

Analysis of New Outpatients' Responses to a Survey of Their Reasons for Visiting a Dental Clinic

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Abstract

Background: To practice holistic therapy, health professionals must understand not only biological information but also psychological and social aspects of patient complaints at the first visit medical interview. However, few studies have investigated psychological and social causes associated with the patient's complaint. Although patients' complaints are expected to be related to their background and behavior, research on this issue has been limited. **Aim:** This study investigated the proportions of biological, psychological, and social causes contributing to patients' complaints as well as the influences of new outpatients' backgrounds on reasons for visiting our hospital. **Methods:** We analyzed health questionnaires from 5129 new outpatients visiting our hospital. Patients' reasons for visiting the dental hospital were classified into three categories: "biological," "psychological," and "social." We subdivided biological reasons based on the patient's explanatory model. Descriptions of psychological reasons were subdivided into several groups. **Results:** Biological, psychological, and social reasons for visiting our hospital were given by 86%, 6%, and 8% of patients, respectively. Compared to men, significantly more women gave psychological reasons, while significantly more men gave social reasons. Patients who had attended another dental clinic were significantly more likely to indicate a psychological reason. Among patients who had attended another dental clinic, the most common reason for visiting our hospital was dissatisfaction. Patients who had not previously consulted any medical clinic tended to present explanatory models. Patients without a surgical history or systemic disease and those not taking medication showed similar tendencies. **Conclusion:** These findings suggest that a patient's background affects their behavior.

Keywords: Biopsychosocial model, explanatory model, first visit medical interview, holistic therapy

INTRODUCTION

In the 1960s, Weed proposed the concept of a problem-oriented system (POS) because disease centeredness and doctor centeredness did not improve the quality of life of patients.^[1] To practice POS, it is not enough for health professionals to consider only the patient's biological information, and they need to understand the patient's complaint and needs holistically. In 1977, George Engel proposed a new medical system using a "biopsychosocial model" instead of the biomedicine model.^[2] Subsequently, this suggestion was adopted as the World Health Organization definition of health.^[3] The biopsychosocial model is a method of performing holistic therapy based on understanding the patient's biological, psychological, and social factors. Consequently, to practice holistic therapy, health-care professionals need to consider the patient's complaint and needs including psychological and social factors. However, there are few studies that have

investigated the proportion of psychological and social causes contributing to the patient's complaint and needs. In particular, our dental hospital is a medical institution with a reputation for providing high-level dental care in our country. For this reason, a certain number of patients who were transferred to our hospital from other dental clinics. Although the backgrounds of these patients may affect their complaints and needs, research on this issue has been limited.

Therefore, in this study, we investigated the proportions of biological, psychological, and social causes contributing to patients' complaints as well as the influences of new

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outpatients' backgrounds on their reasons for visiting our hospital. For this purpose, we analyzed their responses to a health questionnaire completed at the initial visit.

MATERIALS AND METHODS

Subjects

We reviewed questionnaires from 5129 of 6235 new outpatients who visited our hospital between January 4, 2014 and June 30, 2014. The study protocol was approved by the Research Ethics Committee of our university (#1250).

Investigative method

We analyzed responses to the health questionnaires that new outpatients must fill out during the first visit and especially focused on the following items: age, gender, reasons for visiting (free descriptive answer), previously attended another dental clinic (Yes or No), previous experience of local anesthesia (Yes or No), history of tooth extraction (Yes or No), presence of systemic disease (selected from disease list in the health questionnaires), currently taking any medication (Yes or No), and presence of surgical history (Yes or No).

Patients listed various reasons for visiting our hospital and these responses were classified into three categories: "biological," "psychological," and "social."

Responses that mentioned any disease was classified as a biological reason. In addition, we subdivided biological reasons based on whether or not they included the patient's explanatory model. For this analysis, we did not consider the appropriateness of the patient's explanatory model.

Responses that described a mental or emotional factor were classified as psychological reasons. In addition, psychological reasons were subdivided into several groups: "anxiety," "dissatisfaction," "persistent demand," and other issues. For example, descriptions including the word "uneasiness" were classified as "anxiety." Responses that described social factors, for example, suggestions from family members and/or friends, geographic location were classified as social reasons.

Statistical analysis

Using Chi-square test and residual analysis,^[4] differences in each survey item were compared among the three groups classified by the reasons for visiting our hospital.

Using Fisher's exact test, we analyzed differences in the proportions of patients who presented explanatory models in relation to each survey item. These analyses were performed using SPSS version 20 (IBM, New York, USA).

RESULTS

Gender and age distribution of new outpatients

This study included 5129 patients; the ratio of males and females was 34% and 66%. Concerning age distribution, patients in their sixties comprised the largest age group [Figure 1].

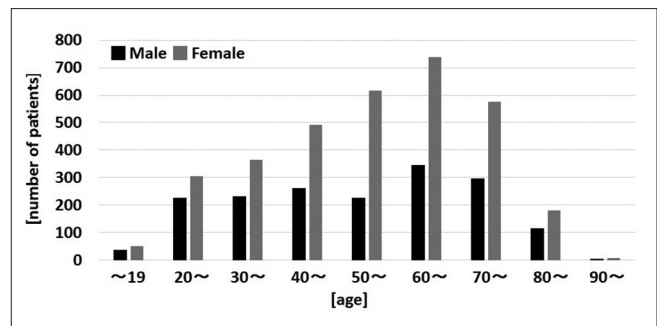


Figure 1: Gender and age distribution of new outpatients

Classification of the reasons for visiting given by new outpatients

Of new outpatients visiting our hospital, 86%, 6%, and 8% gave biological, psychological, and social reasons [Figure 2a]. Approximately 84% of the outpatients who described biological reasons presented only their disease, while approximately 16% presented an explanatory model in the health questionnaire at the initial visit [Figure 2b].

Correlation between gender/visiting another dental clinic and classification of reasons for visiting

There was a significant gender difference among groups classified by their reasons for visiting. Compared to men, significantly more women gave psychological reasons for visiting our hospital ($P < 0.01$). On the other hand, significantly more men gave social reasons for visiting our hospital ($P < 0.01$) [Figure 3a].

Patients who had previously attended another dental clinic were significantly more likely to indicate a psychological reason for visiting our hospital ($P < 0.01$) [Figure 3b].

Analysis of psychological reasons

Among patients who had attended another dental clinic, the most common reason for visiting our hospital was dissatisfaction (35%) with the previous clinic [Figure 4a]. Among patients who had not attended another dental clinic, the most common reason was anxiety (42%) [Figure 4b].

Correlation between description of explanatory models and medical history

Patients who had not previously consulted any medical clinic tended to present an explanatory model ($P < 0.01$) [Figure 5a and b]. Patients without a surgical history or systemic disease and those not taking medication also showed a similar tendency ($P < 0.01$) [Figure 5c-e].

DISCUSSION

In this study, the ratio of males and females was 34% and 66%, similar to previously reported male:female ratios of approximately 40% and 60%.^[5,6] On the other hand, in the past studies, male patients in their twenties and female patients in their twenties and fifties comprised the largest age groups.^[5,6] However, both male and female patients in their sixties comprised the

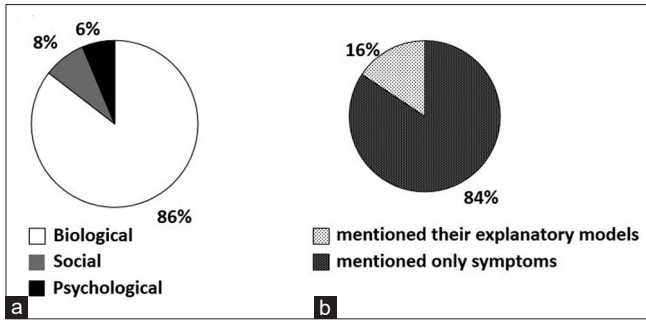


Figure 2: Classification of the reasons for visiting our hospital given by new outpatients. The percentages of biological, psychological, and social reasons (a). The percentage of patients presenting an explanatory model when giving a biological reason (b)

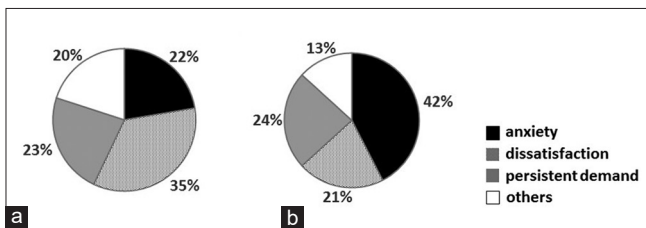


Figure 4: Analysis of psychological reasons. Breakdown of psychological reasons given by patients who had attended another dental clinic (a) and patients who had not attended another dental clinic (b)

largest age groups in this study [Figure 1]. This finding suggests that new outpatients in our hospital are aging. We considered two explanations: (1) the aging of society in general and (2) females in their twenties have less time to visit a dental hospital in accordance with recent advances in women's social progress.

In this study, the reasons given for visiting our hospital were free descriptive answers on a health questionnaire. This health questionnaire is a document that all outpatients in our hospital must fill out just before medical examination for the initial diagnosis to determine the appropriate department for treatment. Since this is the first opportunity for new outpatients to verbalize their reasons for visiting our hospital, it is considered that the reason given expresses the patient's highest priority regarding their problems. To analyze these data, we classified these reasons into three categories: "biological," "psychological," and "social" based on the biopsychosocial model by Engel. Approximately, 84% of new outpatients visited our hospital for biological reasons [Figure 2b]. This finding suggests that most patients were seeking the resolution of biological problems, which is the same as in other health professions. On further analysis of biological reasons, approximately 16% of patients presented explanatory models in their reasons, and there was a correlation with other items on the health questionnaire. Kleinman *et al.* proposed the importance of understanding the patient's explanatory model based on etiology, onset of symptoms, pathophysiology, course of illness, and treatment.^[7] Kleinman also suggested that understanding of patients' explanatory models of chronic disease empowered patients themselves and promoted self-care.

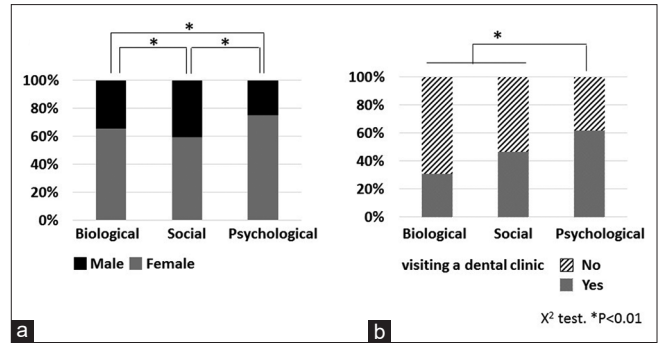


Figure 3: Correlation between gender/visiting another dental clinic and classification of reasons for visiting. Gender differences among groups presenting biological, psychological, and social reasons (a). Patients who had previously attended another dental clinic were significantly more likely to indicate a psychological reason for visiting our hospital ($P < 0.01$) (b)

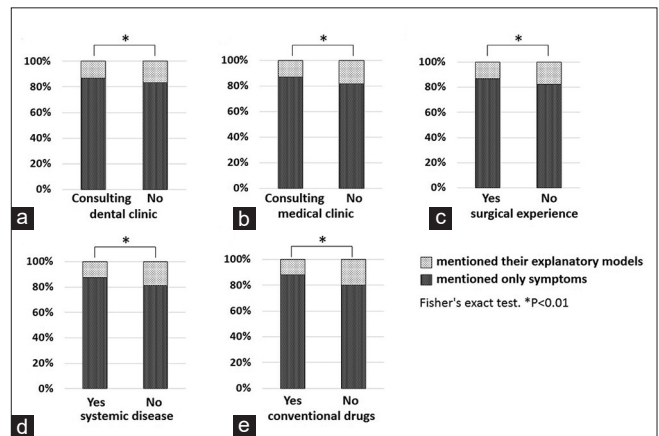


Figure 5: Correlation between description of explanatory models and medical history. The percentages of patients presenting explanatory models in groups classified by whether the patient had attended another dental clinic or not (a), had consulted another medical clinic or not (b), had surgical experience or not (c), had systemic disease or not (d), and currently taking medication or not (e)

In addition, it was reported that good concertation of the patient's and health professional's explanatory model improved patient-doctor relationship and result of care. A possible reason for patients presenting their explanatory models to health professionals is the patient's desire to know whether to accept the explanatory models they have constructed for themselves based on their own unique experiences.

In this study, patients who had attended another dental clinic tended not to present explanatory models [Figure 5a]. A possible reason for this finding is that they had already obtained consensus about their clinical conditions with another dental clinic. In addition, patients who had consulted any medical clinic, patients with a surgical history, patients with systemic disease, and patients currently taking medication tended not to present explanatory models [Figure 5b-e]. A possible reason for this finding is readiness to accept the explanatory model of the medical care provider. The average

age of patients with an explanatory model was 48-year-old and that of patients without an explanatory model was 55-year-old. It is considered important to analyze the relationship between the expression of an explanatory model and the age of new outpatients in a future study.

Our dental hospital is one of the more highly respected dental clinics in our country. This reputation regularly generates a number of patients who want to transfer from another dental clinic and obtain a second opinion. In this study, approximately 34% of new outpatients indicated that they had attended another dental clinics; and this group was significantly more likely to indicate a psychological reason for visiting our hospital [Figure 3b]. This finding suggests that not only recommendations but also the patient's own emotions affected the patient's decision to transfer. Then, we analyzed the breakdown of psychological reasons given by patients attending another dental clinic and by those not attending another dental clinic to investigate the kind of patient psychology affecting the patient's behavior. In this study, patients who had attended to another dental clinic most commonly described dissatisfaction as the reason for visiting our hospital. This ratio is much higher than that for patients who had not attended another dental clinic [Figure 4] suggesting that one possible reason for transferring is dissatisfaction with the previous dental clinic.

Focusing on gender differences, significantly more women gave psychological reasons for visiting our hospital [Figure 3a].

There are several studies researching gender differences in decision-making and preference.[8-10] It has been reported that women are more sensitive to social cues than men, and this psychological tendency may be associated with women's self-disclosure on the health questionnaire.

Because the reasons for visiting analyzed in this study were excerpted from free descriptive answers on health questionnaires, any thinking or opinion of the patient that was not written on the form was not analyzed, and this problem is a limitation of this study. This study was performed in our country, and environmental differences should be considered when the results of this study are generalized to another medical institution. For example, it was previously reported that there are differences between Japanese and Americans in clinical decision-making.[11] In a future study, we need to

examine whether or not cultural differences affect a patients' needs.

CONCLUSION

Our findings indicate that many new outpatients visited our hospital for biological reasons, and some of these patients presented explanatory models. On the other hand, some new outpatients were transferred from other dental clinics for psychological and social reasons. Therefore, it is considered that as a high-level institution, we need to provide professional medical services that include not only advanced medical technology but also consideration of psychological and social information to meet the needs of each patient.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Weed LL. Medical records, patient care, and medical education. *Ir J Med Sci* 1964;462:271-82.
2. Engel GL. The need for a new medical model: A challenge for biomedicine. *Science* 1977;196:129-36.
3. WHO. Constitution of the World Health Organization. WHO; 2006.
4. Haberman SJ. The analysis of residuals in cross-classified tables. *Biometrics* 1973;29:205-20.
5. Fujisawa S, Yamamoto M, Yamamoto A, Ikeuchi H, Ishida S, Igarashi I, *et al.* 4-year clinico-statistical observation of outpatients. *Kokubyo Gakkai Zasshi* 1997;64:376-83.
6. Ishida S, Igarashi I, Oshio H, Iida K, Shimizu C, Mataka S, *et al.* A survey of awareness among new patients at the department of oral diagnosis and general dentistry. *Kokubyo Gakkai Zasshi* 2001;68:93-8.
7. Kleinman A, Eisenberg L, Good B. Culture, illness, and care: Clinical lessons from anthropologic and cross-cultural research. *Ann Intern Med* 1978;88:251-8.
8. Powell M, Ansic D. Gender differences in risk behaviour in financial decision-making. *J Econ Psychol* 1997;18:605-28.
9. Croson R, Gneezy U. Gender differences in preferences. *J Econ Lit* 2009;47:1-27.
10. Venkatesh V, Morris MG, Ackerman PL. Longitudinal field investigation of gender differences in individual technology adoption decision-making processes. *Organ Behav Hum Decis Process* 2000;83:33-60.
11. Ruhnke GW, Wilson SR, Akamatsu T, Kinoue T, Takashima Y, Goldstein MK, *et al.* Ethical decision making and patient autonomy: A comparison of physicians and patients in Japan and the United States. *Chest* 2000;118:1172-82.

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