

Field Study

Physician Job Satisfaction and Working Conditions in Japan

Koji WADA¹, Mayuri ARIMATSU², Toshiaki HIGASHI², Toru YOSHIKAWA³, Susumu ODA⁴, Hatsumi TANIGUCHI⁵, Masatoshi KAWASHIMA⁶ and Yoshiharu AIZAWA¹

¹Department of Preventive Medicine and Public Health, Kitasato University School of Medicine, ²Department of Work Systems and Health, The Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan, ³Institute for Science of Labour, ⁴Fukuoka Occupational Health Promotion Centre, ⁵Department of Microbiology, University of Occupational and Environmental Health, Japan and ⁶Department of Occupational Health, Graduate School of Medical Science, Kitasato University School of Medicine, Japan

Abstract: Physician Job Satisfaction and Working Conditions in Japan: Koji WADA, et al. Department of Preventive Medicine and Public Health, Kitasato University School of Medicine—Objectives: The aim of this study was to determine factors of working conditions associated with job satisfaction among physicians in Japan. **Methods:** We sent a questionnaire to all the physicians who graduated from a medical school in Japan. Physicians who were satisfied with their job were determined as those who selected “very satisfied” and “satisfied” in response to the question: “Overall, are you satisfied with your job?” Working conditions were determined from 10 different aspects: income fairness, hospital resources, career satisfaction, difficulty in patient care, lack of personal time, administrative work, workload, and relationships with physician colleagues, staff and patients. Logistic regression analysis was used to explore the association between working conditions and job satisfaction. **Results:** Among the respondents, 209 (55.4%) men and 62 (61.4%) women were determined to be satisfied with their job. Job satisfaction was associated with income fairness for both men (corrected odds ratio 1.31, 95% confidence interval 1.09 to 1.47) and women (1.35, 1.05 to 1.53). For men, job satisfaction was associated with good hospital resources (1.45, 1.29 to 1.57), high career satisfaction (1.41, 1.23 to 1.57), good relationships with physician colleagues (1.33, 1.12 to 1.49), and good relationships with hospital staff (1.28, 1.07 to 1.45). For women, job satisfaction was associated with good relationships with patients (1.41, 1.07 to 1.56). **Conclusions:** Certain working conditions

were important factors for job satisfaction among physicians. These factors should be discussed for improving working conditions.

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Key words: Job satisfaction, Physicians, Working conditions

Physician job satisfaction is essential for ensuring the quality and sustainability of health care provision^{1, 2}. However, some recent studies have reported declining job satisfaction among physicians in many countries^{3–5}. Japan is one such country that faces issues related to “collapsing health care services” because physicians are losing their motivation³. Some physicians quit their hospital posts due to unfavorable working conditions and then open their own clinics or move to other hospitals with better working conditions. Consequently, some patients are unable to locally access the services of certain specialists due to their unavailability. This phenomenon cannot be fully explained by a hard workload and unsatisfactory salary for physicians⁶.

Job satisfaction is associated with the health conditions of workers including mental or psychological problems such as burnout, low self-esteem, depression, and anxiety⁷. Job dissatisfaction affects patient-rated quality of care and is strongly related to early retirement and cut back of working hours^{5, 8}. Several factors relating to working conditions have been identified to be associated with physician job satisfaction in other countries^{9–13}. These working conditions include career satisfaction, and relationships with patients and staff. However, different factors appear to influence job satisfaction for Japanese physicians.

In an effort to address the growing problem of insufficient healthcare provision, the Japanese government has started to increase the number of medical

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Correspondence to: K. Wada, Department of Preventive Medicine and Public Health, Kitasato University School of Medicine, 1–15–1 Kitasato, Sagami-hara-shi, Kanagawa 228-8555, Japan (e-mail: kwada-sgy@umin.ac.jp)

students^{14, 15}). However, it will take a long time to nurture sufficient numbers of physicians to provide optimal healthcare services.

It is urgent and necessary to considerably improve physician working conditions and redesign their working patterns to maintain job satisfaction in the short term¹⁶. Identifying factors associated with job satisfaction among physicians might be a good strategy to maintain high motivation at work. A limited number of studies on job satisfaction among physicians have been conducted in Japan^{17, 18}. They have focused on physicians working in rural areas and on developing a questionnaire. The aim of this study was to determine factors of working conditions associated with job satisfaction for physicians in Japan.

Methods

The participants of this study were all physicians who had graduated from one medical school in Japan, the University of Occupational and Environmental Medicine, from 1986 to 2003, and who had practiced for at least 3 yr. In November 2006, a questionnaire was distributed to 1,746 eligible participants.

An anonymous self-administered questionnaire was used to obtain information on demographics, working conditions, and job satisfaction. The questionnaire comprised 29 items including the following 10 different aspects of working conditions for physicians: income fairness; hospitals resources; career satisfaction; relationships with physician colleagues; relationships with hospital staff; relationships with patients; difficulty in patient care; lack of personal time; administrative work; and workload. A 5-point Likert scale for each question was used as follows: 1, strongly disagree; 2, mildly disagree; 3, neutral; 4, mildly agree; and 5, strongly agree. Scores were summed and divided at the median into high and low scores.

The details of the questions for each item are reported elsewhere¹⁹. However, some of the 10 aspects of working conditions for physicians needed to be explained. The difference between the difficulty in patient care and relationships with patients was that difficulty in patient care was assessed from the negative aspects of the relationships between patients and physicians, such as the risk of being sued and demands made by the patients, whereas the relationships with patients was assessed from the positive aspects of the relationships between patients and physicians. Hospital resources included essential medical facilities, sufficient space in examination rooms and administrative support at hospitals.

To measure job satisfaction, we used a 5-point Likert scale for overall job satisfaction, in which a response of "very unsatisfied" was scored as 1, and response of "very satisfied" was scored as 5. Physicians who were satisfied with their job were defined as those who answered "very

satisfied" and "satisfied".

Statistical analysis

Logistic regression analysis was performed to determine the associations between job satisfaction and working conditions. We first examined the variables mentioned above by univariate analysis and then entered age and the study variables in the analysis as the adjusted model. All analyses were performed using the Statistical Package for the Social Sciences for Windows, ver.15.0²⁰. In cases the outcome of interest is not rare, the odds ratio may exaggerate risk associations. Thus, odds ratios in this study were converted to corrected odds ratio (cOR) using the formulas suggested by Zhang *et al.* because a relatively high percentage of the participants were satisfied with their job²¹.

Ethics

The Human Research Committee at the University of Occupational and Environmental Health, Japan approved the procedure of this study.

Results

A total of 540 men and 158 women responded to the questionnaire and 34 responded but declined to answer. The adjusted response rate obtained was 41.9%. We analyzed the data of physicians working in clinical settings, and excluded 163 men (30.2% of the male respondents) and 57 women (36.1% of the female respondents) who were working at companies or related institutions as occupational health physicians. A total of 377 men and 101 women working in clinical settings were analyzed.

Among the respondents, 209 (55.4%) men and 62 (61.4%) women were determined as "satisfied with their job". The characteristics of the participants and the median (interquartile range: IQR) of the variables of working conditions are shown in Table 1.

The results of the logistic regression analysis of the associations of job satisfaction with the working conditions are shown in Table 2. The crude model shows the cORs analyzed by univariate analysis. Significant associations of job satisfaction with income fairness, hospital resources, career satisfaction, relationships with physician colleagues, relationships with hospital staff, and relationships with patients for both men and women were observed. Difficulty in patient care, lack of personal time, and administrative work for men, and workload for women were negatively associated with job satisfaction.

The adjusted model shows the significant associations of working conditions with job satisfaction. Job satisfaction was associated with income fairness for both men (corrected odds ratio 1.31, 95% confidence interval 1.09 to 1.47) and women (1.35, 1.05 to 1.53). For men, job satisfaction was associated with high hospital

Table 1. Characteristics of the participants by sex

	Male (n=377)	Female (n=101)
Age		
27–29	26	18
30–39	132	52
40–49	202	28
50–59	16	3
60+	1	0
Job satisfaction		
Very satisfied	23	4
Satisfied	186	58
Neutral	118	25
Not satisfied	41	11
Very unsatisfied	9	3
The median (IQR) of the variables		
Income fairness	6.0 (4.0–8.0)	7.0 (5.0–8.0)
Hospital resources	10.0 (8.0–12.0)	10.0 (8.5–12.0)
Career satisfaction	7.0 (6.0–8.0)	6.0 (4.0–7.0)
Relationships with physician colleagues	15.0 (13.0–16.0)	14.0 (13.0–16.0)
Relationships with hospital staff	15.0 (13.0–16.0)	15.0 (14.0–16.0)
Relationships with patients	8.0 (8.0–9.0)	8.0 (7.0–9.0)
Difficulty in patient care	15.0 (12.0–17.0)	15.0 (12.0–17.0)
Lack of personal time	12.0 (9.0–14.0)	11.0 (6.0–13.0)
Administrative work	8.0 (6.0–9.0)	10.0 (8.0–12.0)
Workload	11.0 (10.0–13.0)	10.0 (9.0–12.0)

resources (1.45, 1.29 to 1.57), high career satisfaction (1.41, 1.23 to 1.57), good relationships with physician colleagues (1.33, 1.12 to 1.49), and good relationships with hospital staff (1.28, 1.07 to 1.45). For women, job satisfaction was associated with relationships with patients (1.41, 1.07 to 1.56) and weakly associated with good hospital resources (1.32, 1.00 to 1.50), and high career satisfaction (1.31, 0.96 to 1.50).

Discussion

In this study, we report the association between certain factors of working conditions and job satisfaction among physicians in Japan. The results show that 50 to 60% of the participants were satisfied with their job. Some differences in the working condition factors associated with job satisfaction were observed between men and women. However, these differences can not be confirmed due to the limited number of women participants.

Job satisfaction among physicians is often high in other countries. In Switzerland, 77% of physicians participating in a study, and in Canada, 75% of respondents among anaesthesiologists were found to be satisfied with their job^{10, 22}. In the United States, 75% of 129 obstetrician-gynaecologists rated overall satisfaction as moderate or

strongly agree²³. Relatively fewer physicians were satisfied with their job in the present study than in these other studies.

Income fairness was associated with job satisfaction for both men and women. The income scale among physicians in Japan is usually determined by the number of years of experience as a physician and not by specialization and workload²⁴. The income level of physicians working in clinics is often higher than that of those working in hospitals²⁴. Moreover, two-thirds of hospitals in Japan do not have a standard pay structure for physicians²⁵. This may heighten distrust of hospitals among physicians and may contribute to the uneven distribution of physicians in terms of specialization. Therefore, the perception of income fairness must become a topic for discussion when considering job satisfaction among physicians.

Hospital resources such as essential medical facilities, sufficient space in examination rooms, and administrative support in the hospital were associated with job satisfaction for both men and women. Governmental efforts to minimize medical expenses have not improved hospital resources in Japan. Thus, it is important for hospital managers to seriously consider job satisfaction

Table 2. Association between working conditions and job satisfaction by sex

Variables	Men		Women	
	Crude cOR* (95% CI)	Adjusted cOR* (95% CI)	Crude cOR* (95% CI)	Adjusted cOR* (95% CI)
Income fairness				
High	1.39 (1.24 to 1.51)	1.31 (1.09 to 1.47)	1.45 (1.26 to 1.55)	1.35 (1.05 to 1.53)
Low	1.00	1.00	1.00	1.00
Hospitals resources				
High	1.49 (1.37 to 1.59)	1.45 (1.29 to 1.57)	1.41 (1.20 to 1.55)	1.32 (1.00 to 1.50)
Low	1.00	1.00	1.00	1.00
Career satisfaction				
High	1.50 (1.38 to 1.60)	1.41 (1.23 to 1.57)	1.40 (1.18 to 1.53)	1.31 (0.96 to 1.50)
Low	1.00	1.00	1.00	1.00
Relationships with physician colleagues				
High	1.41 (1.26 to 1.52)	1.33 (1.12 to 1.49)	1.26 (0.98 to 1.45)	1.00 (0.56 to 1.34)
Low	1.00	1.00	1.00	1.00
Relationships with hospital staff				
High	1.49 (1.36 to 1.59)	1.28 (1.07 to 1.45)	1.39 (1.17 to 1.52)	1.29 (0.94 to 1.49)
Low	1.00	1.00	1.00	1.00
Relationships with patients				
High	1.24 (1.01 to 1.42)	1.11 (0.81 to 1.36)	1.41 (1.17 to 1.53)	1.41 (1.07 to 1.56)
Low	1.00	1.00	1.00	1.00
Difficulty in patient care				
High	0.67 (0.51 to 0.86)	0.82 (0.60 to 1.05)	0.72 (0.45 to 1.08)	0.96 (0.51 to 1.33)
Low	1.00	1.00	1.00	1.00
Lack of personal time				
High	0.81 (0.64 to 0.99)	0.88 (0.66 to 1.11)	0.77 (0.46 to 1.10)	0.74 (0.33 to 1.21)
Low	1.00	1.00	1.00	1.00
Administrative work				
High	0.72 (0.55 to 0.91)	0.81 (0.59 to 1.05)	0.89 (0.57 to 1.20)	1.07 (0.57 to 1.42)
Low	1.00	1.00	1.00	1.00
Workload				
High	0.97 (0.78 to 1.15)	1.15 (0.92 to 1.36)	0.70 (0.39 to 1.04)	0.82 (0.36 to 1.28)
Low	1.00	1.00	1.00	1.00

Figures are corrected odds ratios (95% confidence intervals). *Odds ratios are corrected by Zhang's formula.

among their physicians, and the government should consider taking measures to improve this aspect of unfavorable working conditions.

Career satisfaction among physicians has been paid great attention because it is also associated with quality of care and patient outcomes²⁾. On the other hand, career dissatisfaction is associated with burnout and prolonged fatigue among physicians¹⁹⁾. In the present study, career satisfaction was associated with job satisfaction among male physicians and was weakly associated with job satisfaction among female physicians. Career satisfaction varies across demographic factors such as specialization, age, income, and region²⁾. Autonomy is also an important factor for career satisfaction²⁰⁾. Further studies are needed to identify factors affecting career development for

Japanese physicians.

The high scores of relationships with physician colleagues for men were associated with job satisfaction. A survey of the National Health Service staff in London also showed that physicians considered their work colleagues as a key factor in job satisfaction¹⁾.

The high score of relationships with hospital staff for both men and women was associated with job satisfaction. Laubach *et al.* showed that collaboration between occupational groups was strongly associated with job satisfaction among physicians in Germany²⁷⁾. On the other hand, a meta-analysis study of nurses' job satisfaction showed that nurse-physician collaboration was a major determinant. However, difficulty in communication between physicians and other staff, and

disruptive physician behaviour were often reported²⁸⁾. The impact of these phenomena on other staff and on patient outcomes could also be a concern. In this regard, educational and training programs to promote better communication among staff should be regularly carried out at hospitals.

The high score of relationships with patients was associated with job satisfaction among female physicians, and difficulty in patient care showed a weakly negative association with job satisfaction among male physicians. In this study, the questions on relationships with patients such as gratitude and personal connection were considered as positive aspects, and those on patient care issues such as lawsuits, time pressures and increasing demands of patients were considered as negative aspects. Recently, conflicts between physicians and patients have often occurred because patients believe that modern medicine can do remarkable things, whereas physicians view modern medicine as having limited power and sometimes of being detrimental patients' safety²⁹⁾. A new paradigm in which patients and physicians realize the limitation of modern medicine and come to work together to solve and address medical problems should be explored.

Administrative work was weakly associated with job satisfaction among male physicians. Some percentage (38.5%) of the respondents of a survey conducted by the Japan Hospital Association indicated that administrative work has increased when compared with that of 5 yr ago¹⁵⁾. This is because paperwork has increased (54.7% of respondents) and the frequency of administrative meetings has also increased (45.8% of respondents) despite the introduction of IT technologies such as electric medical recording systems which have not in practice reduced the workload. It was also shown that the time spent on administrative work was associated with job dissatisfaction and prolonged fatigue among physicians^{10, 17)}. Since 2008, based on the national health coverage system, the Japanese government has allowed the assigning of clerks to physicians to reduce the burden of paperwork. This can be expected to minimize the administrative work of physicians in the coming years.

Interestingly, despite the knowledge that physicians in Japan are generally overworked³⁾, neither workload nor lack of personal time was associated with job satisfaction in this study. We focused on the job satisfaction which is a positive aspect while previous studies have focused on prolonged fatigue which is a negative aspect¹⁹⁾. This difference in focus might be a reason why differences in the associations with working conditions compared to previous reports were found in the present study.

The present study has some limitations. First, because this is a cross-sectional study, we cannot confirm causal relationships. Second, the generalizability of our results was not confirmed. This study was conducted only among

physicians graduating from one medical school in Japan. A multi-center study is needed to overcome this limitation. Third, the response rate was not ideal. The number of physicians who were analyzed in this study was 27.4% of the eligible population. The non-respondents might feel job dissatisfaction. Fourth, we did not take into account other factors that may affect working conditions such as specializations, work stress, and types of work place, and the score of each working condition might be influenced by these backgrounds.

Despite these limitations, the present study indicates that certain working conditions were associated with job satisfaction among physicians in Japan. Improving some of them at the earliest opportunity would not take much time and effort. In order to ensure that physicians are satisfied with their job, physicians themselves, hospital administrators and the government should take the initiative to improve the working conditions so that effective management of physicians' working environment can be realized.

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References

- 1) Sibbald B, Bojke C, Gravelle H. National survey of job satisfaction and retirement intentions among general practitioners in England. *BMJ* 2003; 326: 22.
- 2) Leigh JP, Kravitz RL, Schembri M, Samuels SJ, Mobley S. Physician career satisfaction across specialties. *Arch Intern Med* 2002; 162: 1577–84.
- 3) Komatsu H. Collapsing health care services (Iryouhoukai). Tokyo: Asahi News Press; 2006 (in Japanese).
- 4) Janus K, Amelung VE, Gaitanides M, Schwartz FW. German physicians "on strike"—shedding light on the roots of physician dissatisfaction. *Health Policy* 2007; 82: 357–65.
- 5) Landon BE, Reschovsky JD, Pham HH, Blumenthal D. Leaving medicine: The consequences of physician dissatisfaction. *Med Care* 2006; 44: 234–42.
- 6) Edwards N, Kornacki MJ, Silversin J. Unhappy doctors: what are the causes and what can be done? *BMJ* 2002; 324: 835–8.
- 7) Faragher EB, Cass M, Cooper CL. The relationship between job satisfaction and health: A meta-analysis. *Occup Environ Med* 2005; 62: 105–12.
- 8) Grembowski D, Paschane D, Diehr P, Katon W, Martin D, Patrick DL. Managed care, physician job satisfaction, and the quality of primary care. *J Gen Intern Med* 2005; 20: 271–7.
- 9) McMurray JE, Williams E, Schwartz MD, et al. Physician Job Satisfaction: Developing a model using qualitative data. *J Gen Intern Med* 1997; 12: 711–4.
- 10) Bovier PA, Perneger TV. Predictors of work satisfaction

- among physicians. *Eur J Public Health* 2003; 13: 299–305.
- 11) Nylenna M, Gulbrandsen P, Forde R, Aasland OG. Unhappy doctors? A longitudinal study of life and job satisfaction among Norwegian doctors 1994–2002. *BMC Health Serv Res* 2005; 5: 44.
 - 12) Linzer M, Konrad TR, Douglas J, McMurray JE, Pathman DE, Williams ES, et al. Managed care, time pressure, and physician job satisfaction: Results from the physician worklife study. *J Gen Intern Med* 2000; 15: 441–50.
 - 13) Comeau M. Professional satisfaction among Canadian physicians: A retrospective look at survey results. [online]. 2007 [cited 2008 Dec 10]; Available from: URL: http://www.nationalphysicianssurvey.ca/nps/reports/PDF-e/Professional_Satisfaction_26-01-07.pdf
 - 14) The Japan Times. Coping with the doctor shortage. [online]. 2007 [cited 2008 Dec 10]; Available from: URL: <http://search.japantimes.co.jp/cgi-bin/ed20071001a1.html>
 - 15) Japan Hospital Association. A report on the assurance of the number of physicians. [online]. 2007 [cited 2008 Dec 10]; Available from: URL: <http://www.mhlw.go.jp/shingi/2007/04/dl/s0410-4b.pdf>
 - 16) MacDonald R. More doctors is not the answer to the EU working time directive. *BMJ* 2003; 326: 68.
 - 17) Matsumoto M, Okayama M, Kajii E. Rural doctors' satisfaction in Japan: A nationwide survey. *Aust J Rural Health* 2004; 12: 40–8.
 - 18) Ozaki M, Bito S, Matsumura S. Developing a Japanese hospital physician satisfaction scale. *Int J Health Care Qual Assur* 2008; 21: 517–28.
 - 19) Wada K, Arimatsu M, Yoshikawa T, et al. Factors on working conditions and prolonged fatigue among physicians in Japan. *Int Arch Occup Environ Health* 2008; 82: 59–66.
 - 20) SPSS for Windows Version 15.0. Chicago: SPSS Inc; 2007.
 - 21) Zhang J, Yu KF. What's the relative risk? A method of correcting the odds ratio in cohort studies of common outcomes. *JAMA* 1998; 280: 1690–1.
 - 22) Jenkins K, Wong D. A survey of professional satisfaction among Canadian anesthesiologists. *Can J Anaesth* 2001; 48: 637–45.
 - 23) Bell DJ, Bringman J, Bush A, Phillips OP. Job satisfaction among obstetrician-gynecologists: A comparison between private practice physicians and academic physicians. *Am J Obstet Gynecol* 2006; 1474–8.
 - 24) The Japan Medical Association. Salary among physicians. [online]. 2007 [cited 2008 Dec 10]; Available from: URL: http://www.med.or.jp/teireikaiken/20070411_4.pdf
 - 25) All Japan Hospital Association. A survey on salary among health care workers. [online]. 2004 [cited 2008 Dec 10]; Available from: URL: http://www.ajha.or.jp/topnews/backnumber/2004/04_12_15_8.html
 - 26) Stoddard JJ, Hargraves JL, Reed M, Vratil A. Managed care, professional autonomy, and income: Effects on physician career satisfaction. *J Gen Intern Med* 2001; 16: 675–84.
 - 27) Laubach W, Firschbeck S. Job satisfaction and the work situation of physicians: A study at a German university hospital. *Int J Public Health* 2007; 52: 54–9.
 - 28) Rosenstein AH, O'Daniel M. Managing disruptive physician behaviour: impact on staff relationships and patient care. *Neurlogy* 2008; 70: 1564–70.
 - 29) Smith R. Why are doctors so unhappy? There are probably many causes, some of them deep. *BMJ* 2001; 322: 1073–4.