Influencing Factors of the Work Satisfaction of the Hospital Medical Staff in Liaoyang City, Liaoning Province of China

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Abstract

Medical personnel are the main body of medical services, but the satisfaction of medical personnel has not been improved. This paper intends to obtain the relevant factors of medical staffs satisfaction through research and investigation, to help improve the job satisfaction of hospital staff. Based on this, by means of interview, the resulting information is converted into a questionnaire and carrying out the survey, to get the correlation factors of satisfaction in a public hospital. The data was collected by using stratified interview sampling of 10 employees of different positions in the hospital and 129 questionnaires in Liaoyang as samples. The data was analyzed using analytic hierarchy process (AHP) method. The findings indicate that the main indicators leading to the dissatisfaction of medical personnel including hourly pay satisfaction, performance satisfaction, training satisfaction, sense of achievement, hospital atmosphere and development expectations.

Keywords: Medical staff, Job satisfaction, Expectancy theory, Influencing factors, Improvement strategies

Introduction

After the outbreak of COVID-19, medical personnel from all places gathered quickly and rushed to the epidemic area in the shortest time. Looking back on the course of epidemic prevention, medical personnel have successfully completed the professional mission of helping the wounded and rescuing the dying, which reflects the irreplaceable role of the group in social development. But as the epidemic cooled down, the sound of disharmony gradually emerged. In May 2020, more than 40 medical staffs of Xianyang Maternal and Child Health Hospital were cut. In July, the article "The epidemic cost 1,000 yuan a month for medical staff in Zhejiang" exploded on the internet. In the same year, the college entrance examination policy of adding extra points for the children of epidemic prevention medical personnel was widely criticized by all walks of society, and the image of medical personnel declined rapidly and became the biggest victim of the policy. In this context, the protection of the rights and interests of medical personnel and their work satisfaction have become the focus of wide attention from all walks of life. Some scholars, such as Yu et al. (2020); Zhao (2014); Chen (2011), investigated and studied the job satisfaction of medical staff in public hospitals in Jiangsu Province. The results show that the job achievement and salary of medical staff are generally low, and some medical staff have the intention of resignation. In addition, Li et al. (2020) pointed out in the survey that the job satisfaction of grassroots medical staff in China is far lower than the external expectation, and the salary level of most medical staff is similar to the average social salary, but the workload, responsibility and psychological pressure are much higher than that of most positions with the same salary. As a result, medicine has become one of the least popular majors for university candidates. According to data from the medical education website, the number of applicants for the 2020 national medical qualification exam has continued decrease for 4 consecutive years, with 896,000, 834,540, 770,000 and 679,290 applying for the exam from 2017 to 2020, respectively. Compared with 2017, the number of applicants in 2020 dropped by 24.2 %. On the contrary, the passing 5 rate increased by 21.7 % due to the decline in the number of applicants and stable social demand. Medical services are an important part of the social security system and concern the people's health. The decline in the satisfaction

of medical staff will inevitably lead to the rapid loss of talents, low work efficiency, and a huge impact on the medical system. Based on this, this paper takes the work satisfaction of the hospital medical staff as the research focus to extracts the influencing factors of work satisfaction. The findings of this research may be the guideline for policymaker to improve work satisfaction of the medical staffs.

Literature review

Theoretical basis

There are 2 main theories related to work satisfaction which are comprehensive compensation theory and expectation theory. According to Lawler (1971), the comprehensive compensation theory can be divided into 3 parts; 1) direct compensation, 2) indirect compensation and 3) non-monetary compensation. Direct compensation refers to the cash income that can be obtained through labor, including basic wages, performance wages, allowances, bonuses, stock options, etc. Indirect compensation consists of 2 parts: Legal welfare and enterprise supplementary welfare. It can be subdivided into social insurance, vacation, employee privileges, training and development and other indicators. Non-monetary compensation refers to the income obtained by employees due to the characteristics of the post, including working environment, identity marks, work fun, sense of achievement, work responsibility, leader character, social respect, industry reputation, etc.

The expectation theory treats satisfaction as a comparative result of the 2 feelings (Potter, 1968). The theory holds that before implementing the action, the participants will inevitably form expectations for the outcome of the action, the expected value is higher than the action cost, and the participants will change implement the action. After the action, participants receive benefits from real action. Action income comparison is expected, can form a new value assessment. Satisfaction occurs if the proceeds of action are higher than the action cost. The opposite is the opposite. The mechanism can be expressed by the following formula;

Satisfaction with = Action Proceeds − Action costs

In the production labor, the producers' action income will be reflected by the comprehensive compensation. If the comprehensive compensation is higher than the action cost, the labor satisfaction is positive. At the same time, the changing environment will also enable workers to form new expectations or new costs at different stages, and the fixed labor income will also lead to different satisfactory results in the corresponding stage.

Empirical Evidences

Squires et al. (2015) conducted an investigation and research on the work satisfaction of the Chinese caregivers, and pointed out that the work satisfaction of the respondents was in the risk range, indicating that the group is performing the work with a tolerant and patient attitude. Lacher et al. (2015) proposed in the study that the work quality of nurses is closely related to work satisfaction, and the decline of work satisfaction will inevitably have a negative impact on work quality. Brady (2016) also believes that the quality of care is positively correlated to job satisfaction and that care for critical patients should be done by caregivers with higher satisfaction. Oliveira (2017) also proposed in the study that the medical staff should form a certain satisfaction with the work unit, and then make the work attitude more correct. Based on Japanese survey data, Kudo et al. (2017) found that medical staff should remain in good working condition to optimize the work details. By using case study methods, Nony (2017) pointed out that most successful medical personnel have established good emotional connections with patients. This connection not only helps medical staff quickly into the work role, but also makes medical staff maintain a high sense of achievement. Araujo-Dos-Santos et al. (2018) noted in the study that medical staff are threatened by patients and their families, and the insecurity will quickly reduce the work satisfaction of medical staff and the quality of work. Kudo et al. (2019) noted in another study that job satisfaction is necessary to maintain the stability of the healthcare team. Therefore, medical institutions should start from the working atmosphere to improve the sense of gain of medical personnel. Zhou et al. (2020) found that the main cause

for the decline in medical staff satisfaction came from the doctor-patient contradiction. Han and Hou (2020) investigated the work satisfaction of medical personnel with intermediate titles in third-grade hospitals and found that the negative factors affecting work satisfaction mainly came from the high expectations of the patients' families and the strong contrast formed after incurable. Qin and Li (2020) investigated the work satisfaction of medical staff in community hospitals and found that the income of community medical staff is generally low, with easy psychological gap compared with professionals with the same degree and working in other fields. This problem is the main cause of the decrease in work satisfaction of community medical workers.

Some observations can be drawn from the above theoretical basis and literature. The influencing factors of the work satisfaction of medical personnel come from the society, medical institutions and patients' families, respectively, and it is difficult for medical institutions to solve them independently. Additionally, medical institutions should try to explore work strategies that can be independently improved, and get rid of their excessive reliance on social support. The model of the factors studies is presented in **Figure 1** which derived from comprehensive compensation theory and expectation theory.
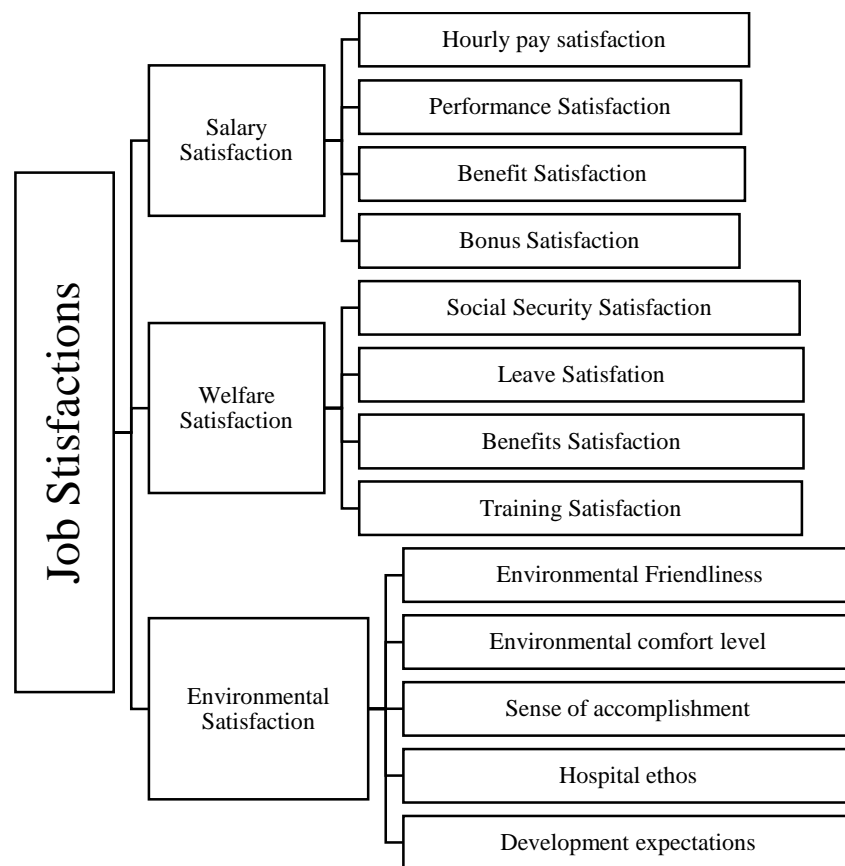

Figure 1 The model of the factors studies.

Methodology

This paper mainly uses literature analysis, interview, and questionnaire survey to extracts the influencing factors of work satisfaction as follows;

1) Literature analysis method was used to query the relevant documents related to this research on ZhiNet and other platforms, so as to consolidate the theoretical foundation.

2) Interview method is based on the overall number of questionnaires and the number of types of work of medical personnel in the hospital. Therefore, it was applied with 10 employees of different positions in the hospital by stratified sampling. During the interview, communication was conducted through WeChat

and other social software. Based on the work experience of the interviewees, each person proposed a factor that might affect their job satisfaction. The respondents were asked questions from the following 3 aspects; 1) the potential factors that may affect the salary satisfaction, 2) the potential factors that may affect welfare satisfaction, and 3) corresponding to environmental factors. In order to facilitate the calculation, this paper uses AHP-fuzzy comprehensive evaluation method to estimate the weight of each index. Among them, the influencing factors of salary satisfaction include salary satisfaction, performance satisfaction, allowance satisfaction and bonus satisfaction. Welfare satisfaction includes social security satisfaction, vacation satisfaction, welfare satisfaction and training satisfaction. The influencing factors of environmental satisfaction include environmental friendliness, environmental comfort, sense of achievement, hospital ethos and development expectation.

3) The questionnaire survey has become the main research means for the work satisfaction of medical personnel, and most studies will use this method to analyze the influencing factors. The medical staff satisfaction index system was transformed into a questionnaire and distributed to 151 in-service medical staff in a hospital in Liaoyang City. It is used to obtain the main factors leading to the decline of medical staff's job satisfaction in practical work. Questionnaire method was distributed via WeChat, QQ and other social software, 129 valid questionnaires were recovered, and the recovery rate reached 85.43 %. Of these, 51 male respondents, accounting for 39.53 %. There were 56 attending respondents with professional titles and above, accounting for 43.41 %. There were 107 respondents with a bachelor's degree or above, accounting for 82.95 %. There were 61 respondents with more than 5 years' work experience, accounting for 47.29 %. In the survey, the Likert's 5-point scale was used for reference. The details are presented in **Table 1** as follows;

Table 1 The Likert's scoring scale.

	Very satisfied	**More satisfied**	**Acceptable**	**Less satisfied**	**Very dissatisfied**
Points value	5 Points	4 Points	3 Points	2 Points	1 Point

As shown in **Table 1**, the survey score is composed of 5 dimensions which are extremely satisfied, relatively satisfied, fair, less satisfied and extremely dissatisfied, corresponding to 5 points, 4 points, 3 points, 2 points and 1 point. The higher the score, the higher the work satisfaction of the medical staff, the less the actual impact of the corresponding factors. In the study, the comprehensive compensation theory was taken as a reference, 3 dimensions of satisfaction influencing factors of job satisfaction questionnaire were determined. Interview with employees to further determine the influencing factors of satisfaction.

Results and discussion

The findings from 10 employees of different positions in the hospital by stratified sampling according to the factors that may affect the salary satisfaction are reported in **Table 2** show that 10 respondents put forward 10 possible influencing factors based on direct compensation, including low labor remuneration, performance reward, inadequate allowance, unfair bonuses, unreasonable allowance design, too low labor remuneration, excessive performance bonus difference, labor amount is not proportional to labor income, the bonus amount is lower than expected, and the allowance is not issued in time.

Table 2 Summary of the interview results of the salary dimension.

Summary:	**What are the factors that may affect compensation satisfaction?**
No. 1	Unit labor remuneration is too low, so that the medical personnel in the dissatisfaction of the comparison.
No. 2	Problems existing in performance rewards may cause dissatisfaction.
No. 3	The allowance is not in place, which may cause dissatisfaction.
No. 4	The bonus payment is unfair, or it may cause dissatisfaction with the medical staff.
No. 5	The allowance design is unreasonable, which can have a negative impact on the work satisfaction.
No. 6	Too low labor remuneration is the main cause of the dissatisfaction of medical personnel.
No. 7	Performance bonus difference too different, or will have a negative impact on work satisfaction.
No. 8	The amount of labor and labor income is not proportional, is one of the influencing factors.
No. 9	The bonus amount is lower than expected, which will lead to a decline in satisfaction.
No. 10	Untimely payment of subsidies will lead to a decline in satisfaction.

The same approach required the respondents to propose factors that could affect the welfare satisfaction of the medical staff. The following table can be obtained after finishing the results.

The factors affecting job satisfaction mentioned by 10 respondents at the level of welfare dimension are recorded in **Table 3**. They include social insurance deduction increased year by year, unreasonable vacation arrangement, too little leave, too much overtime, uneven welfare distribution, lack of training and technology improvement path, training design, training activities is unreasonable, welfare difference, payment difference in pension insurance, department welfare difference and insufficient training.

Table 3 Summary of the welfare dimension interview results.

Summary:	**What are the factors that may affect welfare satisfaction?**
No.1	The amount of social insurance deduction increases year by year, which will have an impact on the work satisfaction of the basic salary medical personnel.
No. 2	Unreasonable vacation arrangement will have a negative impact on work satisfaction.
No. 3	Too little leave, too much overtime, may cause dissatisfaction with the medical staff.
No. 4	Unbalanced distribution of welfare benefits may cause dissatisfaction with medical personnel.
No. 5	Lack of training and technical improvement path, which can have a negative impact on work satisfaction.
No. 6	The unreasonable design of training activities is the cause of the dissatisfaction of medical personnel.
No.7	Excessive differences in welfare benefits, or will have a negative impact on the work satisfaction of medical staff.
No. 8	Difference in pension insurance payment is one of the influencing factors affecting satisfaction.
No. 9	Differences in departmental welfare can lead to a decline in satisfaction.
No. 10	Lack of training will lead to a decline in the work satisfaction of medical staff.

Finally, **Table 4** records that 10 influencing factors extracted by 10 respondents in the environmental dimension including the friendship between colleagues, environmental comfort, sense of achievement, the work atmosphere of the hospital, leadership methods, medical results and psychological influence, the expectation of medical staff for career development, rising channel, the feelings of rest facilities, and positive working atmosphere.

Table 4 Summary of the interview results in environmental dimensions.

Summary:	**What are the factors that may affect environmental satisfaction?**
No. 1	The friendship between colleagues can affect the work satisfaction of medical staff.
No. 2	The comfort level of the working environment can have an impact on the work satisfaction of the medical staff.
No. 3	Work sense of achievement is the main inducement affecting the work satisfaction of medical personnel.
No. 4	The working atmosphere of the hospital can have an impact on the work satisfaction of the medical staff.
No. 5	Leaders' methods can have an impact on the work satisfaction of medical staff.
No. 6	Medical results and the psychological impact are the influencing factors of the work satisfaction of medical personnel.
No. 7	Medical staff expectations for career development will have an impact on job satisfaction.
No. 8	Rising channel is one of the influencing factors of work satisfaction.
No. 9	The feeling of the rest facilities is the influencing factor of the work satisfaction of the medical staff.
No. 10	Positive work atmosphere, will lead to the improvement of work satisfaction.

The interview results in **Tables 2 - 4** show that some interview results were correlated and similar in the content. The 3 results jointly point to the possible unreasonable design of labor remuneration. According to the interview results, there must be weight differences in the indexes of the related factors affecting satisfaction. In order to facilitate calculation, this paper uses AHP-fuzzy comprehensive evaluation method to estimate the weight of each index. First of all, the job satisfaction index system of hospital medical staff was sorted out, as shown in **Table 5** for details.

Table 5 Work satisfaction index system of hospital medical staff.

Target layer	Code layer	Index layer
Job Satisfaction (A)	Compensation Satisfaction (B 1)	Hourly pay satisfaction (C1)
		Performance Satisfaction (C2)
		Benefit Satisfaction (C3)
		Bonus Satisfaction (C4)
	Benefits Satisfaction (B 2)	Social Security Satisfaction (C 5)
		Leave Satisfaction (C 6)
		Benefits Satisfaction (C 7)
		Training Satisfaction (C 8)
	Environmental Satisfaction (B 3)	Environmental friendliness (C 9)
		Environmental comfort level (C10)
		Sense of accomplishment (C11)
		Hospital ethos (C12)
		Development expectations (C13)

The index system is divided into target layer, standard layer (code layer) and index layer as shown in **Table 5**. The target layer reflects the work satisfaction of medical staff, composed of 3 indicators of the standard level. The 3 indicators of the standard layer correspond to the 3 analytical dimensions of work satisfaction, including a number of influencing factors. Among them, compensation satisfaction includes the influencing factors which are hourly pay satisfaction, performance satisfaction, allowance satisfaction, and bonus satisfaction. For the benefits satisfaction, the influencing factors include social security satisfaction, vacation satisfaction, welfare satisfaction, and training satisfaction. The influencing factors for environmental satisfaction includes environmental friendliness, environmental comfort, sense of achievement, hospital atmosphere and development expectations.

The weight calculation of AHP-fuzzy analysis is based on the opinions given by 7 professionals. The evaluation basis is the 9 points scale method as shown in **Table 6**.

Table 6 Nine-point scale method.

Scale ratio	Indicator A score	Intermediate value
Crucial	9	8
Very important	7	6
Important	5	4
A lightly important	3	2
Equally important	1	1/2
A lightly minor	1/3	1/4
Secondary level	1/5	1/6
Very of secondary importance	1/7	1/8
Very secondary	1/9	

Table 6 is the 9 points scale method, with 17 scores and 9 evaluation results. If scoring experts see an indicator as important to another, it scored 7 and 1/7 of another. To demonstrate the scoring process, the article lists the scoring results of respondent's No. 1 for standard layer weights as shown in **Table 7**.

Table 7 Standard layer weights of respondent's No. 1.

Job Satisfaction (A)	Compensation Satisfaction (B 1)	Benefits Satisfaction (B 2)	Environmental Satisfaction (B 3)	Normalization score
Compensation Satisfaction (B 1)	1	3	3	
Benefits Satisfaction (B 2)	1/3	1	1	
Environmental Satisfaction (B 3)	1/3	1	1	
		Conformance test:		

Organize the data in **Table 6** into the standard layer judgment matrix;

$$B = \begin{Bmatrix} 1 & 3 & 3 \\ 1/3 & 1 & 1 \\ 1/3 & 1 & 1 \end{Bmatrix}$$

Normalized the matrix by basis and product method: B

$$\bar{B} = \begin{Bmatrix} 3/5 & 3/5 & 3/5 \\ 1/5 & 1/5 & 1/5 \\ 1/5 & 1/5 & 1/5 \end{Bmatrix}$$

$\bar{B}$ Line and calculate the matrix after;

$$\bar{W} = \begin{Bmatrix} 1.8 \\ 0.6 \\ 0.6 \end{Bmatrix}$$

$\bar{W}$ After the normalization of the matrix;

$$\bar{W} = \{0.6 \quad 0.2 \quad 0.2\}$$

The formula for calculating the maximum eigenvalue of the matrix is;

$$\lambda_{max} = \frac{1}{n} \sum_{i=1}^{n} \frac{(AW)_i}{W_i} \quad A = B,$$

(1)

AW Priority calculation matrix, the calculation process and results are;

$$A \cdot W = \begin{Bmatrix} 1 & 3 & 3 \\ 1/3 & 1 & 1 \\ 1/3 & 1 & 1 \end{Bmatrix} \cdot \begin{Bmatrix} 1.8 \\ 0.6 \\ 0.6 \end{Bmatrix} = \begin{Bmatrix} 5.4 \\ 1.8 \\ 1.8 \end{Bmatrix}$$

After importing the calculation results into formula (1);

$$\lambda_{max} = \frac{1}{3} \left(\frac{5.4}{1.8} + \frac{1.8}{0.6} + \frac{1.8}{0.6} \right) = 3$$

λ_{max} Guide the value calculation results as the test formula;

$$CI = \frac{\lambda_{max} - n}{n - 1}$$

(2)

Therefore;

$$CI = \frac{3-3}{3-1} = 0$$

The consistency inspection list can be obtain as shown in **Table 8**.

Table 8 Conformance inspection table (Order 12).

The N value	1	2	3	4	5	6	7	8	9	10	11	12
The R value	0.0	0.0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49	1.51	1.54
Inspection conditions: (1). (2).. $n > 2$ $CR < 0.10$												

CR Recalculation value, the calculation formula is;

$$CR = \frac{CI}{RI}$$

(3)

The calculation results are;

$$CR = \frac{0}{0.58} = 0$$

n CR $n > 2$ $CR < 0.10$ Since the matrix order is 3 and the value is 0 and meets the test conditions. Additionally, the score shown by respondent No. 1 meets the test criteria and can complied as presented in **Table 9**.

Table 9 Standard layer rating of respondent's No. 1.

Job satisfaction	Compensation satisfaction	Benefit satisfaction	Environmental satisfaction	Normalization score
Compensation satisfaction	1	3	3	0.6
Benefit satisfaction	1/3	1	1	0.2
Environmental satisfaction	1/3	1	1	0.2
Conformity inspection; $n = 3 > 2$ $CR = 0 < 0.10$				

　　　Using the above process, the evaluation results given by the 7 respondents were counted and summarized as follows;

Table 10 Standard layer weight estimation results.

Code layer	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	Rating 7	Mean
Compensation satisfaction	0.6	0.714	0.714	0.333	0.333	0.6	0.714	0.573
Benefit satisfaction	0.2	0.143	0.143	0.333	0.333	0.2	0.143	0.214
Environmental satisfaction	0.2	0.143	0.143	0.333	0.333	0.2	0.143	0.214

　　　Computing the index layer weight again, first obtaining the index weight of the salary dimension as shown in **Table 11**.

Table 11 Estimation result of compensation dimension index weight.

Compensation dimension	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	Rating 7	Mean
Satisfaction with hourly pay	0.327	0.466	0.327	0.327	0.466	0.466	0.327	0.387
Performance satisfaction	0.327	0.178	0.327	0.327	0.178	0.178	0.327	0.263
Allowance satisfaction	0.173	0.178	0.173	0.173	0.178	0.178	0.173	0.175
Bonus satisfaction	0.173	0.178	0.173	0.173	0.178	0.178	0.173	0.175

　　　Secondly, the index weight of welfare dimension index is calculated and shown in **Table 12**.

Table 12 Estimation result of welfare dimension index weight.

Benefit dimension	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	Rating 7	Mean
Satisfaction with hourly pay	0.327	0.466	0.327	0.327	0.466	0.466	0.327	0.387
Performance satisfaction	0.327	0.178	0.327	0.327	0.178	0.178	0.327	0.263
Allowance satisfaction	0.173	0.178	0.173	0.173	0.178	0.178	0.173	0.175
Bonus satisfaction	0.173	0.178	0.173	0.173	0.178	0.178	0.173	0.175

Finally, the index weight of environmental dimension index is calculated and shown in **Table 13**.

Table 13 Estimating result of environmental dimension index weight.

Environment dimension	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	Rating 7	Mean
Environmental friendliness	0.2	0.286	0.25	0.2	0.2	0.25	0.286	0.239
Environmental comfort	0.2	0.143	0.125	0.2	0.2	0.125	0.143	0.162
A sense of achievement	0.2	0.143	0.125	0.2	0.2	0.125	0.143	0.162
Hospital ethos	0.2	0.286	0.25	0.2	0.2	0.25	0.286	0.239
Development expectations	0.2	0.143	0.25	0.2	0.2	0.25	0.143	0.198

After sorting the above calculation results, the weighted index system of hospital medical staff work satisfaction is obtained as shown in **Table 14**.

Table 14 Weighted work satisfaction weighted index system of hospital medical staff.

Target layer	Code layer	Code layer weight	Index layer	Index layer weight
Job Satisfaction (A)	Compensation Satisfaction (B1)	0.573	Hourly pay satisfaction (C1)	0.387
			Performance Satisfaction (C2)	0.263
			Benefit Satisfaction (C3)	0.175
			Bonus Satisfaction (C4)	0.175
	Benefits Satisfaction (B2)	0.214	Social Security Satisfaction (C5)	0.387
			Leave Satisfaction (C6)	0.263
			Benefits Satisfaction (C 7)	0.175
			Training Satisfaction (C8)	0.175
	Environmental Satisfaction (B3)	0.214	Environmental friendliness (C9)	0.239
			Environmental comfort level (C10)	0.162
			Sense of accomplishment (C11)	0.162
			Hospital ethos (C12)	0.239
			Development expectations (C13)	0.198

The medical staff satisfaction index system was transformed into a questionnaire. The following table is obtained after finishing the survey results.

Table 15 Work satisfaction survey of hospital medical staff.

Code layer	Index layer	5 Points	4 Points	3 Points	2 Points	1 Points	Mean
Compensation Satisfaction (B1)	Hourly pay satisfaction (C1)	7	11	37	56	18	2.48
	Performance satisfaction (C2)	6	12	23	61	27	2.29
	Benefit satisfaction (C3)	26	38	39	17	9	3.43
	Bonus satisfaction (C4)	19	41	44	23	2	3.40
Benefits Satisfaction (B2)	Social security satisfaction (C5)	14	36	77	2	0	3.48
	Leave satisfaction (C6)	11	35	37	23	23	2.91
	Benefits satisfaction (C7)	27	26	29	24	23	3.08
	Training satisfaction (C8)	0	15	31	62	21	2.31
Environmental Satisfaction (B3)	Environmental friendliness (C9)	12	25	55	27	10	3.06
	Environmental comfort level (C10)	55	36	25	13	0	4.03
	Sense of accomplishment (C11)	0	1	26	65	37	1.93
	Hospital ethos (C12)	0	4	26	64	35	1.99
	Development expectations (C13)	3	9	17	84	16	2.22

According to the preliminary observation, according to the Likert's scoring scale, 3 points means acceptable, 2 points or less represents dissatisfaction, those that can be regarded as less than 3 points are regarded as low points. In the column representing the average score in **Table 15** shows that the hourly salary satisfaction and performance satisfaction in the salary dimension are low, the welfare dimension, the training satisfaction are low, and the sense of achievement, hospital atmosphere and development expectation are low. On this basis, the overall medical staff satisfaction score was calculated and the result was shown in **Table 16**.

Table 16 Work satisfaction score of the hospital medical staff.

Target layer	Code layer	Code layer weight	Index layer	Index layer weight	Investigation points
Job Satisfaction (A) 2.792	Compensation satisfaction (B1)	0.573×2.757	Hourly pay satisfaction (C1)	0.387	2.48
			Performance Satisfaction (C2)	0.263	2.29
			Benefit Satisfaction (C3)	0.175	3.43
			Bonus Satisfaction (C4)	0.175	3.40
	Benefits satisfaction (B2)	0.214×3.055	Social Security Satisfaction (C5)	0.387	3.48
			Leave Satisfaction (C6)	0.263	2.91
			Benefits Satisfaction (C7)	0.175	3.08
			Training Satisfaction (C8)	0.175	2.31
	Environmental satisfaction (B3)	0.214×2.612	Environmental friendliness (C9)	0.239	3.06
			Environmental comfort level (C10)	0.162	4.03
			Sense of accomplishment (C11)	0.162	1.93
			Hospital ethos (C12)	0.239	1.99
			Development expectations (C13)	0.198	2.22

The overall work satisfaction of the interviewed medical staff was about 2.792 points as shown in **Table 16**. This score was below the median score (3 points) which implied that there was still room for improvement in the management work. In addition, the results of the compensation satisfaction survey showed that the low scores of hourly pay and performance satisfaction were 2.48 and 2.29, respectively. The hourly salary and performance compensation are the main indicators that constitute the direct compensation system. The problems of the 2 indicators show that the medical staff's satisfaction with the direct compensation system is low. This implied that the unreasonable design of direct compensation is the main influencing factor of salary satisfaction. For the welfare satisfaction, the findings showed that the satisfaction score of the training link was significantly lower than other indicators, only 2.31. Different from other indicators, training is the main way to improve the quality of medical personnel and promote personal development. The problems of this index will inevitably have a negative impact on youth or low-level medical personnel. Lastly, the survey results of environmental satisfaction showed that the sense of achievement, hospital atmosphere and development expectation had the lowest scores, with 1.93, 1.99 and 2.22, respectively. Compared with the other 2 indicators, the 3 low-score indicators are all related to the hospital management and social attention, so the management mechanism can be regarded as the focus.

Conclusions

Medical personnel are the main body of medical services, but the satisfaction of medical personnel has not been improved or may decrease further. The decline in the satisfaction of medical staff will inevitably lead to the rapid loss of talents, low work efficiency, and a huge impact on the medical system. Therefore, this research aims to evaluate the weight of influencing factors of medical personnel's work satisfaction, to help improve the job satisfaction of hospital staff. Based on the comprehensive compensation theory, the research framework of compensation satisfaction, welfare satisfaction and environmental satisfaction was designed. This research uses analytic hierarchy process (AHP) method to evaluate the weight of influencing factors of medical personnel's work satisfaction. Then, the resulting information is converted into a questionnaire and carrying out the survey, to get the correlation factors of satisfaction in a public hospital. The findings indicate that the main indicators leading to the dissatisfaction of medical personnel including hourly pay satisfaction, performance satisfaction, training satisfaction, sense of achievement, hospital atmosphere and development expectations. With the public welfare orientation of the hospital, it is difficult to improve the direct salary of medical staff in the short term. Based on this, the subsidy is increased. It is a more reasonable way of financing to provide financial support by the government. Medical institutions can hold regular seminars in our hospital, and participating experts can summarize the experience gained from practice into knowledge points. After study and discussion, mature knowledge points can be incorporated into the learning materials of the Institute. Make the training system of medical institutions more systematic, the harvest of medical personnel in training will also be improved, and the satisfaction may also be increased. Medical institutions can regard work achievement as the main basis for evaluating talent flow, and design integral production as supporting measures. To realize the flow of talents, the medical personnel of various departments can also follow fixed standards to realize their work achievements. At the same time, under a quantifiable and transparent system, the working atmosphere of medical institutions will be more positive.

Acknowledgements

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