

Received: 2018.08.13
Accepted: 2018.09.26
Published: 2018.10.08

Job Satisfaction Among Doctors from Jiangsu Province in China

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Source of support:

Project supported by the National Science Foundation for Young Scientists of China (Grant No. 71503040), and the Jiangsu Provincial Medical Youth Talent and Research Topic of Hospital Management Innovation of Jiangsu Hospital Association (JSYG-3-2017-101)

Background: Doctors' job satisfaction has an important effect on medical and health services. This study assessed the level of job satisfaction in Chinese doctors and explored how influencing factors differ between general practitioners and specialists.





Material/Methods: The Minnesota Satisfaction Questionnaire (MSQ) on job satisfaction was distributed to 1883 doctors in Jiangsu province, including 850 general practitioners and 1033 specialists. Data analysis was performed with SPSS 20.0. A one-way ANOVA was used to analyze doctors' job satisfaction and logistic regression analysis was used for multivariate analysis. Correlation analysis was done on the 5 dimensions of satisfaction.

Results: The average MSQ score of all surveyed doctors was 3.11 ± 0.87 , with general practitioners (GPs) and specialists scores of 2.81 ± 0.84 and 3.35 ± 0.82 , respectively. Analysis of doctor satisfaction indicated that gender, age, marital status, educational attainment, professional title, and seniority were statistically significant ($P < 0.05$). Overall satisfaction was most closely related to the job itself ($r = 0.96$); work, work environment, and interpersonal relationship were closely related with lead management.

Conclusions: The level of job satisfaction of Chinese doctors, especially general practitioners, needs to be improved. Measures such as improving education levels, work environment, and relationships should be taken soon to improve doctors' job satisfaction in China.

MeSH Keywords: **General Practitioners • Job Satisfaction • Specialization**

Full-text PDF: <https://www.medscimonit.com/abstract/index/idArt/912712>

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Background

Job satisfaction is often defined as a kind of feeling that one person has about his/her job [1]. In the 21st century, “human resources” plays an increasingly important role in enterprise management [2]. As an important indicator of employees’ sense of belonging to the enterprise, job satisfaction is also getting more attention. Education, personal income, and workplace relationships proved to be positively and significantly related to all 3 of these indicators of job satisfaction [3]. Higher job satisfaction can give employees a stronger sense of belonging to the company and improve their motivation. In contrast, lower job satisfaction can weaken the feeling of belonging and enthusiasm of employees, and increases employees’ willingness to quit [4]. For physicians, job satisfaction not only affects their own career, but can also affect patients [5].

With deepening reform of the medical system in China, people’s awareness of health has been increasing, and the demand for high-quality medical and health services has increased [6]. According to reported data from the fourth survey released by the Chinese Medical Doctor Association on doctor practice conditions in China, 48.51% of medical staff are not satisfied with their current practice environment, and 95.66% of doctors surveyed believe their effort and income are not consistent [7]. There are several factors affecting doctors’ job satisfaction, for example, work intensity and pressure is increasing yearly for clinical doctors; doctors are frequently maligned, negative reporting on doctors is prevalent in media, and the unpopular doctor professional evaluation system and drug price system in China have negative effects on the clinical practice environment, decreasing the level of doctors’ job satisfaction and negatively affecting the health care service process [8]. Numerous studies show a correlation between a doctor’s job satisfaction, the quality of medical services offered, and the likelihood the doctor will quit. Meanwhile, doctor’s job satisfaction is directly related to the patient’s satisfaction with the medical service [9]. Hass et al. [10] confirmed that there is a correlation between doctors who had high job satisfaction and patients who had obtained treatment from these doctors, which showed that patients treated by doctors with high job satisfaction scores were twice as satisfied as those treated by doctors with low job satisfaction scores. There is less focus and research on the job satisfaction of doctors at present, which leads to the lack of status research on Chinese doctor’s job satisfaction. Doctors can only provide high-quality health service to patients if they are adequately cared for and respected internally [11].

Salary, promotion, and job safety are crucial for improving job satisfaction. Therefore, Wen et al. [12] suggested that the government increase its financial investment in primary care facilities, especially in less-developed areas, and reform

incentive mechanisms to improve the job satisfaction of primary care doctors, and considered policies such as establishing a social pension programmer for village-level doctors and providing more opportunities for job promotion among primary care doctors. The present study investigated the overall job satisfaction of doctors in China to explore its influencing factors, and to provide policy advice to improve the clinical doctors’ job satisfaction.

Material and Methods

Study population

A cross-sectional survey was conducted during July–August 2016 in Jiangsu province, southeastern China. We randomly selected 1 city in each geographic region of Jiangsu province (northern, middle, and southern). We divided clinical doctors into general practitioners and specialists. General practitioners (GPs) refer to the doctors working in community health care institutions, whereas specialists are often working in specialized and general hospitals.

Surveys about the job satisfaction

The short Minnesota Satisfaction Questionnaire (MSQ) scale compiled by Weiss, Dawis, England, and Lofquist in 1967 [13] was used. The reliability of the sub-scale of the MSQ shows that overall satisfaction, internal satisfaction, and external satisfaction was 0.85–0.91, 0.82–0.86, 0.70–0.82, respectively, and the test-retest reliability was 0.73–0.76. The short MSQ scale consists of 20 items, among which questions 5, 6, 12, 13, 14, and 19 assess indicators of external satisfaction, and questions 1–4, 7–11, 15, 16, and 20 assess indicators of internal satisfaction [14]. Job satisfaction can also be divided into 5 dimensions: work itself (questions 1, 2, 6, 11, 20), work environment (questions 3, 15–17), and interpersonal relationships (questions 4, 9, 18), lead management (questions 5, 7, 10, 12), and pay and benefits (questions 8, 13, 14, 19) [9]. The degree of job satisfaction was measured on a 5-point Likert scale, using “very dissatisfied”, “unsatisfactory”, “uncertain”, “satisfied”, and “very satisfied” as options, given numerical assignments of 1 to 5, respectively. The total possible points on the scale were thus 100 points if all 20 questions were given a response of “very satisfied.”

Data collection

In this study, we used stratified random sampling to select 27 general hospitals and 27 community hospitals from the south, central and north of Jiangsu province, separately. We recruited 2010 doctors according to the calculation of sample size, using the formula: $N = \mu_a^2 \times P_0 (1 - P_0) / \delta^2$

According to reported data from the 4th survey released by the Chinese Medical Doctor Association on doctor practicing conditions in China [16], 48.51% of medical staff are not satisfied with their current practice environment ($P_o=0.52$). Relative permissible error is 15%, and $\delta=0.15 \times 0.52=0.078$, $\mu_\alpha=1.96$. Considering the 95% response rate, the design effect was 1.8, and the minimum sample size for each level (a general practitioner or specialist in each region) was calculated as $n=299$. There were 81 general hospitals and 81 community hospitals included. We selected 10–13 doctors from each hospital. The sample size was divided into 3 levels according to south, central, and north areas of Jiangsu province, and 2 levels according to specialist doctors and general practitioners ($N=2996=1794$). Finally, a total of 2010 clinicians were selected as respondents and were surveyed by questionnaire.

We recorded the following doctors' demographic characteristics: gender (male, female), age (<30, 30–40, 41–50, >50), marital status (single, married, divorced, widowed), educational attainment (undergraduate and below, master's and above), professional title (junior title and below, intermediate title, deputy senior and above), and seniority (<5 years, 5–10 years, 11–15 years, >15 years).

Ethics approval

Approval to conduct this study was granted by the Ethics Committee on Human Research (Institutional Review Board) at Zhong Da Hospital, Southeast University.

Statistical analysis

Data were recorded using the data management software Epidata for Windows, ver. 3.01 (<http://www.epidata.dk>), and data analysis was performed in IBM SPSS Statistics for Windows, ver. 20 (www.ibm.com/legal/copytrade.shtml). Survey respondents' basic characteristics and job satisfaction scoring are indicated as percentages. A one-way ANOVA was used for the analysis of doctors' job satisfaction, and logistic regression was used for multivariate analysis. The dependent variable was doctors' job satisfaction, and independent variables were doctor classification (GPs=1, specialists=0), gender (female=1, male=0), age (>41 years, ≤ 40 years), marital status (married, divorce, or widowed=1, single=0), educational attainment (master's and above=1, undergraduate and below=0), professional title (intermediate title and above=1, junior title and below=0), and seniority (>5 years=1, ≤ 5 years=0). Correlation analysis was used to assess the relationships among the 5 dimensions of satisfaction, with $P<0.05$ used as the criterion for statistical significance.

Results

Basic characteristics

For the survey, 2010 questionnaires were issued and 1883 valid filled questionnaires were recovered, for an effective response rate of 93.7%. The basic information of respondents is shown in Table 1. Of the 1883 doctors responding, 850 were general practitioners and 1033 were specialists (Table 1). More male than female doctors were included. Most respondents were under the age of 50, and a large portion of respondents were married. As shown in Table 1, the chi-square values of differences between specialist doctors and general practitioners in terms of age, marital status, educational attainment, professional title, and seniority were statistically significant ($P<0.05$).

Satisfaction analysis of each item for general practitioners and specialists

The overall satisfaction of the doctors was 3.11 ± 0.87 , with internal satisfaction equal to 3.09 ± 0.90 and external satisfaction equal to 3.14 ± 0.90 (Table 2). Overall satisfaction of general practitioners (GPs) was 2.81 ± 0.84 , with internal satisfaction equal to 2.78 ± 0.86 and external satisfaction equal to 2.86 ± 0.88 . For specialists, overall satisfaction was 3.35 ± 0.82 , internal satisfaction was 3.33 ± 0.85 , and external satisfaction was 3.37 ± 0.84 . Overall, the degree of job satisfaction of specialists was higher than that of general practitioners. The highest scored item of doctors was question 12 (the way hospital policy is implemented, 3.29 ± 1.13), and the lowest scored was question 7 (work that does not violate my conscience, 2.95 ± 1.31). Each item differed significantly ($P<0.05$) between general practitioners and specialists, and there was a statistically significant difference in satisfaction between specialists and general practitioners ($P<0.05$).

Factors influencing doctors' job satisfaction

Single-factor analysis of doctor satisfaction indicated (Table 3) that job satisfaction was highest in: male doctors over female doctors ($P<0.05$); doctors more than 50 years old ($P<0.05$); married doctors ($P<0.05$); doctors with master's degree and above ($P<0.05$); and, doctors who have worked for 5–10 years ($P<0.05$). The single-factor analysis of internal and external satisfaction is consistent with that of overall satisfaction.

Logistic regression analysis (Table 4) showed that doctor classification, gender, education, and professional title significantly affected doctors' job satisfaction. In addition, gender, education, and work time were factors affecting general practitioners' job satisfaction, while marriage status, birth, education, and professional title were factors affecting specialist doctors' job satisfaction.

Table 1. Basic characteristics information of the doctors investigated.

Variable	Total n (%)	Number of subjects from community n (%)	Number of subjects from hospital n (%)	χ^2	P-value
Gender					
Male	1057 (56.1)	461 (54.2)	596 (57.7)	2.268	0.132
Female	826 (43.9)	389 (45.8)	437 (42.3)		
Age (years)					
<30	354 (18.8)	131 (15.5)	223 (21.6)	57.216	0.000
31–40	745 (39.6)	285 (33.5)	460 (44.5)		
41–50	631 (33.5)	353 (41.5)	278 (26.9)		
>50	153 (8.1)	81 (9.5)	72 (7.0)		
Marital status					
Single	189 (10.0)	62 (7.2)	127 (12.3)	107.012	0.000
Married	157 (83.4)	782 (92.0)	788 (76.3)		
Divorce	88 (4.7)	3 (0.4)	85 (8.2)		
Widowed	36 (1.9)	3 (0.4)	33 (3.2)		
Education					
Undergraduate and below	144 (76.8)	837 (98.5)	610 (59.1)	460.049	0.000
Master's and above	436 (23.2)	13 (1.5)	423 (40.9)		
Professional title					
Junior title and below	595 (31.6)	199 (23.4)	396 (38.3)	61.360	0.000
Intermediate title	780 (41.4)	388 (45.6)	392 (37.9)		
Deputy senior and above	383 (20.4)	181 (21.4)	202 (19.6)		
Other	125 (6.6)	82 (9.6)	43 (4.2)		
Seniority (years)					
<5	536 (28.5)	123 (14.5)	413 (40.0)	652.643	0.000
5–10	650 (34.5)	149 (17.5)	501 (48.5)		
11–15	158 (8.4)	110 (12.9)	48 (4.6)		
>16	539 (28.6)	468 (55.1)	71 (6.9)		
Total	1883	850	1033		

Correlation analysis of doctors' job satisfaction in 5 dimensions

Overall satisfaction is divided into 5 dimensions: work itself, work environment, interpersonal relationship, lead management, pay, and benefits. The correlation analysis revealed that overall satisfaction was most closely related to the job itself. In addition, work itself, work environment, and interpersonal relationships were all closely correlated with the lead management dimension (Table 5).

Discussion

In China, general and specialized hospitals are often superior to primary health care institutions; therefore, specialists often have a superior work environment, higher salary and benefits, and better career development compared to general practitioners. However, specialists have heavier workloads and pressure, especially the competitive pressure imposed by a professional title and scientific research requirements. There is a high and

Table 2. Doctor satisfaction analysis for each project on MSQ.

Items	Total (N=1883) (M±SD)	GPs (N=850) (M±SD)	Specialists (N=1033) (M±SD)	χ ²	P
q1: Being able to keep busy all the time	3.10±1.13	2.83±1.05	3.33±1.15	105.55	0.000
q2: The chance to work alone on the job	3.13±1.06	2.84±1.02	3.38±1.04	121.53	0.000
q3: The chance to do different things from time to time	3.14±0.97	2.89±0.90	3.35±0.98	112.02	0.000
q4: The chance to be “somebody” in the community	3.12±1.07	2.82±1.03	3.37±1.04	127.17	0.000
q5: The way my boss handles his/her workers	3.05±1.20	2.70±1.16	3.34±1.15	137.04	0.000
q6: The competence of my supervisor in making decisions	3.06±1.18	2.75±1.15	3.32±1.15	108.34	0.000
q7: Being able to do things that don’t go against my conscience	2.95±1.31	2.56±1.26	3.27±1.26	147.69	0.000
q8: The way my job provides for steady employment	3.04±1.17	2.68±1.15	3.34±1.11	158.81	0.000
q9: The chance to do things for other people	3.09±1.03	2.79±0.99	3.35±0.99	143.77	0.000
q10: The chance to tell people what to do	3.08±1.04	2.77±1.00	3.34±1.00	144.70	0.000
q11: The chance to do something that makes use of my abilities	3.12±1.05	2.84±1.05	3.36±0.99	124.74	0.000
q12: The way company policies are put into practice	3.29±1.13	2.81±1.05	3.33±1.02	124.67	0.000
q13: My pay and the amount of work I do	3.17±1.07	3.13±1.08	3.42±1.15	48.63	0.000
q14: The chances for advancement on this job	3.07±1.05	2.87±1.08	3.42±1.00	134.16	0.000
q15: The freedom to use my own judgment	3.07±1.05	2.77±1.03	3.32±1.00	134.84	0.000
q16: The chance to try my own methods of doing the job	3.08±1.04	2.80±1.03	3.32±0.99	121.99	0.000
q17: The working conditions	3.20±1.13	2.90±1.13	3.44±1.07	112.17	0.000
q18: The way my co-workers get along with each other	2.99±1.18	2.64±1.13	3.27±1.15	140.27	0.000
q19: The praise I get for doing a good job	3.18±1.05	2.89±1.05	3.42±0.99	123.54	0.000
q20: The feeling of accomplishment I get from the job	3.12±1.11	2.83±1.10	3.36±1.08	113.27	0.000
General	3.11±0.87	2.81±0.84	3.35±0.82	285.50	0.000
Intrinsic	3.09±0.90	2.78±0.86	3.33±0.85	247.94	0.000
Extrinsic	3.14±0.90	2.86±0.88	3.37±0.84	194.96	0.000

External satisfaction: questions 5–6, 12–14 and 19; internal satisfaction: questions 1–4, 7–11, 15–16 and 20.

increasing level of mental distress and discontent among GPs, and targeted interventions are needed to address GP mental health and job satisfaction [16]. Nonetheless, the present study found that for all measures of job satisfaction (overall, internal and external), specialists ranked higher than general practitioners. The 3 highest-scored items of doctors were: the way company policies are put into practice, the working conditions, and praise doing a good job. The highest-scored item for general practitioners was working conditions. For specialists, the highest-scored item was also working conditions. General practitioners and specialists all gave low scores for question 7 (“Being able to do things that don’t go

against my conscience”). This may be related to China’s drug price system. China’s drug price system links part of the doctors’ income to the prescriptions they give. Increasing income and benefits levels for doctors, especially general practitioners, may increase doctors’ satisfaction. Communication activities should be carried out to enhance internal mutual cooperation, creating a harmonious, interactive work atmosphere, and improving doctors’ working enthusiasm.

The influence of gender on job satisfaction has previously been the focus of academic research [17,18], showing that male doctors scored higher than female doctors on all items in general

Table 3. Influencing factors of doctors' job satisfaction.

	GPs (n=850) (M±SD)	Specialists (n=1033) (M±SD)	Total (n=1883) (M±SD)	F/P	Intrinsic	F/P	Extrinsic	F/P
Gender								
Male	2.92±0.85	3.42±0.81	3.20±0.87	31.029/ 0.000	3.19±0.90	29.711/ 0.000	3.24±0.89	27.737/ 0.000
Female	2.67±0.80	3.25±0.83	2.98±0.86		2.96±0.88		3.02±0.89	
Age (years)								
<30	2.98±1.00	3.11±0.86	3.06±0.92	6.001/ 0.000	3.06±0.92	6.761/ 0.000	3.09±0.95	4.031/ 0.007
31–40	2.69±0.79	3.36±0.77	3.11±0.85		3.08±0.87		3.17±0.88	
41–50	2.80±0.79	3.38±0.82	3.06±0.86		3.04±0.89		3.09±0.87	
>50	2.95±0.85	3.86±0.76	3.38±0.92		3.40±0.95		3.34±0.94	
Marital status								
Single	2.91±1.00	3.12±0.80	3.05±0.87	13.729/ 0.000	3.04±0.87	16.310/ 0.000	3.07±0.90	6.689/ 0.000
Married	2.80±0.82	3.50±0.79	3.15±0.88		3.14±0.90		3.17±0.90	
Divorce	1.73±0.33	2.64±0.63	2.61±0.64		2.55±0.64		2.77±0.74	
Widowed	3.38±1.10	2.66±0.57	2.72±0.64		2.60±0.63		2.95±0.75	
Educational attainment								
Undergraduate and below	2.80±0.84	3.38±0.78	3.05±0.86	28.804/ 0.000	3.03±0.89	26.111/ 0.000	3.08±0.89	29.788/ 0.000
Master and above	2.93±0.89	3.31±0.87	3.30±0.88		3.28±0.90		3.35±0.89	
Professional title								
Junior title and below	2.76±0.77	3.54±0.83	2.28±0.89	15.892/ 0.000	3.27±0.92	16.258/ 0.000	3.29±0.90	12.229/ 0.000
Intermediate title	2.77±0.80	3.34±0.74	3.06±0.82		3.03±0.85		3.11±0.85	
Deputy senior and above	3.02±0.97	3.07±0.82	3.05±0.89		3.04±0.90		3.08±0.92	
Other	2.62±0.80	3.04±1.03	2.77±0.90		2.75±0.90		2.80±0.96	
Seniority (years)								
<5	2.90±.96	3.18±0.84	3.12±0.87	46.275/ 0.000	3.10±0.89	46.932/ 0.000	3.17±0.89	34.941/ 0.000
5–10	2.79±0.87	3.55±0.79	3.38±0.87		3.37±0.89		3.38±0.90	
11–15	2.84±0.81	3.10±0.65	2.92±0.77		2.88±0.82		3.00±0.80	
>16	2.78±0.80	3.08±0.76	2.82±0.80		2.80±0.83		2.87±0.83	
Total	2.81±0.84	3.35±0.82	3.11±0.87		3.09±0.90		3.14±0.90	

practitioners, which is similar to the present study. General practitioners with master's education level and above scored higher than those with undergraduate level and below. In specialists, however, undergraduate and below scored higher than

master's and above. The difference between the 2 groups was statistically significant. Compared to primary health institutions, general and specialized hospitals typically require higher levels of vocational and technical experience for doctors. Research

Table 4. Logistic regression of doctor satisfaction.

Variables	B	SE	OR	95%CI	P
Doctor classification (GPs/Specialists)	-1.20	0.11	0.30	0.24, 0.37	0.000
Gender (Female/Male)	-0.45	0.10	0.64	0.53, 0.77	0.000
Education (Master and above/Undergraduate and below)	-0.34	0.13	0.71	0.55, 0.92	0.009
Professional title (Intermediate title and above/Junior title and below)	-0.31	0.11	0.73	0.60, 0.90	0.003
Constant	1.09	0.12	2.98	-	0.000

Table 5. Correlation analysis of doctors' job satisfaction in 5 dimensions.

	Overall	Work itself	Work environment	Interpersonal relationship	Lead management	Pay and benefits
Overall	1					
Work itself	0.961*	1				
Work environment	0.945*	0.887*	1			
Interpersonal relationship	0.929*	0.864*	0.842*	1		
Lead management	0.958*	0.898*	0.875*	0.898*	1	
Pay and benefits	0.923*	0.857*	0.856*	0.806*	0.845*	1

* $P < 0.05$.

shows that a higher degree can lead employees to have higher expectation for their career [19]. As a result, higher-educated doctors may have higher expectations for their career, and if working at a primary health institution, these expectations may not be met, and thus they have lower job satisfaction. On the other hand, for less-educated doctors working in general and specialized hospitals, their lack of education may be an obstacle, lowering their competitiveness in their career development, especially in terms of scientific research and professional title, and this may also reduce job satisfaction.

Doctor classification, gender, education, and professional title are factors that affect doctors' job satisfaction. In addition, gender, education, and work time affected general practitioners' job satisfaction, while marriage status, education, and professional title affected specialists' job satisfaction. More working years is accompanied by increasing salary and promotion, leading to greater social status and confidence in future career development; it is thus unsurprising that these factors lead to increased job satisfaction. Marital status has an impact on people's daily life, especially their emotions. Good marital status makes people happy, leading to work motivation and enthusiasm. Divorced and widowed individuals often lack self-care in their daily lives, and are affected by various aspects of negative effects that can also have an impact on work motivation and efficiency. Zhou [20] suggested that measures are

needed to promote continuing education and personal health, balance workload, and income, and to rebuild trust and respect for medical staff, thereby improving job satisfaction among physicians and nurses in tertiary public hospitals. Meanwhile, work itself, work environment, and interpersonal relationship are closely correlated with lead management. Thus, we need to take measures to improve the abilities of lead management.

As an important constituent group of health service providers, doctors directly affect the quality of medical and health services provided. Improving doctors' job satisfaction is thus important to improving the quality of medical and health services, the relationship between doctors and patients, and patient satisfaction in the treatment process. With the deepening of the new reform in China's medical and health care system and the implementation of hierarchical diagnosis and treatment, general practitioners and specialists undertake different responsibilities at different levels of medical institutions. The results of this survey provide suggestions for improving doctors' job satisfaction. First, general practitioners' job satisfaction is less than that of specialists overall. However, with implementation of the first-option at the primary system, general practitioners play the role of gatekeeper in residents' health. As the first-contact doctor for residents, it is important to improve the job satisfaction of general practitioners. This can be done by improving income levels, benefits received,

and working environment, and regularly developing the teaching and training work of general practitioners. When the level of medical technology in general practitioners increases, their work enthusiasm also increases.

Second, job satisfaction in specialists was mainly related to the working time and the degree of busy work. Implementing a hierarchical diagnosis and treatment system, especially the first-option in primary medical institutions (guiding patients to go to primary medical institutions first), will allow primary medical institutions to undertake treatments of the most frequently-occurring diseases, to some extent relieving the degree of busy work of specialists.

Finally, although general practitioners and specialists undertake different labor divisions in different levels of medical institutions, they are all included in the health care system in China. Under the backdrop of hierarchical diagnosis and treatment implementation in China, strengthening the linking and cooperation projects between different levels of medical and health institutions, and enhancing information-sharing and

communication between general practitioners and specialists, could significantly reduce working pressure and promote efficient medical service supply, especially for referral patients. In addition, better professional title assessment mechanisms, promoting fairness of professional title competitions, and increasing doctors' confidence in their career development planning for the future are all ways to increase the working enthusiasm and job satisfaction of doctors.

Conclusions

The level of job satisfaction of Chinese doctors, especially general practitioners, needs to be improved. Doctor classification, gender, education, and professional title are factors that affect doctors' job satisfaction. Measures such as improving education levels, work environment, and relationships should be taken soon to improve doctors' job satisfaction in China. In addition, the improvement of doctors' own education and professional title is also beneficial to the improvement of job satisfaction.

References:

1. Spector PE: Job satisfaction: Application, assessment, causes, and consequences. 1997; 513-16
2. Jia, JN, Liu ZP: Study on demand forecasting of enterprise management human resources based on MRA-OLS. In International Conference on Management and Service Science, 2010
3. Cabelkova I, Ahrham J, Strielkowski W: Factors influencing job satisfaction in post-transition economies: The case of the Czech Republic. *Int J Occup Saf Ergon*, 2015; 21(4): 448-56
4. Judge TA, Weiss HM, Kammeyer-Mueller JD, Hulin CL4: Job attitudes, job satisfaction, and job affect: A century of continuity and of change. *J Appl Psychol*, 2017; 102(3): 356-74
5. Rui H: [The influence of doctor - patient relationship and job satisfaction on physicians' organizational citizenship behavior.] *Journal of Xi'an Jiaotong University (Social Sciences)*, 2017; 37(4): 55-61 [in Chinese]
6. Yuan F, Qian D, Huang C et al: Analysis of awareness of health knowledge among rural residents in Western China. *BMC Public Health*, 2015; 15(1): 1-8
7. Zihong M: [Report on the status of doctors' practice in China.] *China Health Industry*, 2011; (25): 12-13 [in Chinese]
8. Fu J, Sun W, Wang Y et al: Improving job satisfaction of Chinese doctors: The positive effects of perceived organizational support and psychological capital. *Public Health*, 2013; 127(10): 946-51
9. Ying G: [The influence factors on the public hospital doctor's work enthusiasm.] *Fujian Medical University*, 2014 [in Chinese]
10. Haas JS, Cook EF, Puopolo AL et al: Is the professional satisfaction of general internists associated with patient satisfaction? *J Gen Intern Med*, 2010; 15(2): 122-28
11. Tingyu W: Quanzhou City No. 1 Hospital doctors' flow management research. *Huaqiao University*, 2016 [in Chinese]
12. Wen T, Zhang Y, Wang X, Tang G: Factors influencing turnover intention among primary care doctors: A cross-sectional study in Chongqing, China. *Hum Resour for Health*, 2018; 16: 10
13. Weiss DJ, Dawis RV, England GW: Manual for the Minnesota Satisfaction Questionnaire. *Minnesota Studies in Vocational Rehabilitation*, 1967; 22
14. Wei Y: [Job satisfaction of young general practitioners in community health service centers and their comparison with specialists.] *Fudan University*, 2014 [in Chinese]
15. China, Investigation and study on Chinese doctor-patient relationship: The fourth special research report of national health service survey. *China Union Medical University Press*, 2010
16. Nørøxe KB, Pedersen AF, Bro F, Vedsted P et al: Mental well-being and job satisfaction among general practitioners: A nationwide cross-sectional survey in Denmark. *BMC Fam Pract*, 2018; 19(1): 130
17. Xiaobo Y: [An empirical study on job satisfaction of clinical doctors - Taking a certain medical group as an example.] *Shanxi Medical University*, 2016 [in Chinese]
18. Wu S et al: The physician attrition crisis: A cross-sectional survey of the risk factors for reduced job satisfaction among US Surgeons. *Int J Environ Res Public Health*, 2018; 42(5): 1285-92
19. Yingchun Y, Jianqian C: [A survey on job satisfaction of doctors in Nanjing.] *Chinese Hospital Management*, 2008; 28(3): 31-33 [in Chinese]
20. Zhou H, Han X, Zhang J et al: Job satisfaction and associated factors among medical staff in tertiary public hospitals: Results from a national cross-sectional survey in China. *Int J Environ Res Public Health*, 2018; 15(7): pii: E1528