

The Gap Between Physicians and the Public in Satisfaction with the National Health Insurance System in Korea

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The Korean National Health Insurance (NHI) system was an unprecedented accomplishment that was achieved in a short period of time. In this study, we sought to identify gaps between physicians and the public with respect to attitudes toward the NHI system in Korea. The study population was derived from the 2008 Korean Medical Association Survey, which was conducted to investigate satisfaction with and perceptions of the NHI system among physicians ($n = 961$) and the public ($n = 935$). Only 6.5% of the physicians were satisfied with NHI system, and 71.5% were dissatisfied with it. In contrast, 28.3% of the public were satisfied with the NHI system, and 21.4% were dissatisfied. The level of dissatisfaction expressed by physicians (2.03 ± 0.91 on a five-point scale) was also higher than that expressed by the public (3.06 ± 0.84). Despite rapid growth of NHI system, a large gap in satisfaction exists between physicians and the public.

Key Words: Satisfaction; Physician; Health System; National Health Insurance

INTRODUCTION

The Korean Government launched a mandatory health insurance scheme for employees in large corporations employing more than 500 people in 1977 and implemented the National Health Insurance (NHI) system, which covered the entire Korean population, in 1989 (1). The Korean NHI system has been an unprecedented achievement for such a short period of time (2). The NHI system initially offered plans with low premiums, low benefits, and low doctors' fees, to contribute to eliminating inequities based on socioeconomic status (3). This approach improved access to medical services, enhanced life expectancy, and eliminated gaps between urban and rural areas and among different classes with respect to the use of services (2, 4).

From an external perspective, the Korean NHI system appears to have been successful in mobilizing resources for healthcare, rapidly extending coverage among the public, effectively pooling public and private resources to provide healthcare for the entire population, and containing healthcare expenditures (1). However, the rapid growth of the NHI also produced a number of problems. Although most medical institutions (78% of hospitals) are privately owned and receive no government support (2), all medical institutions and physicians in Korea have been required to join the NHI system (5).

Korea experienced two significant healthcare reforms in 2000:

1) the separation of drug prescription and dispensing (SPD), and 2) the integration of multiple health insurers into a single payer (4). These reforms created conflicts between physicians and the Government and led to strikes by physicians. In 2001, the NHI system experienced financial deficits as a result of these reforms, and the Government focused on regulating payment policies, which only increased the complaints expressed by physicians.

Physician dissatisfaction with the NHI system might lead to a negative effect on the development of healthcare systems and on the quality of care offered in those systems. Recently, many studies focusing on job satisfaction among physicians have examined satisfaction with medical services in various countries and have compared opinions on the quality of medical services expressed by physicians and the general public (6-8). Some studies have shown that the job satisfaction of physicians derives, in part, from the quality of services and the extent to which patients feel helped by the medical services provided (9-11). These studies have concluded that greater job satisfaction among physicians is positively associated with positive relationships between doctors and patients and increases both patient satisfaction and the quality of service (9, 10, 12-14). At the same time, physician satisfaction may be related to characteristics of the healthcare systems in which they practice. As the influence of managed care increases, physicians may experience greater dissatisfaction with

their jobs (9, 15). The new health insurance act weakened the autonomy of physicians, increased their administrative workloads, and increased their responsibility for growing medical costs, eventually decreasing their job satisfaction (16, 17). Some studies have concluded that the job satisfaction of physicians is attributable to the nature of the healthcare system in which they work (18, 19).

More specifically, Korean physicians are either operators of or subscribers to the NHI system. Thus, their level of satisfaction may be more important than that of the public. However, studies on satisfaction with the NHI system in Korea have focused primarily on the public rather than on the practitioners (20). Although research should not ignore public opinion, it should place at least equal priority on identifying the opinions of physicians and comparing these with those of the public. Physicians and members of the general public have different levels of experience with the healthcare system (7). The purpose of this study was to identify gaps, if any, between physicians and the public with respect to their opinions of the NHI system, the successful healthcare system in operation in Korea.

MATERIALS AND METHODS

Data source

The study sample was derived from the 2008 Korean Medical Association Survey (KMAS), which investigated satisfaction with and perceptions of the NHI system among physicians and the general population, allowing for comparisons between the two groups.

The survey was conducted by a professional research company via telephone with 1,002 physicians randomly selected from a list maintained by the Korean Medical Association (KMA) of physicians practicing in Korea. We used random-digit dialing to select a sample of 1,024 members of the general public over 20 yr of age. After surveys with missing variables were excluded, the final sample consisted of 961 physicians and 935 members of the public.

Measures

Satisfaction with the NHI system was measured by asking, "How satisfied (or dissatisfied) are you with the NHI system?" All responses were provided in terms of a five-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). Satisfaction level was treated as a dichotomous variable in the chi-square analysis (1-3: dissatisfied, 4-5: satisfied).

We hypothesized that both physician and public satisfaction with the NHI system may be affected by personal characteristics. Thus, we assessed independent variables that may contribute to the level of satisfaction with the NHI program. The questionnaire included items measuring socioeconomic status, individual characteristics, region (metropolitan, urban, rural), and

type of NHI used (employee-insured, insured through self-employment, medical aid program). Data collected from the physicians included the type of medical institution at which they worked, their positions, and their areas of specialization. We classified type of medical institution into clinics, hospitals, general hospitals, and tertiary hospitals according to the relevant law related to the practice of medicine. Professional positions were divided into four categories: owners, employed doctors, professors, and residents. The income level of physicians was measured by the question, "How would you rate your income compared with that of other physicians with the same expertise?" (lower/similar or average/higher).

Twenty-one medical specialties were divided into four categories: major specialties, general practice (including family medicine), specialties not covered by the NHI system, and other specialties. Major specialties included internal medicine, surgical medicine, obstetrics-gynecology, and pediatrics. Specialties not covered by the NHI system included dermatology and plastic surgery. Other specialties included neurosurgery, psychiatry, anesthesia, ophthalmology, ENT, urology, radiology, clinical laboratory services, and rehabilitation medicine.

Analysis

Descriptive statistics were calculated for all socioeconomic groups, satisfaction levels, and dependent variables; these included the frequency distribution for each categorical variable. Chi-square tests and t-tests (calculated with SAS, ver. 9.1) were used to analyze gaps between physicians and the public in their satisfaction with the NHI program. We used an ANOVA to examine satisfaction according to the personal characteristics of physicians and the public.

Ethics statement

This study sample was derived from the 2008 KMAS. The data collected did not contain any information that could be used to identify the individual subjects in this study. The 2008 KMAS data did not include any information about individual health. Also, we began the survey only after obtaining consent for participation from respondents. This study was reviewed by the institutional review board of Soonchunhyang University College of Medicine and was given exemption from the deliberation (SCHCM-2012-01-30-01).

RESULTS

General characteristics of respondents

Of the 961 physicians who participated in this survey, 90.5% were male. In 2008, 80% of the physicians in Korea were male and 20% were female (21). Physicians operating private clinics represented 69.2% of the sample, whereas 10.3% of the physician group worked in hospitals, 9.1% worked in general hospi-

tals, and 11.5% worked in tertiary hospitals.

We found an association between physician satisfaction and the type of medical institution with which physicians were affiliated ($P = 0.001$) as well as with their position in the medical institution ($P = 0.041$). More specifically, clinic physicians and directors expressed higher levels of dissatisfaction (Table 1). On the other hand, physician satisfaction was not related to income level or medical specialty.

Women accounted for 51.5% of the respondents drawn from the general public. Those who were employee-insured accounted for 64.6% of respondents, and those who were insured through self-employment accounted for 34.3%. Residents of metropolitan areas were more likely than residents of urban or rural areas to express satisfaction with the NHI system.

Satisfaction levels of physicians and the public

We compared the mean ratings for satisfaction with the NHI system expressed by physicians and those expressed by the public according to subject characteristics. Only 6.5% of the physi-

cians were satisfied with NHI system, and 71.5% were dissatisfied with it. In contrast, 28.3% of the public were satisfied with the NHI system, and 21.4% of the public were dissatisfied. The public expressed greater satisfaction than did the physicians. Physicians working in hospitals expressed the least satisfaction, and those working in general hospitals expressed the greatest satisfaction among physicians ($P = 0.009$). Directors showed the least satisfaction, and professors demonstrated the greatest satisfaction among physicians ($P = 0.025$). Members of the public under the age of 39 yr expressed the greatest satisfaction ($P = 0.023$) compared with that expressed by other age groups, and those living in rural areas were also more likely to be more satisfied with the NHI system ($P = 0.016$; Table 2) than were those living in urban or metropolitan areas.

Finally, we determined the extent of the gap between physician and public overall satisfaction with the NHI system (Table 3). Only 6.4% of the physicians were satisfied with NHI system, whereas 71.5% were dissatisfied. On the other hand, 28.3% percent of the public portion of the sample expressed satisfaction

Table 1. Level of satisfaction with the NHI program by personal characteristics: physicians versus the public

Variables	Physician			P value	Variables	Public			P value
	Satisfied No. (%)	Dis-satisfied No. (%)	Total			Satisfied No. (%)	Dis-satisfied No. (%)	Total	
Total	62 (6.5)	899 (93.5)	961 (100.0)		Total	265 (28.3)	670 (71.7)	935 (100.0)	
Sex					Sex				
Male	53 (6.1)	817 (93.9)	870 (90.5)	0.161	Male	135 (29.8)	318 (70.2)	453 (48.5)	0.337
Female	9 (9.9)	82 (90.1)	91 (9.5)		Female	130 (27.0)	352 (73.0)	482 (51.5)	
Age (yr)					Age (yr)				
< 40	15 (6.5)	216 (93.5)	231 (24.0)	0.172	< 40	82 (27.2)	219 (72.8)	301 (32.2)	0.261
40-49	36 (8.1)	407 (91.9)	443 (46.1)		40-49	71 (26.0)	202 (74.0)	273 (29.2)	
≥ 50	11 (3.8)	276 (96.2)	287 (29.9)		≥ 50	112 (31.0)	249 (67.0)	361 (38.6)	
Residential area					Residential area				
Metropolitan*	35 (6.4)	512 (93.6)	547 (57.0)	0.794	Metropolitan*	115 (25.5)	336 (74.5)	451 (48.2)	0.006
Urban	25 (6.9)	335 (93.1)	360 (37.4)		Urban	123 (30.7)	278 (69.3)	401 (43.1)	
Rural	2 (3.7)	52 (96.3)	54 (5.6)		Rural	27 (32.5)	56 (67.5)	83 (8.9)	
Medical institution					Social security type				
Clinic	33 (5.0)	632 (95.0)	665 (69.2)	0.001	Employee-insured	166 (27.5)	438 (72.5)	604 (64.6)	0.530
Hospital	6 (6.1)	93 (94.0)	99 (10.3)		Self-employed Insured	97 (30.2)	224 (69.8)	321 (34.3)	
General hospital	10 (11.5)	77 (88.5)	87 (9.1)		Medicaid program	2 (20.0)	8 (80.0)	10 (1.1)	
Tertiary hospital	13 (11.8)	97 (88.2)	110 (11.5)						
Position					Education (yr)				
Owner	36 (5.3)	638 (95.0)	674 (70.1)	0.041	≤ 9	33 (22.8)	112 (77.2)	145 (15.5)	0.532
Employed doctor	11 (7.5)	136 (92.5)	147 (15.3)		< 9 ≤ 12	112 (31.1)	248 (68.9)	360 (38.5)	
Professor	12 (13.0)	80 (87.0)	92 (9.6)		> 12	120 (27.9)	310 (72.1)	430 (46.0)	
Residencyship	3 (6.3)	45 (93.8)	48 (5.0)						
Income level					Income level (US\$/month)				
Higher	4 (4.8)	79 (95.2)	83 (8.6)	0.532	< 2,000	66 (30.3)	152 (69.7)	218 (23.3)	0.648
Average	34 (6.4)	496 (93.6)	530 (55.2)		2,000-2,999	45 (22.6)	154 (77.4)	199 (21.3)	
Lower	24 (6.9)	324 (93.1)	348 (36.2)		3,000-3,999	52 (29.9)	122 (70.1)	174 (18.6)	
					> 4,000	102 (29.7)	242 (70.4)	344 (36.8)	
Specialty					Job				
Major specialties†	25 (6.5)	361 (93.5)	386 (40.2)	0.948	Self-employed	36 (28.4)	91 (71.6)	127 (13.6)	0.055
Family practice	10 (7.5)	124 (92.5)	134 (13.9)		Blue-collar worker	70 (22.7)	239 (77.3)	309 (33.1)	
Dermatology & plastic surgery	0 (0.0)	36 (100.0)	36 (3.8)		White-collar worker	99 (30.8)	222 (69.2)	321 (34.3)	
Others	27 (6.7)	378 (93.3)	405 (42.1)		Housewife	18 (29.5)	43 (70.5)	61 (6.5)	
					Unemployed	42 (35.9)	75 (64.1)	117 (12.5)	

*Metropolitan includes Seoul, Busan, Incheon, Daegu, Gwangju, Daejeon, and Ulsan; †Major specialties include internal medicine, surgical medicine, obstetrics-gynecology, and pediatrics.

Table 2. Satisfaction level by personal characteristics: physician versus the public (ANOVA)

Variables	Physician			Variables	Public		
	Mean	S.D.	P value		Mean	S.D.	P value
Sex				Sex			
Male	2.02	0.91	0.751	Male	3.06	0.83	0.916
Female	2.05	0.87		Female	3.06	0.85	
Age (yr)				Age (yr)			
< 40	2.12	0.90	0.054	< 40	3.10	0.80	0.023
40-49	2.04	0.94		40-49	2.94	0.87	
≥ 50	1.93	0.86		≥ 50	3.11	0.84	
Residential area				Residential area			
Metropolitan*	2.01	0.91	0.753	Metropolitan	2.98	0.86	0.016
Urban	2.05	0.91		Urban	3.10	0.82	
Rural	1.98	0.86		Rural	3.24	0.75	
Type of medical institution				Type of social security			
Clinic	1.98	0.88	0.009	Employee-insured	3.06	0.80	0.982
Hospital	1.93	0.87		Self-employed insured	3.06	0.92	
General hospital	2.28	0.98		Medicaid program	3.10	0.57	
Tertiary Hospital	2.17	0.98					
Position				Education (yr)			
Owner	1.98	0.89	0.025	≤ 9	3.04	0.75	0.918
Employed doctor	2.07	0.90		> 9 ≤ 12	3.06	0.88	
Professor	2.28	1.00		> 12	3.05	0.83	
Residencyship	2.02	0.89					
Income level				Income level (dollars)			
Higher than colleagues	2.08	0.89	0.114	< 2,000	3.08	0.82	0.678
Average	2.07	0.90		2,000-2,999	3.00	0.84	
Less than colleagues	1.95	0.92		3,000-3,999	3.10	0.80	
				> 4,000	3.06	0.87	
Specialty				Job			
Major specialties [†]	2.01	0.90	0.227	Self-employed	3.00	0.89	0.065
Family practice	2.10	0.97		Blue-collar worker	2.97	0.79	
Dermatology & plastic surgery	1.75	0.73		White-collar worker	3.11	0.85	
Others	2.05	0.92		Housewife	3.11	0.90	
				Unemployed	3.20	0.83	

*Metropolitan includes Seoul, Busan, Incheon, Daegu, Gwangju, Daejeon, and Ulsan; [†]Major specialties include internal medicine, surgical medicine, obstetrics-gynecology, and pediatrics.

Table 3. Satisfaction with the NHI program: physicians versus the public

Items	Respondents (%)		Total	P value
	Physician	Public		
Satisfaction with NHI program				< 0.001
Very satisfied	3 (0.3)	28 (3.0)	34 (1.6)	
Satisfied	59 (6.1)	237 (25.3)	296 (15.6)	
Neutral	212 (22.1)	470 (50.3)	682 (36.0)	
Dissatisfied	373 (38.8)	162 (17.3)	535 (28.2)	
Very dissatisfied	314 (32.7)	38 (4.1)	352 (18.6)	
Total	961 (100.0)	935 (100.0)	1,896 (100.0)	
Scale (five-point Likert scale)*	2.03 (0.91)	3.06 (0.84)		< 0.001

*Mean (standard deviation).

with the NHI system. We also identified differences between the physician and public groups on the scale measuring level of satisfaction. Physicians were more dissatisfied (2.03 ± 0.91) than were members of the public (3.06 ± 0.84).

DISCUSSION

The goal of this study was to identify whether physicians and the public differed in terms of their satisfaction with the NHI

system. We hypothesized that the rapid growth in the Korean national health insurance system might differentially affect the satisfaction with this system expressed by physicians and members of the general public, and that the satisfaction of physicians, unlike that of the public, would be negatively affected by such growth.

In this study, we were able to determine that physicians in Korea were generally dissatisfied with the NHI system. Only 6.4% of physicians expressed satisfaction with the program, whereas

28.3% of the public expressed satisfaction. Additionally, 71.5% of physicians and 46.8% of the public expressed dissatisfaction with the medical services delivered under the NHI system, adding that the program was below average. These data indicate that the perceptions of the NHI system held by physicians and the public do indeed differ. Previous studies have also shown that Korean physicians were much more dissatisfied with the healthcare system (22). Indeed, Korean physicians have lower job satisfaction (23), due at least in part to their low opinion of the healthcare system (9, 15, 16, 18). The difference between physicians and patients in their levels of satisfaction may be related to characteristics of the health system in Korea, which may have led to differences in the perceptions held by members of the two groups. Such low satisfaction among physicians seems to have originated in the separation between prescribing and dispensing medicines initiated in 2000, which catalyzed conflicts between the Government and the medical physicians' society. Additionally, the Health Insurance Law of Korea strongly regulates physicians and the medical services they provide. This dissatisfaction with the healthcare system and with the circumstances under which healthcare is delivered is related to the low level of job satisfaction among physicians (17, 23).

A gap in the definition of the quality of medical services exists between physicians and patients. Physicians define the quality of medical services primarily in terms of a clinical perspective, which includes factors such as diagnostic accuracy and the level of the medical technology available. In contrast, patients evaluate the quality of care based on what they perceive (24). These differences may lead to differences in the definitions of the quality of medical services because patients are typically not exposed to or cannot understand many aspects related to the provision of medical services. Korean physicians perceive that the Government and NHI system control the use of their expertise in their medical practice. In contrast, the general population perceives only issues related to convenience when they visit hospitals; these include access to care, prices, and satisfaction with the care they receive. Positive popular evaluations of the convenience of using medical services and the appropriateness of medical costs are associated with higher levels of satisfaction with health systems (7). Indeed, most patients were satisfied with the services they received under the NHI in terms of quality of care, access to medical facilities, and costs of care. Satisfaction with the medical services received may lead to satisfaction with the NHI system (25).

This study also examined Korean physicians' opinions about the state of the healthcare system with the questionnaire used in Blendon's study (7), which compared overall perceptions about the healthcare systems in five countries (America, Australia, Great Britain, Canada, New Zealand). Blendon (7) reported that between 4% and 12% of the physicians in each participating nation believed that the health system in their country should

be completely rebuilt. However, more than 15% of the Korean physicians in our study believed that the Korean health system should be rebuilt. Based on these results, it is reasonable to assume that Korean physicians were more dissatisfied than physicians in other countries with their respective health systems.

We examined differences in opinions according to physician characteristics and found that physicians who owned their own clinics were more dissatisfied with the NHI system (95% of physicians in this group were dissatisfied). Physicians working at general hospitals were relatively more satisfied with the NHI system than were physicians who owned their own clinics. Several studies have found lower job satisfaction among physicians in the primary care sector than among those in public hospitals (11, 21, 26) and among professors than among fee-for-service doctors (10, 12). Such lower satisfaction among primary care physicians has been attributed to the relatively low economic rewards available in the primary care sector (26). In Korea, where physicians in clinics predominantly provide primary healthcare, only 7.4% of all physicians are general practitioners, and the remainder are specialists (21). This phenomenon may be attributable to feelings of dissatisfaction with the NHI system among clinic owners. Korean physicians should provide most of the medical services covered by the NHI system at prices lower than those found in the complex healthcare delivery system in the US, for example, given that the Korean Government controls the costs of medical services and the NHI affects the operation of medical institutions (2).

This study focused on the satisfaction of physicians with the healthcare system for the following reasons. First, the satisfaction of physicians is related to the satisfaction of their patients as well as to the quality of healthcare services (9-11, 13, 15, 18). In this context, the satisfaction of physicians may directly affect the health of the public. Thus, it is necessary to analyze those factors contributing to physician satisfaction that affect the quality of care and the healthcare system (12). Second, because physicians are both among the insured and, as providers, are the main stakeholders in the NHI system, the level of satisfaction experienced by Korean physicians is especially important from the perspective of healthcare policy. Indeed, Korea may experience the "policy non-compliance" phenomenon, in which the complaints of patients accumulate because they remain unaddressed by dissatisfied physicians and potentially lead to non-compliance with relevant policy provisions (27). In this situation, people cannot depend on their healthcare system. Third, a deep understanding of physicians is crucial for the further development of existing healthcare policies. It is impossible to understand the problems of healthcare systems without understanding the situations of physicians. It may also be difficult to imagine a healthcare system in the absence of changes in the attitudes of physicians (18). Thus, we must attend to both the satisfaction experienced by patients and to the factors contrib-

uting to the satisfaction and attitudes of physicians (19).

According to the national health insurance law, all medical facilities in Korea must provide medical services covered by the NHI system to insured patients (23, 28), and all physicians must participate in the NHI system. Additionally, all medical practices are subject to the NHI system. The Government has enacted many regulations that have precipitated physicians' dissatisfaction with the NHI system. Policymakers should remember that dissatisfaction among physicians can damage the security of the NHI system and precipitate public health problems. Thus, if one were to wonder about the sources of physician grievances, the unique structure of the NHI system in Korea would probably emerge as the primary source. The Korean NHI system involves unilateral and strong governmental control within a system in which private hospitals and clinics provide most of the healthcare services, accounting for 90% of the total number of medical institutions (29).

Thus far, this study surveyed physicians and the public separately. However, in Korea, the relationships among all three parties involved in the delivery of healthcare—the insurers, medical providers, and beneficiaries (patients)—are crucial, and the perceptions of physicians and the public about the NHI system have a tremendous effect on the insurance market. It is particularly urgent that we recognize the perception gap between physicians and the public with respect to our healthcare system. Only in the context of greater consensus can the system be considered stable.

We hope that policy-makers give careful consideration to the voice of the medical field and attend to the fact that physicians are generally not satisfied with their job environments and the NHI system. More importantly, the perception gap between physicians and the public must be narrowed. This study may find its ultimate purpose in its description of the actual levels of satisfaction with the Korean NHI system experienced by both physicians and the public. Despite its reputation as generally being successful, the NHI system is viewed considerably differently by physicians and members of the general public.

This study found a significant difference between physicians and the general population in satisfaction with the Korean health insurance system. That is, Korean physicians were much more dissatisfied with the NHI system than was the public. Increasing job satisfaction and protecting the autonomy of physicians will be important contributors to maintaining the NHI system. Thus, it is necessary to conduct periodic surveys to understand the working conditions, levels of satisfaction, and perceptions about the health system of physicians. To reduce the perception gap between physicians and the public with respect to the health system, policy makers should invite physicians in expert committees when new health policies are introduced. Also, the Government should identify the factors that influence satisfaction with the health system and endeavor to address these issues.

REFERENCES

1. Kwon S. *Thirty years of national health insurance in South Korea: lessons for achieving universal health care coverage. Health Policy Plan* 2009; 24: 63-71.
2. Lee GS. *30 year-history of Korean National Health Insurance. Res Inst Healthcare Policy Korean Med Assoc* 2007; 5: 72-80.
3. Moon OR. *A Study on problem and improvement of National Health Insurance system in Korea. Seoul: Korean Medical Association, 2005.*
4. Jeong HS. *Health care reform and change in public-private mix of financing: a Korean case. Health Policy* 2005; 74: 133-45.
5. NHI. *2007 National health insurance program of Korea. National Health Insurance Corporation, 2007.*
6. Donelan K, Blendon RJ, Benson J, Leitman R, Taylor H. *All payer, single payer, managed care, no payer: patients' perspectives in three nations. Health Aff (Millwood)* 1996; 15: 254-65.
7. Blendon RJ, Schoen C, Donelan K, Osborn R, DesRoches CM, Scoles K, Davis K, Binns K, Zapert K. *Physicians' views on quality of care: a five country comparison. Health Aff (Millwood)* 2001; 20: 233-43.
8. Blendon RJ, Leitman R, Morrison I, Donelan K. *Satisfaction with health systems in ten nations. Health Aff (Millwood)* 1990; 9: 185-92.
9. 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.
10. Linzer M, Konrad TR, Douglas J, McMurray JE, Pathman DE, Williams ES, Schwartz MD, Gerrity M, Scheckler W, Bigby JA, et al. *Managed care, time pressure, and physician job satisfaction: results from the physician worklife study. J Gen Intern Med* 2000; 15: 441-50.
11. Landon BE, Reschovsky J, Blumenthal D. *Changes in career satisfaction among primary care and specialist physicians, 1997-2001. JAMA* 2003; 289: 442-9.
12. Yoon HG, Yoon SJ, Hwang IK, Moon YB, Lee HY. *Job satisfaction, subjective class identification and associated factors of professional socialization in Korean physicians. J Prev Med Public Health* 2008; 41: 30-8.
13. Isett KR, Ellis AR, Topping S, Morrissey JP. *Managed care and provider satisfaction in mental health settings. Community Ment Health J* 2009; 45: 209-21.
14. Kim HJ, Koh Y, Chun EJ, Jang SR, Kim CY. *Subjective satisfaction with medical care among older people: comprehensiveness, general satisfaction and accessibility. J Prev Med Public Health* 2009; 42: 35-41.
15. Stoddard JJ, Hargraves L, Reed M, Vratil A. *Managed care, professional autonomy, and income: effects on physician career satisfaction. J Gen Intern Med* 2001; 16: 675-84.
16. Bovier PA, Perneger TV. *Predictors of work satisfaction among physicians. Eur J Public Health* 2003; 13: 299-305.
17. Cho BH. *A study on professionalism and job satisfaction in doctors who practice in Korea. Korean J Sociol* 1994; 28: 37-64.
18. Qian F, Lim MK. *Professional satisfaction among Singapore physicians. Health Policy* 2008; 85: 363-71.
19. Murray A, Montgomery JE, Chang H, Rogers WH, Inui T, Safran DG. *Doctor discontent. A comparison of physician satisfaction in different delivery system settings, 1986 and 1997. J Gen Intern Med* 2001; 16: 452-9.
20. Lee YL, Chun CB, Lee GL, SEO NG. *Survey on satisfaction with NHI Program in Korea. National Health Insurance Corporation, 2007.*
21. Kim WJ. *Comparative study on the determinants of job satisfaction be-*

- tween self-employed and salaried physicians in Korea. Graduate School of Health and Environment. Seoul: Yonsei University, 2009.
22. Kim KY. *A study on the introduction of contract system: focused on the NHI system*. Seoul: Research Institute for Healthcare Policy, 2008.
23. Lee HY, Park SE, Park EC, Hahm MI, Cho WH. *Job satisfaction and trust in health insurance review agency among Korean physicians*. *Health Policy* 2008; 87: 249-57.
24. Zifko-Baliga GM, Krampf RF. *Managing perceptions of hospital quality. Negative emotional evaluations can undermine even the best clinical quality*. *Mark Health Serv* 1997; 17: 28-35.
25. Seo NG, Moon SW, Lee YG, Hong SY, Kang CG. *The survey for satisfaction of NHI system in Korea*. Seoul: National Health Insurance Cooperation, 2007.
26. Bucuniene I, Blazeviciene A, Bliudziute E. *Health care reform and job satisfaction of primary health care physicians in Lithuania*. *BMC Fam Pract* 2005; 6: 10.
27. Kim GJ. *The principles of policy science*. Seoul: Dae Myung, 1997.
28. Lee SY, Chun CB, Lee YG, Seo NK. *The National Health Insurance system as one type of new typology: the case of South Korea and Taiwan*. *Health Policy* 2008; 85: 105-13.
29. Lee KS. *Review of debate over the expansion of public medical facilities to enhance the public role in the medical care sector*. *Korean J Health Policy Adm* 2001; 11: 107-30.