

Research on the Status Quo and Influencing Factors of Salary Satisfaction of Professional Technicians in Center for Disease Control and Prevention

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Abstract: Objective: To explore the status quo and influencing factors of salary satisfaction of professional technicians in the CDC(center for disease control and prevention). Methods: A self-designed questionnaire was used to investigate 220 on-the-job staff in the centers for disease control and prevention under the municipal jurisdiction. Regression analysis is used to analyze the influence of individual characteristic factors and different entries factors on salary satisfaction. Results: The total salary satisfaction score of the respondents was (2.85±0.73). Among all entries, the " performance-related pay" entry has the highest score, while the "monthly income" entry has the lowest score. The overall satisfaction scores of the surveyed staff samples are mainly distributed at the level of "generally dissatisfied", accounting for 67.8%. Multiple linear regression analysis after controlling demographic factors shows that age, marriage, position, working years for CDC, workload, monthly income, are the main influencing factors of salary satisfaction. Conclusion: The salary satisfaction of CDC staff is generally at the low-level, and different management measures and incentives should be taken to improve salary satisfaction according to the factors affecting salary satisfaction.

1. Introduction

CDC (Center for Disease Control and Prevention) is a public welfare institution that carries out disease prevention and control, public health technical management and service, and the professional quality and job satisfaction of its professional and technical personnel are important guarantees to complete public health work [1-2]. CDC staff are the main providers of basic public health services, and their job satisfaction plays an important role in improving the quality of public health services, enhancing public satisfaction with public health services and ensuring the sustainable development of social public health services. Based on the two-factor theory, this study explores the salary satisfaction of CDC staff in China and its influencing factors, and provides clues for health education staff motivation and team building.

2. Research on salary satisfaction of employees

Human is the most active factor in human productivity. High-tech talents are the core competitiveness of CDC. If CDC wants to develop continuously, it is necessary to keep the technical backbone team stable. According to the survey, 70% of employees who leave their jobs are dissatisfied with the organization, while 30% of those who are dissatisfied with the existing ones intend to leave their jobs. Therefore, if CDC wants to retain outstanding talents, it is necessary to improve the loyalty of medical staff, and it is necessary to invest a lot of time and money to improve medical staff's satisfaction with CDC in all aspects, such as bonus distribution, working conditions, learning environment, living treatment, professional titles and positions, etc.

The significance of salary satisfaction survey mainly includes the following four aspects [3]:

Organization diagnosis: Through the salary satisfaction survey, we can find out what the problems in management are, and more importantly, systematically solve the problems according to

the existing problems, and observe whether the problems have been improved through the satisfaction evaluation again.

Impact on future performance: Satisfaction survey can play a preventive role, monitor the effectiveness of enterprise performance management, predict the turnover intention of enterprise personnel in time, and prevent some "brain drain".

Safeguarding employees' physical and mental health: The level of salary satisfaction will directly affect employees' emotions. Emotional activities are the intermediate media of psychological activities affecting physical health. Low satisfaction will cause employees to have negative emotions, leading to diseases such as ulcer, hypertension, cancer, etc., and the increase of sick leave rate will affect the quality of work [4].

Improve the quality of employees' work: Salary satisfaction can affect the productivity of employees by affecting their morale [5]. Higher satisfaction will enable employees to give full play to their subjective initiative and effectively complete the work, so that employees and enterprises can achieve a win-win goal.

Different understanding of salary satisfaction will lead to different measurement methods, and salary satisfaction is the intrinsic attitude of individuals, which cannot be measured directly, but needs to be measured by indirect methods, such as observation, interview and questionnaire. Many organizations like to use the questionnaire method because the observation method and the interview method are expensive and take a long time, but they are beneficial to analyze deeper problems [6].

In actual investigation and research, because questionnaire is the easiest quantitative tool to measure and measure, most of the questionnaires are used to measure salary satisfaction, some of which have been translated or revised in China and are increasingly cited.

3. Objects and methods

3.1. Research objects

Using cluster sampling method, a questionnaire survey was conducted among 227 on-the-job professionals of CDC in a city. Under the principle of informed consent, the trained investigators conducted on-the-spot questionnaires in district/county CDC. Questionnaires are uniformly distributed by investigators, self-filled by respondents on the spot and recycled on the spot. A total of 227 questionnaires were distributed in this survey, and 220 valid questionnaires were recovered, with an effective recovery rate of 96.9%.

3.2. Research method

The self-administered questionnaire was compiled with reference to employee satisfaction test questionnaire [7] and Minnesota Job Satisfaction Scale (MSQ).

The questionnaire consists of two parts: characteristics, salary satisfaction, in which each statement of satisfaction questions has five answers, namely, very dissatisfied, less satisfied, basically satisfied, relatively satisfied and very satisfied, with corresponding assigned values of 1-5 points. The satisfaction score of the respondents is the average of the sum of the scores of each item. Each dimension is obtained by adding the measured values of corresponding items and averaging them.

The alpha coefficient of the influencing factor scale is 0.949, and the alpha coefficient of each dimension is 0.856 ~ 0.954. Each item is scored according to Likert's five-level scoring method. The higher the score, the higher the enthusiasm or the greater the influence, and the negative score of the reverse question. The correlation analysis between enthusiasm and influencing factors of each dimension shows that all correlation coefficients have reached the level of statistical significance.

3.3. Statistical method

Epidata 3.1 was used to build the database, and Stata 12.0 statistical software was used to carry out statistical description, Pearson correlation analysis and logistic regression analysis, with the test

level of $\alpha = 0.05$.

4. Result

4.1. Overall salary satisfaction

The total satisfaction score of the survey respondents is (2.85 ± 0.73) points. Among the scores of each entry, the “performance-related pay” entry has the highest score, and the “monthly income” entry has the lowest score. Salary satisfaction is positively correlated with all entries ($P < 0.001$), see the Table 1.

Table 1 Correlation between salary satisfaction degree and satisfaction degree of each entry

Entry	Satisfaction score	Correlation (r)	P
monthly income	2.69 ± 0.88	0.468	P<0.001
performance-related pay	3.00 ± 0.79	0.624	
Salary system	2.74 ± 0.89	0.595	
Welfare security	2.93 ± 0.81	0.630	
Pay compared return	2.87 ± 0.84	0.609	

4.2. Graded distribution of salary satisfaction

According to SHARP's grading standard [8], the salary satisfaction scores of the surveyed staff samples are mainly distributed at the level of "generally dissatisfied", accounting for 67.8%, as shown in Figure 1.



Figure 1 Graded distribution of salary satisfaction

4.3. Multiple regression analysis of influencing salary satisfaction of CDC staff

7 positive influencing factors were measured by KMO and Bartlett's spherical test. The KMO was 0.883, $\chi^2 = 6337.96$ and the significance level was 0.000, which indicated that the samples were suitable for factor analysis.

Taking salary satisfaction as the dependent variable, firstly, demographic sociological factors such as gender, age, position and professional title are introduced into the regression equation as control variables; secondly, monthly income is introduced; thirdly, performance-related pay is introduced to investigate the significance of the regression equation and the significance of the regression coefficient. The collinearity 2 analysis shows that the tolerance of each variable is 0.990~0.998, and the VIF value is 1.027~1.356, which indicates that there is no obvious multicollinearity problem after each variable enters the model.

Regression analysis shows that salary satisfaction is influenced by age, marriage, position,

working years for CDC, workload, monthly income, among which monthly income and workload play the strongest role. Although the performance-based pay system has entered the equation, it has the less effect on job satisfaction.

5. Discussion

The results show that the total salary satisfaction score of CDC staff is (2.85 ± 0.73) , which is at the general dissatisfied level, suggesting that the overall evaluation of the current unit by CDC staff is low, which should be paid attention to by the unit managers. In all entries of salary satisfaction, the "monthly income", "salary system" and "pay compared return" is relatively low, and the entry of "monthly income" is the lowest, which is consistent with most previous research results [9-10]. Studies have shown that there is a positive correlation between salary level and job satisfaction [11], which shows that improving salary is an important way to improve job satisfaction of medical staff. For grass-roots workers, government departments should give preferential policies to promote their professional titles, which can be evaluated according to factors such as continuous grass-roots service years, workload, error rate, etc., and scientific research conditions should be appropriately relaxed, giving priority to promotion of professional titles.

Among the scores of other item of satisfaction in the survey, the item of "Colleague's Coping Style" which belongs to the external satisfaction dimension has the highest score; However, the items of "work reward" have the lowest scores, which is similar to the result that the medical workers reported in literature [12] have low satisfaction with remuneration. On the one hand, the results indicate that the interpersonal relationship between employees and colleagues of the disease prevention and control system in a city is harmonious. Therefore, the item has a high satisfaction score; On the other hand, because the salary mechanism of employees in this system is under the unified management of municipal health administration and finance departments, there are common problems of low basic salary for new employees, and the scoring results of satisfaction items reflect this objective reality from the side.

Multiple regression analysis shows that age, marriage, position, working years for CDC, workload, monthly income indicate that managers should pay full attention to these factors, and on this basis, external incentive factors such as performance-based salary system, salary, management system and humanistic construction can play a better role. In addition, this study shows that leaders' respect and concern for subordinates is an important element of leadership behavior. China is a country that attaches great importance to relationship and harmony, and takes harmony as its most important thing. The unequal rights between the superior and the subordinate, and the superior requires the subordinate to obey, respect and trust their authority, is a traditional Chinese cultural model. However, this model is gradually weakening, because it does not adapt to the trend of modernization. It shows that in the process of leadership and management, more energy is put into improving work performance, but less attention is paid to employees.

At present, China is vigorously developing public health undertakings, and it is difficult for professional and technical personnel with low education, aging team and low satisfaction to provide high-quality health services to the masses. Therefore, it is suggested, on the one hand, to provide enough health personnel, add highly educated professional and technical personnel to the public health team, and strengthen the training of new employees to improve the level of the whole team; On the other hand, effective measures should be taken to improve the working conditions of the staff of the disease prevention and control institutions, perfect the salary system, etc., to ensure the realization of the concept of "equal pay for equal work" and improve the salary satisfaction and job satisfaction of the professional and technical personnel of the disease prevention and control institutions.

6. Conclusions

To sum up, in the future work, it is necessary to optimize the working environment, improve the staff's treatment, improve the work style, improve the incentive mechanism, improve the work

design, embody the professional value, strengthen the continuing education, broaden the promotion channels, and provide a stage for CDC personnel to give full play.

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