

Satisfaction of patients and physicians with
outpatient consultations at a university hospital

(外来診療における患者と医師の満足度に関する検討)

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Satisfaction of Patients and Physicians with Outpatient Consultations at a University Hospital

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Abstract

(Objectives) This study was performed to investigate the factors influencing the correlation between physician satisfaction and patient satisfaction in an outpatient setting.

(Methods) New patients attending the General Medicine Outpatient Clinic of Chiba University Hospital and their physicians were enrolled. After the initial consultation, both the patients and the physicians completed an anonymous questionnaire.

(Results) There were 875 patients (381 men and 494 women; mean age: 54 years) and 10 physicians (4 men and 6 women; mean experience: 6 years). The satisfaction of the patients and the physicians was not correlated ($r = 0.14$, $P < 0.001$). A logistic regression analysis revealed that the factors associated with greater physician satisfaction were "guidance/advice from senior colleagues" [odds ratio (OR) = 2.03; 95% confidence interval (CI) = 1.76–2.34] and "confidence in the diagnosis" [OR = 1.52; 95%CI = 1.37–1.69], while "a difficult patient" [OR = 0.73; 95%CI = 0.68–0.78] was associated with reduced satisfaction. The factors associated with greater patient satisfaction were "the doctor listened carefully" [OR = 1.98; 95%CI = 1.62–2.42] and "my diagnosis is correct" [OR = 1.57; 95%CI = 1.41–1.74]. One item in the questionnaire for the physicians, "I diagnosed psychogenic illness" [OR = 0.87; 95%CI

= 0.81–0.94], was associated with lower patient satisfaction.

(Conclusions) The satisfaction of the patients and the physicians was not correlated. If only the factors promoting the satisfaction of one party are targeted, the satisfaction of the other party will not increase. The satisfaction of the physicians may be increased by receiving advice from mentors and an improved diagnostic ability, while the patients wants a physician who listens carefully and makes the correct diagnosis.

Key words: patient satisfaction; physician satisfaction; diagnosis; general outpatient department

Introduction

In recent years, medical care has become more focused on patient preferences and the medical model has been evolving from a physician-led approach to one that takes the patient's wishes more carefully into consideration. Competition between hospitals has also increased and many surveys of patient satisfaction have been conducted to evaluate the quality of medical care ¹⁾⁻³⁾. It has been previously shown that the patient's level of satisfaction with medical consultations is greatly influenced by factors in the patient-physician relationship, including courtesy during the interview and providing easily understandable explanations, in addition to the doctor's skill and knowledge⁴⁾.

Problems related to the workload of doctors, such as psychological stress and burnout syndrome, have also become prominent ⁵⁾. It has been previously reported that there is a positive correlation between job satisfaction and the productivity of professionals, including doctors ⁶⁾. It has also been shown that a decrease in job satisfaction for doctors is not only associated with the mental health problems, including burnout syndrome and depression ⁵⁾, but is also correlated with poor patient adherence to treatment and with a lower quality of medical care ^{6), 7)}. Fatigue may not only adversely influence the doctor, but may also reduce the quality of medical care and lead to wasted medical resources, thus doctor fatigue can have a negative influence on the

patient outcomes. However, the satisfaction of physicians with medical consultations has rarely been investigated in Japan. There is a saying that "a satisfied patient leads to a satisfied doctor." A previous study has demonstrated that the level of patient satisfaction correlated with their physician's satisfaction ⁸⁾, however, several other studies have found no such correlation ^{9), 10)}. The present study was performed to focus on the satisfaction of physicians working in the general outpatient department of a university hospital. Doctor-related and patient-related factors that determined the physician's satisfaction with medical consultations were investigated and the correlation between physician satisfaction and patient satisfaction was evaluated.

(Subjects and Methods)

Subjects

This study was approved by the Ethical Review Board of Chiba University Graduate School of Medicine (approval number 22 of the General Affairs Department of Chiba University Graduate School of Medicine). The subjects included new patients attending the General Medicine Outpatient Clinic at Chiba University Hospital and their physicians during a 1-year period from November 2012 to November 2013. After the initial consultation, the patient and physician each completed an anonymous

questionnaire, and they placed the completed questionnaire in a collection box at the reception counter of the outpatient department. The questionnaires were numbered for identification and data obtained from the patient and physician questionnaires were compared for the same consultations.

Questionnaire

Items for the two questionnaires were selected after an extensive review of the pertinent literature and focused discussions at our department (Table 1). There were six items in the questionnaire for the physicians, and the physician's level of satisfaction with the consultation was defined by the score for the item "I am satisfied with the medical care I provided for this patient." There were three items in the questionnaire for the patients, and the patient's level of satisfaction with the consultation was defined by the score for the item "I am satisfied with the medical care provided by my doctor today." Each item in the two questionnaires was scored on a ten-point scale. Regarding the item "The patient is difficult," a difficult patient was defined as one with whom it was difficult to form a normal doctor-patient relationship ¹¹⁾, e.g., a patient who tends to argue with the physician and doubts the physician's competence. The age and sex of the patients were also included in this study.

Analytical methods

The data obtained from incomplete questionnaires were excluded from this analysis.

Simple correlations were determined by Spearman's rank correlation analysis to examine the correlation between the patient's level of satisfaction and the physician's level of satisfaction using nine items (besides the age and sex of the patient) in the questionnaires completed by the patients and physicians. Next, a multiple logistic regression analysis with stepwise forward selection was performed using the physician's satisfaction with the consultation as a dependent variable and the items that showed a correlation with the physician's satisfaction level as independent variables to extract the determinants of satisfaction. This analysis was also done to evaluate the multicollinearity. Items with a correlation coefficient $|r| > 0.2$ in Spearman's analysis were used as independent variables. In addition, whether each variable should be included or excluded in the multiple logistic regression model was determined from the P value in the likelihood ratio test, with the thresholds being $P < 0.05$ for inclusion and $P > 0.1$ for exclusion. A similar multiple regression analysis was performed using the patient's satisfaction with the consultation as a dependent variable and the items correlated with patient satisfaction level as independent variables to identify factors

determining patient satisfaction. In these analyses, a score of 7–10 points for patient/physician satisfaction was defined as indicating "satisfied," while a score of 1–6 points meant "not satisfied." All analyses were performed using the SPSS Statistics for Windows 20.0 software package.

(Results)

Disposition of the subjects

During the study period, 941 new patients presented to our department. Among them, 39 patients were excluded because they were hospital staff or students of our university. The remaining 902 patients were eligible for this study. The questionnaires were collected from 891 patients (collection rate: 98.8%) and the questionnaires of 875 patients were found to be complete (valid answer rate: 97.0%). These 875 patients comprised 381 men and 494 women with a mean age of 54 years (range: 13–94 years). Ten physicians who treated the 875 patients also participated in this study. They included four men and six women with a mean age of 31 years (range: 26–41 years) and a mean time since graduation of 6 years (range: 2–13 years).

Physician satisfaction and its determinants

The physicians were satisfied with 67% of the consultations (583/875 consultations). Spearman's correlation analysis showed that the following items in the questionnaire for the physicians were correlated with their level of satisfaction: "guidance/advice from a senior colleague" ($r = 0.54$; $P < 0.001$), "confidence in the diagnosis" ($r = 0.50$; $P < 0.001$), and "difficult patient" ($r = -0.35$; $P < 0.001$). However, none of these items significantly correlated with the patient's level of satisfaction with the consultation ($r = 0.14$, $P < 0.001$) (Table 2). Using these three items as independent variables, a multiple logistic regression analysis was performed. An evaluation of the multicollinearity showed that there were correlations between "guidance/advice from a senior colleague" and "confidence in the diagnosis" ($r = 0.32$; $P < 0.001$), as well as between "guidance/advice from a senior colleague" and "difficult patient" ($r = -0.30$; $P < 0.001$). However, no significant linearity of any variable was observed.

As a result of the multivariate analysis, two items were extracted as factors that increased the satisfaction of the physicians, which were "guidance/advice from a senior colleague" [odds ratio (OR) = 2.03; 95% confidential interval (CI) = 1.76–2.34] and "confidence in the diagnosis" [OR = 1.52; CI = 1.37–1.69]. In addition, "difficult patient" [OR = 0.73; 95%CI = 0.68–0.78] was found to be a factor that decreased the satisfaction of the physicians. There were no items from the questionnaire for the

patients that had a significant influence on the physician satisfaction (Table 3).

Patient satisfaction and its determinants

Eighty-eight percent of the patients (767/875 patients) were satisfied with their consultations. Spearman's correlation analysis showed that two items in the questionnaire for patients, "The doctor listened to me very carefully today" ($r = 0.63$; $P < 0.001$) and "I have been diagnosed correctly" ($r = 0.57$; $P < 0.001$), correlated with the satisfaction of the patients. An item from the questionnaire for the physicians, "I diagnosed psychogenic illness" ($r = -0.22$; $P < 0.001$), also correlated with the patient satisfaction. However, none of these items correlated with the physician's satisfaction (Table 4). Using the three items "The doctor listened to me very carefully today," "I have been diagnosed correctly," and "I diagnosed psychogenic illness" as independent variables, a multiple logistic regression analysis was performed. An evaluation of the multicollinearity showed that there was a correlation between "The doctor listened to me very carefully today" and "I have been diagnosed correctly" ($r = 0.41$; $P < 0.001$). However, no significant linearity of any variable was observed.

As a result of the multivariate analysis, two items from the patient questionnaire were identified as factors that increased the satisfaction of the patients with their

consultations, which were "The doctor listened to me very carefully today" [OR = 1.98; 95%CI = 1.62–2.42] and "I have been diagnosed correctly" [OR = 1.57; 95%CI = 1.41–1.74]. In addition, an item from the physician questionnaire, "I diagnosed psychogenic illness" [OR = 0.87; 95%CI = 0.81–0.94], was extracted as a factor that decreased the patient satisfaction (Table 5).

(Discussion)

The satisfaction of physicians working in outpatient services is thought to be influenced by various factors. For example, in a clinic that mainly provides ongoing medical care (i.e., many patients have chronic diseases), the factors influencing the physician's level of satisfaction may include the following: the doctor's personal relationship with the patient, whether the doctor feels needed by community residents, and managerial satisfaction obtained by acting as the clinic director. In order to exclude such factors and examine the factors which influence the physician's satisfaction that were directly related to the consultation itself, we conducted the present study in the general outpatient department of a university hospital. The survey assessed the initial consultation of each new patient, which means that a definite diagnosis had not been made when the patients presented and diagnosis-related items could also be evaluated.

In addition, all of the physicians studied were employees of the hospital who were not directly involved in management. Therefore, this study was able to appropriately evaluate the factors influencing the level of satisfaction of the physicians with the outpatient consultation process.

This study showed that the 10 physicians were satisfied with their handling of 67% of the outpatient consultations, while 88% of the patients were actually satisfied with their consultations. A previous study reported ⁹⁾ that the physicians were satisfied with their handling of 88% of consultations, while 98% of patients were satisfied with their consultations. Although our results cannot be compared easily with the previous findings because a five-point Likert scale was used in the previous study⁹⁾, the level of patient satisfaction was higher than the physician satisfaction in both studies.

Determinants of physician satisfaction

Two items from the questionnaire for the physicians ("guidance/advice from a senior colleague" and "confidence in the diagnosis") were found to be associated with an increase in the level of physician satisfaction. In general, job satisfaction is improved by reducing unpleasant factors and increasing factors that give the person a sense of satisfaction ¹²⁾. Unpleasant factors include a low salary and poor work environment,

while factors that give a sense of satisfaction include those that promote the person's growth, social recognition, and sense of accomplishment ¹²⁾. When the physicians received advice from a senior colleague, they probably felt that they were gaining useful knowledge and this improved their level of satisfaction in the present study, while feeling confident about the diagnosis may have been associated with a sense of accomplishment that also led to an increase in the satisfaction of the physicians.

Conversely, one item from the questionnaire for physicians ("The patient is difficult") was associated with a decrease in satisfaction. It has been previously reported that consultations involving difficult patients result in physicians becoming tired and dissatisfied ¹³⁾. Patients who are generally considered to be difficult to manage by physicians include those who do not want to fully recover, those who make many inconsistent complaints, and those with chronic pain. The characteristics of these patients tend to place them in conflict with their physicians and this can lead to a loss of self-esteem or a feeling of being unable to control the consultation, which is unpleasant for the physician and thus can reduce the level of satisfaction with such patients ¹⁴⁾. The decrease of satisfaction associated with difficult patients in the present study was probably due to similar reasons.

Determinants of patient satisfaction

The present study showed that an item from the questionnaire for the patients ("The doctor listened to me very carefully today") was a factor associated with an increase in the level of patient satisfaction. It has been previously reported that the satisfaction of a patient with a consultation can be strongly influenced by the physician's attitude and by the doctor-patient relationship ⁴⁾. In addition, empathic listening by the physician may help to develop a good doctor-patient relationship ¹⁵⁾. These points probably explain why "The doctor listened to me very carefully today" was identified as a factor that increased the patient satisfaction in the present study.

This study also revealed that believing "I have been diagnosed correctly" was a factor that increased the level of patient satisfaction. In addition to the doctor taking a patient's psychological problems, such as fear and anxiety about disease, into consideration, the level of satisfaction can be increased if the patient believes that the doctor is skillful and competent ⁴⁾. This suggests that improvement of the diagnostic ability may be important for increasing the satisfaction of the patients.

Conversely, an item from the questionnaire for the physicians ("I diagnosed psychogenic illness") was associated with a decrease in the level of patient satisfaction. This was probably because the physician may not have clearly informed the patient of

the diagnosis when it was thought to be psychogenic illness, out of consideration for the patient. It has been previously reported that the disclosure of disease names to psychiatric patients contributes to an improvement of their level of satisfaction ¹⁶⁾. Therefore, even if the patient has psychogenic illness, disclosure of the disease name by the doctor may increase the patient's satisfaction. However, some patients cannot accept the diagnosis when physicians tell them the disease clearly. Epstein et al. ¹⁷⁾ reported that some patients with somatoform disorder are convinced their symptoms are caused by organic disease and do not accept the diagnosis of psychogenic illness, resulting in the development of conflict between the patient and the doctor. If a patient cannot accept the diagnosis, then satisfaction may be reduced by hearing the accurate diagnosis from the doctor.

Relation between patient satisfaction and physician satisfaction

In our study, no correlation was observed between the patient's level of satisfaction and the physician's level of satisfaction. Even when the patient believed that "I have been diagnosed correctly," this was not a determinant of the physician's level of satisfaction. Goodacre et al. ¹⁰⁾ also reported that the patient believing "I have been diagnosed correctly" was not correlated with the physician's level of satisfaction. They

suggested that this occurred because the patients did not have adequate knowledge of medicine and their impression of an accurate diagnosis was based on the subjective assessment of the thoroughness of the consultation and examination, whereas the physicians judged the accuracy of the diagnosis based on their medical knowledge. Similarly, the evaluation by the patients was probably based on different standards from those of the physicians in our study.

It was previously reported that the satisfaction of patients with medical consultations is correlated with that of their physicians ⁸⁾, whereas several other studies have not found any correlation between the satisfaction of the patients and the physicians ^{9), 10)}. The study that identified a correlation was conducted by Linn et al. in the general medicine outpatient department of a university hospital ⁸⁾, which is a similar setting to the present study, but it was performed many years ago and reported in 1985. Since then, there have been many changes to medical practice and obtaining medical information on the Internet has become easy, which may have led to an increase in the expectations of the patients with regard to the medical consultations. This may be the reason why the results of our study were inconsistent with the findings of the study conducted by Linn et al. ⁸⁾. Additional reports on the lack of a correlation between patient satisfaction and physician satisfaction with medical consultations have included a study conducted by

Probst et al. ⁹⁾ in the general outpatient department of a university hospital, which was also a similar setting to our study, and a study conducted by Goodacre et al. in patients with chest pain presenting to the emergency department of a general hospital ¹⁰⁾. In a survey conducted in clinics by Kisa et al. ¹⁸⁾, the satisfaction of the patients and the physicians was not evaluated by direct comparison between each doctor-patient pair and the authors did not clearly state whether or not the satisfaction of the patients and the physicians correlated.

Limitations

There are some limitations associated with this study. The present study was conducted in the general outpatient department of a university hospital. Therefore, the results may not be directly applicable to municipal hospitals and local clinics, which are likely to have a different patient population than those presenting to the university hospitals.

(Conclusions)

This study showed that there were no common factors related to the satisfaction of the patients and the physicians with outpatient consultations. If only the factors

promoting patient or physician satisfaction are targeted, the satisfaction of the other party will not increase concurrently. Receiving guidance/advice from a senior colleague in the outpatient department and improved diagnostic ability were associated with an increased satisfaction in the physicians, while the satisfaction of the patients was increased by the doctor listening carefully and by the perception of having been diagnosed correctly.

(Conflict of Interest)

None of the authors have any conflicts of interest to declare.

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Table 1. The questionnaires for patients and physicians

Questionnaire for physicians

- I am satisfied with my medical care for this patient.
 - This is a scientifically interesting and educational case.
 - I have confidence in the diagnosis.
 - A senior colleague gave me guidance/advice.
 - The patient is difficult.
 - I diagnosed psychogenic illness.
-

Questionnaire for patients

- Age
 - Sex
 - I am satisfied with the medical care of my doctor today.
 - I have been diagnosed correctly.
 - The doctor listened to me very carefully today.
-

Each item except the age and sex of the patient was scored on a ten-point scale: 1 point = "completely disagree"; 10 points = "completely agree".

Table 2. Factors influencing the physician's satisfaction (Simple correlations)

	correlation coefficient	P value
Items from the questionnaire for physicians:		
This is a scientifically interesting and educational case.	0.06	0.06
I have confidence in the diagnosis. *	0.50	<0.001
A senior colleague gave me guidance/advice. *	0.54	<0.001
The patient is difficult. *	-0.35	<0.001
I diagnosed psychogenic illness.	-0.20	<0.001
Items from the questionnaire for patients:		
Age	0.02	0.62
Sex **	-0.01	0.78
I am satisfied with the medical care of my doctor today.	0.14	<0.001
I have been diagnosed correctly.	0.18	<0.001
The doctor listened to me very carefully today.	0.13	<0.001

* correlation coefficient $|r| > 0.2$ in Spearman's analysis

** men=1, women=2

Table 3. Factors influencing the physician's satisfaction (Multiple logistic regression analysis)

	OR (95%CI)	P value
Items from the questionnaire for physicians:		
A senior colleague gave me guidance/advice.	2.03(1.76-2.34)	<0.001
I have confidence in the diagnosis.	1.52(1.37-1.69)	<0.001
The patient is difficult.	0.73(0.68-0.78)	<0.001

OR: odds ratio; 95%CI: 95% confidence interval

Table 4. Factors influencing the patient's satisfaction (Simple correlations)

	correlation coefficient	P value
Items from the questionnaire for physicians:		
I am satisfied with my medical care for this patient.	0.14	<0.001
This is a scientifically interesting and educational case.	0.07	0.03
I have confidence in the diagnosis.	0.01	0.69
A senior colleague gave me guidance/advice.	0.09	0.01
The patient is difficult.	-0.19	<0.001
I diagnosed psychogenic illness. *	-0.22	<0.001
Items from the questionnaire for patients:		
Age	0.18	<0.001
Sex **	0.04	0.22
I have been diagnosed correctly. *	0.57	<0.001
The doctor listened to me very carefully today. *	0.63	<0.001

* correlation coefficient $|r| > 0.2$ in Spearman's analysis

** men=1, women=2

Table 5. Factors influencing the patient's satisfaction (Multiple logistic regression analysis)

	OR (95%CI)	P value
Item from the questionnaire for physicians:		
I diagnosed psychogenic illness.	0.87(0.81-0.94)	<0.001
Items from the questionnaire for patients:		
The doctor listened to me very carefully today.	1.98(1.62-2.42)	<0.001
I have been diagnosed correctly.	0.73(0.68-0.78)	<0.001

OR: odds ratio; 95%CI: 95% confiden

Internal Medicine

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