Survey of Patient and Physician Satisfaction Regarding Patient-Centered Outpatient Consultations in Japan

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Abstract

Objective  The purpose of this study was to show the difference in consultation satisfaction between patient and physician in rural settings, and identify the variables affecting their satisfaction regarding these encounters.

Methods  We collected data by administering questionnaires that included questions regarding satisfaction for a patient-centered approach to patients and physicians, transcribing data from medical records, and observing consultations in person. We then modeled cumulative logits of patient and physician satisfaction scores by performing ordered logistic regression using the proportional odds model.

Patients  Seven physicians and 122 patients participated in the study.

Results  Both patients and physicians expressed high satisfaction with their consultation sessions. Patient satisfaction tended to be higher than physician satisfaction. Physicians were satisfied with longer consultations but patients were not. Moreover, the long waiting times dissatisfied patients. In cases of multiple healthcare episodes (courses of treatment for a different condition) during a single visit, patient satisfaction decreased, while physician satisfaction increased. Physician satisfaction for interactions in general was less when they checked the same patient who had previously visited them.

Conclusion  Our findings suggest that if physicians feel satisfied with their consultation, patients also feel satisfied regardless of the physician’s opinion. The variables that affect patient and physician satisfaction include prior visits with the same physician, consultation length, longer waiting times, and number of episodes. These findings from Japanese clinics are consistent with those previously reported for other countries.

Key words: physician satisfaction, patient satisfaction, outpatient, patient centeredness, questionnaire, primary care


Introduction

The patient-physician relationship plays a crucial role in primary care visits. During consultations, physicians must adopt a patient-centered approach and make it apparent that they care for patients. Measuring patient satisfaction is a reliable and widely used method to evaluate consultations, an important component of primary care (1). Physicians generally keep a busy work schedule and have little time, to assess patient satisfaction by interviewing or asking their patients to complete questionnaires. However, doing so would help physicians tremendously in dealing with their patients.

Whether patient and physician satisfaction following a consultation was mutual has only been infrequently addressed (2-4). In one study, physicians viewed consultations more negatively than their patients (2). In an outpatient setting, patient ratings regarding visit-specific satisfaction were substantially higher than, and only moderately correlated with, physician ratings for the same visits (3). Another study reported that most encounters were satisfying for both patients and physicians, but did not statistically analyze the patient and physician satisfaction correlation (4). Physicians were most satisfied with encounters in which they believed...
they spent adequate time, addressed patient problems competently, and communicated successfully with the patient. Patients were more likely to be fully satisfied if they believed themselves to be in good health, did not wait long, and had health insurance (4).

The relationship between patient and physician satisfaction might be expected to be different in a clinical setting. In Japan, utilization of consultations per episode is relatively high. The Japanese system requires multiple physician-patient encounters per episode in a short time (5). Japanese patients visit outpatient clinics more often than patients in other Organisation for Economic Co-operation and Development (OECD) countries (6). In Japan, researchers have reported on the relationship between physician job satisfaction and quality of care (7), but to our knowledge, no study has compared patient and physician satisfaction. To address this important point, we compared physician and patient satisfaction regarding the outcome of consultations and performed exploratory analyses of the relevant variables.

**Patients and Methods**

**Sample population**

We chose 7 general practitioners (6 men and 1 woman) from 3 clinics in rural Hokkaido, Japan to take part in the study, and collected the data in October 2009. The survey was performed for 1 or 2 days at each clinic, over a period of 5 days. The means for physician ages, years in practice, and outpatient encounters per day were, 33.7 (28-44) years, were 8.7 (3-19) years, and 30 (20-40), respectively. We asked 143 eligible patients to participate in our study. Of these, 6 rejected our proposal and 15 returned incomplete questionnaires, resulting in 122 final participants.

**Measurements**

We collected data from questionnaires administered to patients and physicians, transcripts of data from the patients’ medical records, and notes made during observations of consultations made in person. We asked the patients and physicians to answer their questionnaires immediately after the consultation. Table 1 presents the modified Patient Satisfaction Questionnaire for Patients (PSQ Patients) and Patient Satisfaction Questionnaire for Physicians (PSQ Physicians) (3). The 5 items addressed by the questionnaires are as follows: 1) how patient needs were addressed; 2) patient’s active involvement in the interaction; 3) information received from the physician; 4) emotional support received from the physician; and 5) interaction in general (8, 9). These 5 factors reflect a patient-centered approach and are designed to reveal whether patient-centered treatment was achieved successfully.

The internal reliability (Cronbach’s α) of these questionnaires is high. We translated PSQ into Japanese but did not confirm by triangulation. In order to obtain answers easily, we used a 5-point Likert-type scale instead of the visual analog scale. An overall satisfaction score was obtained by summing the responses to the 5 questions. If the patients were unable to answer the questionnaires by themselves because of extreme old or young age, those who accompanied them were requested to assist. The questionnaires also queried the point of the patients’ waiting time before consultation. Next we transcribed the patients’ age, gender, date of prior visit with the same physician, and number of visits from their medical records. We then measured consultation length by observing directly the patient-physician interaction. During the conversation, we recorded the reason for the visit and the number of episodes of care. Here, “episode of care” means a health problem or disease, which represents the standard unit of assessment for healthcare provider (10).

**Statistical analysis**

We modeled cumulative logits of patient and physician satisfaction scores by performing ordered logistic regression, using the proportional odds model (11). We estimated the odds ratio of individual explanatory variables for patient and physician satisfaction scores after adjusting the multiple explanatory variables. Response variables are as follows: need addressed, patient involvement, information given by the
physician, emotional support, and patient-physician interaction in general. Explanatory variables include age, gender, prior visit with the same physician, number of visits for the same problem, reason for the visit, waiting time perceived by the patient, consultation length, and number of episodes. Nominal measurements of these variables were coded as combinations of dummy variables at zero and one. Data were analyzed with SAS 9.2 on Windows 7 platform.

**Ethical considerations**

We informed the patients that they would not be disadvantaged if they did not participate in our survey, and we did not show the completed questionnaires to the physicians. We also informed the patients that answering the questionnaires constituted their approval. The Ethical Committee of the Hokkaido University Graduate School of Medicine approved the study.

**Results**

Table 2 summarizes patient characteristics. Their ages ranged from 0 to 96, and more than half had experienced only 1 episode of care. Figure 1 presents our findings on overall patient and physician satisfaction. Overall, patient satisfaction tended to be higher than physician satisfaction. Fifty-one patients (41.8%) were 100% satisfied, but the physicians’ median satisfaction score was 20. Table 3 summarizes patients’ and physicians’ opinions on their specific level of satisfaction with survey parameters as described above.

On the basis of scores, we divided 122 subjects into 3 groups as follows: Unsatisfied, score =1 or 2), Intermediate, score =3, Satisfied, score =4 or 5. In general, the Satisfied group included more than 90% of patients while the Intermediary group included 16%-32% of physicians. This pattern held for all parameters. Briefly, the patients were more satisfied with their consultations than the physicians. Both patients and physicians were mostly satisfied with “need addressed”, but patients were less satisfied with “interaction in general”, and physicians were less satisfied with “emotional support”.

Table 4 presents the results of the ordered logistic regression analysis. We found the 3 following patterns with 95% confidence intervals (CIs) with odds ratio (OR) ≠ 1 that we judged to be statistically significant, regarding patient satisfaction: patient involvement, emotional support, and interaction in general. Notably, older patients were less satisfied with their degree of involvement. Patients’ lower rates of satisfaction with the emotional support provided by their physicians were correlated with having made a prior visit and longer waiting times. We found discern 3 distinct patterns of physician responses with respect to the categories of need addressed, emotional support, and interaction in general. Thus, physician satisfaction for need addressed was higher when the consultations were longer and when the physician dealt with increased numbers of episodes of care, but it was lower when there were prior visits by the same patient. Higher physician satisfaction for emotional support was associated with longer consultations. Physician satisfaction for interaction in general was less when there were prior visits by the same patient.

**Discussion**

**Patient and physician satisfaction**

Here we present the results of an investigation of patient and physician satisfaction regarding consultations from the

![Figure 1](image-url)
viewpoint of a patient-centered approach in general practice. We discovered that both patients and physicians were highly satisfied with their consultations. Interestingly, patient satisfaction was higher than physician satisfaction and was also less associated with physician satisfaction. Previous studies have reported that patient satisfaction was higher than physician satisfaction (2, 3, 12). The Japanese medical insurance system allows patients to access any healthcare provider, from general practitioners to specialists (6). Patients therefore end up consulting their favorite physicians, which might also explain their high degree of satisfaction. However, the 3 clinics included in our study are located in rural areas and patients would have to drive for at least 30 min to visit other physicians, which forces them to approach a physician in their own area. We therefore consider the effect on the results of selecting a healthcare provider to be negligible. Our study suggests that in Japan, patients are more satisfied with consultations than the physicians believe.

**Factors associated with patient and physician satisfaction**

In this study, by performing ordered logistic regression analysis, we attempted to statistically reveal the factors associated with 5 parameters related to patient and physician satisfaction when applied to a patient-centered approach. Patients were more satisfied when visiting a physician for the

### Table 3. Specific Satisfaction

<table>
<thead>
<tr>
<th>Satisfaction with</th>
<th>Not at all</th>
<th>1-2</th>
<th>3</th>
<th>Extremely well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need addressed</td>
<td>Patient</td>
<td>1 (0.8%)</td>
<td>2 (1.6%)</td>
<td>119 (97.5%)</td>
</tr>
<tr>
<td></td>
<td>Physician</td>
<td>5 (4.1%)</td>
<td>19 (15.5%)</td>
<td>98 (80.3%)</td>
</tr>
<tr>
<td>Patient's involve</td>
<td>Patient</td>
<td>5 (4.1%)</td>
<td>2 (1.6%)</td>
<td>115 (94.3%)</td>
</tr>
<tr>
<td>ment</td>
<td>Physician</td>
<td>3 (2.5%)</td>
<td>35 (28.7%)</td>
<td>84 (68.9%)</td>
</tr>
<tr>
<td>Information given by the physician</td>
<td>Patient</td>
<td>1 (0.8%)</td>
<td>2 (1.6%)</td>
<td>119 (97.5%)</td>
</tr>
<tr>
<td></td>
<td>Physician</td>
<td>7 (5.7%)</td>
<td>28 (23.0%)</td>
<td>87 (71.3%)</td>
</tr>
<tr>
<td>Emotional support</td>
<td>Patient</td>
<td>0 (0.0%)</td>
<td>2 (1.6%)</td>
<td>120 (98.4%)</td>
</tr>
<tr>
<td></td>
<td>Physician</td>
<td>7 (5.7%)</td>
<td>39 (32.0%)</td>
<td>76 (62.3%)</td>
</tr>
<tr>
<td>Interaction in general</td>
<td>Patient</td>
<td>3 (2.5%)</td>
<td>7 (5.7%)</td>
<td>112 (91.8%)</td>
</tr>
<tr>
<td></td>
<td>Physician</td>
<td>6 (4.9%)</td>
<td>32 (26.2%)</td>
<td>84 (69.9%)</td>
</tr>
</tbody>
</table>

The data show the number (and the percentages) of patients and physicians. Not all figures add up to 100% because of rounding errors.

### Table 4. Summary of Analyses in which the 95% Confidence Interval did Not Include 1 (Odds Ratio of Ordered Logistic Regression)

#### Patient satisfaction

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p-value</th>
<th>OR denotes odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.97</td>
<td>0.95-0.99</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.74</td>
<td>0.30-1.81</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Prior visit with the same physician</td>
<td>0.48</td>
<td>0.19-1.22</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Number of visits about the same problem</td>
<td>0.25</td>
<td>0.06-1.04</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>Reason for visit</td>
<td>0.56</td>
<td>0.18-1.98</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Waiting time perceived by the patient</td>
<td>0.99</td>
<td>0.98-0.99</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Consultation length</td>
<td>0.99</td>
<td>0.90-1.08</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>Number of episodes</td>
<td>0.41</td>
<td>0.15-1.16</td>
<td>0.33</td>
<td></td>
</tr>
</tbody>
</table>

#### Physician satisfaction

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p-value</th>
<th>OR denotes odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.98</td>
<td>0.97-1.01</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.95</td>
<td>0.83-4.61</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Prior visit with the same physician</td>
<td>0.35</td>
<td>0.14-0.88</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>Number of visits about the same problem</td>
<td>0.41</td>
<td>0.13-1.33</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>Reason for visit</td>
<td>1.34</td>
<td>0.40-4.16</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Waiting time perceived by the patient</td>
<td>1.10</td>
<td>1.01-1.20</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td>Consultation length</td>
<td>3.03</td>
<td>1.16-7.89</td>
<td>2.07</td>
<td></td>
</tr>
</tbody>
</table>

OR denotes odds ratio
95% CI denotes 95% confidence interval
*95% confidence interval of odds ratio under 1
†95% confidence interval of odds ratio over 1

Age (by year)
Gender (0:1); 0 = male, 1 = female
Prior visit with the same physician (0:1); 0 = none, 1 = 1 or more
Number of visits about the same problem (0:1); 0 = first visit, 1 = 2 or more
Reason for visit (0:1); 0 = routine visit, 1 = other
Waiting time perceived by the patient (by minute)
Consultation length (by minute)
Number of episodes (0:1); 0 = 1 episode, 1 = 2 or more episodes
0 = reference group
first time versus having made multiple visits. One could reasonably assume that continuous care correlates with patient satisfaction and that patients have high expectations for continuity of care (13, 14). However, we discovered that both patients and physicians are satisfied with first encounters. We speculate that physicians give special consideration when acquiring patient histories, but we cannot ascertain the reason for this, as it is beyond the scope of the present study. It remains a question to explore in future studies.

Longer waiting times, as could be expected, made patients feel less satisfied with the emotional support they received as well as with the interaction in general. We could not find a significant correlation with gender, number of visits for the same problem, routine visits, or consultation length. Longer waiting times negatively affected patient satisfaction regarding emotional support and interaction in general. Even if physicians provide the best consultation, longer waiting times may result in lower patient satisfaction. In this study, we asked patients to express their satisfaction only for consultation and not regarding their waiting time. It is reasonable to conclude that longer waiting times subconsciously affect the patients’ opinion of the consultation. This finding challenges healthcare providers to decrease the waiting times.

A characteristic of the Japanese healthcare system is that patients visit outpatient clinics often, resulting in shorter consultations (6). We measured consultation length for every patient in the study and applied this parameter to the analysis. Consultation length correlated with physician satisfaction but not with patient satisfaction, which suggests that patients do not feel that they always require longer interactions with their physician. These results are also consistent with those of a previous study demonstrating that patient satisfaction was not significantly associated with consultation length, but was associated with patient-estimated consultation length and with patients’ perceived waiting time relative to real time (15). On the other hand, physicians tended to be satisfied with longer consultations. This result is similar to those of a previous report demonstrating that physicians were most satisfied with encounters in which they believed they had adequate time (4). Physicians may intrinsically believe that longer consultations constitute good practice. Another possible explanation for these findings is that good physician-patient relationships generally result in longer consultations.

Patient satisfaction decreased when multiple episodes were addressed in consultations, while physician satisfaction increased. Patients with multiple healthcare problems may believe that their problems are not adequately resolved, and physicians may think that dealing with multiple episodes is good practice, similar to their view of consultation times. Our findings in the setting of Japanese clinics are consistent with those of most previous studies in other countries (2-4, 12). However, it is difficult to understand why patients would be more satisfied when there have been no prior visits. The clinics that participated in our study employ a group practice and this system may account for the result. It suggests that enhanced patient satisfaction will result if clinics combine solo practices into groups.

**Study limitations**

In this study, we chose clinics in a rural area, which differ from clinics in urban settings; therefore, it is not possible to conclude that our study represents general practice in Japan. The sample size was small and patient satisfaction was considerably high; hence, definitive statistical analysis was difficult to achieve. In addition, triangulation between English and Japanese was insufficient, and the number of participating physicians was small, which prevented meaningful analysis of factors such as physician age or gender.

**Conclusion**

In this study, we analyzed outpatient encounters involving 122 subjects and 7 general practitioners in. Both patients and physicians were highly satisfied with their experiences, and patient satisfaction was higher than physician satisfaction. These results suggest that patient satisfaction is less associated with physician satisfaction. Physicians appreciated longer consultations but the patients did not. Patients were dissatisfied with long waiting times before the consultation. The findings presented here are consistent with those of other similar studies conducted in other countries.

**The authors state that they have no Conflict of Interest (COI).**

**Acknowledgement**

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**References**