Association Between Patients' Communication Motivation and Physicians' Past Reactions/Attitudes Regarding Complementary and Alternative Medicine Use in Japan

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ABSTRACT

Objective This study aimed to elucidate the perspective of patients with chronic diseases on the relationship between their motivation to communicate regarding complementary and alternative medicine（CAM）use and past reactions of physicians（negative or supportive）.

Methods A questionnaire was administered to 428 patients about their experiences of disclosing CAM use to physicians, the physicians' reaction, and patients' motivation to communicate regarding CAM in the future.

Results In total, 277 patients（65.3%）had discussed CAM with their physicians, with 83（30.2%）experiencing a negative reaction（i. e., denial of therapy efficacy, with no reason/information provided）and 217（79.2%）experiencing a supportive reaction（i. e., empathy）. Furthermore, 175 patients（63.6%）wished to communicate to the physician regarding CAM in the future. Logistic regression analysis of factors related to the patient willingness to communicate was performed, with physicians' reactions as an additional independent variable. Results indicated that patients' communicative and critical health literacy（P＝0.030, OR＝1.61）and physicians' empathic reaction（P＝0.033, OR＝1.33）were significantly associated with willingness to communicate.

Conclusion Patients who had higher communicative and critical health literacy and experienced an empathic reaction by the physician were more likely to wish to communicate with a physician about CAM use in the future. While it is necessary to educate patients to enhance their communicative and critical health literacy, an empathic reaction by the physician may enhance the patients' willingness to communicate about CAM, contributing to good communication.

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KEY WORDS　Complementary and alternative medicine, Patient-physician communication, Communicative and critical health literacy, Chronic disease, Japan

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INTRODUCTION

Complementary and alternative medicine（CAM）is defined by the National Center for Complementary and Integrative Health（NCCIH）as“a group of diverse medical and healthcare systems, practices, and products that are not presently considered to be part of conventional medicine,”and includes herbal therapy, meditation, chiropractic medicine, and acupuncture/moxibustion.[1] In Japan, translations and definitions of the term“CAM”have been established to a certain extent, but not definitively. The Japanese Society for Complementary and Alternative Medicine defines CAM as a“collective term for medical and healthcare systems not scientifically verified or clinically applied in contemporary Western medicine.”[2] At a committee meeting of the Ministry of Health, Labor, and Welfare, Integrative medicine was regarded only as“modern Western medicine-based medical care combined with complementary/alternative treatments and/or conventional medicine to further enhance the quality of life, which should be initiated by a physician, sometimes in a multidisciplinary manner.”[3]

1 Current usage of CAM in Japan

In Japan, CAM has not been studied as extensively as in Western countries; however, contemporary Kampo medicine, which has been adopted in Japan and independently established from traditional Chinese medicine, includes crude drugs, acupuncture/moxibustion, Japanese massage, and dietary therapy. Further, Kampo medicine and acupuncture/moxibustion have been partly covered by the National Health Insurance,[4] creating a social climate in which CAM is culturally and ethnically acceptable. According to recent surveys, 73% of medical institutions practiced CAM（1999, primarily Kampo medicine）,[5] with 76%（2001）[6] and 57%（2006）[7] of patients utilizing CAM.

2 Physician-patient communication regarding CAM

Use of CAM is a topic that is often not sufficiently discussed among physicians and patients. For instance, according to a 2010 survey conducted in the US, by the US National Center for Complementary and Alternative Medicine（NCCAM）, 69% of CAM users did not inform their physicians, and the most common reasons were“health care provider never asked”（42%）,“didn't know you should”（30%）, and“not enough time during office visit”（19%）.[8] Chao, et al[9] reported that the disclosure rate was lower for patient-administered self-care therapies than for therapist-administered therapies, and lower in Asians than in Caucasians. A study in HIV patients conducted by Liu, et al.[10] showed that, while non-Hispanic Blacks were less likely to disclose their use of CAM, those aged 45 years or older, females, college graduates, health insurance subscribers, heavy CAM users in terms of frequency or variety, and those who were more satisfied with their overall health care were more likely to disclose. Busse, et al.[11] reported that females and elderly people were more likely to disclose CAM use if asked by a physician. To address this issue, the NCCAM initiated a“Time to talk”campaign for promoting conversation about CAM in 2008 to encourage physicians to ask patients about CAM, by including relevant items in questionnaires, etc.[12]

3 Physicians' reaction during communication

In addition, physicians' reaction was cited as a primary reason for poor communication, including“physician did not ask”and“physician does not need to know,”[13] as well as“anxious about the physician's objection or denial of efficacy”[14] and“afraid of being considered stupid or troublesome by the physician.”[15] Schofield, et al.[16] summarized effective physicians' reactions to CAM during a clinical examination of cancer patients as follows:（1）elicit the patient's understanding of his/her situation;（2）respect cultural and linguistic diversity and different epistemological frameworks;（3）ask questions about CAM use at critical points in the illness trajectory;（4）explore details and actively listen;（5）respond to the patient's emotional state;（6）discuss relevant concerns while respecting the patient's beliefs;（7）provide balanced, evidence-based advice;（8）summarize discussions;（9）document the discussion; and（10）monitor and follow-up. Juraskova, et al.[17] reported that physician reactions to CAM in early-stage breast cancer patients included“encouragement”（38%）,“a discouraging comment”（23%）, and“ignored”（20%）, and showed that these physicians' reactions were associated with the patient anxiety. Liu, et al.[18] reported that among patients undergoing cardiac surgery and using CAM, 17% had discussed CAM with their physicians, and 48% did not want to discuss the topic at all. Tasaki, et al.[19] cited the following three reasons why cancer patients in Hawaii did not talk about CAM:“physician does not agree,”“physician emphasizes evidence,”and“physician's negative response is expected.”In summary, the physician reactions to CAM during communication may be important to patients and affect willingness to communicate their usage; however, physi-

cians' reactions from the patients' perspective has not been studied yet.

Of patient factors, health literacy plays an important role in treatment decision and communication. The World Health Organization（WHO）defines health literacy as "the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways which promote and maintain good health."[20] Further, Nutbeam[21] emphasized the important role of patient/physician communication, and proposed a model classifying health literacy into three stages:（1）transmission of factual information on health risks and utilization of health services（functional),（2）opportunities to develop skills in a supportive environment（communicative), and（3）provision of information on social and economic determinants of health, and opportunities to achieve policy and/or organizational change（critical). Patients with high HL were more likely to disclose CAM to their physicians, but they were less likely to experience disclosure if they were afraid of effects of refutation.[22]

Therefore, the present study was conducted to determine whether physician reactions during prior discussions regarding CAM between the physician and patient would affect patients' willingness to talk to a physician about CAM in the future, considering patient health literacy.

MATERIALS AND METHODS

1　Survey items

1）Definition and use of CAM

Given the social background and current conditions in Japan, including that a consensus definition of CAM has yet to be achieved, and with a view to understanding a wide range of treatments voluntarily utilized by patients, CAM was broadly defined as "all attempts made by a patient to treat disease and improve, maintain, or promote his/her health, excluding treatments prescribed to him/her by Western medicine practitioners." Utilizing this definition, patients were asked whether they had used CAM in the past.

2）Attributes of participating patients

Patients' attributes included demographic, disease-related, and psychological characteristics and communicative and critical health literacy, which was assessed based on a questionnaire. Patients were asked to answer eight questions regarding the subjective efficacy of CAM, including "disease symptoms have improved," on a four-point scale（definitely/moderately/slightly/no).

As described below, a preliminary survey was conducted, from December 2010 to January 2011, to discern and list the factors related to physician-patient communication regarding CAM. A total of 35 chronic disease patients, aged 20 years or older, who utilized both a patient support facility and CAM, participated in a semi-structured interview.

3）Reasons for not disclosing use of CAM

Each patient was asked to specify the reason for reluctance to communicate use of CAM（hereinafter referred to as "reason for not disclosing"）from the following options:"My physician does not understand or is not interested," "I am afraid that my physician will get angry," "I am afraid that my physician will deny the efficacy," "I am shy around my physician," "I have no time to talk to my physician," and "I do not know how to talk about it."

4）Physicians' reaction during communication

Each patient was asked to assess physicians' reactions（positive or negative）during previous talks regarding the use of CAM by patients on a three-point scale（often/sometimes/not at all).

5）Empathic reactions of the physician

Each patient was asked to assess whether physicians（1）provided convincing explanation of ineffectiveness（"My physician said that 'the therapy is not effective,' but convinced me by explaining the reason and relevant information),（2）provided information or considered together with the patient（"My physician provided information on the therapy and/or considered together with me"), and（3）empathy for, and understanding of, the feelings and reasoning of the patient（"My physician understood my feelings and reasoning for wanting to use the therapy"）on a three-point scale（often/sometimes/not at all). Responses of "often" and "sometimes" were categorized as "yes"（1), and "not at all" was categorized as "no"（0）to calculate the total score of the three items as the "empathic reaction of the physician" score.

6）Negative reactions of the physician

Each patient was asked to assess whether physicians（1）denied efficacy（My physician said that "the therapy is not effective" without providing any reasons or information),（2）denial of efficacy and cure（My physician said that "the therapy is not effective and there is no effective therapy for your disease"), and（3）reproach by the physician（My physician got angry or offended when I talked about CAM, including the therapy）on a three-point scale:"Often," "Sometimes," and "Not at all." "Often" and "Sometimes" were

Table 1　Patient demographics（$n=428$）[a,b]

		n（%）
Sex	Male	165（38.6）
	Female	263（61.4）
Age		62.3±11.9 （20–85）
Marital Status	Married	318（74.5）
Occupation	Office worker/Public official	36　（8.4）
	Self-employed/Professional	42　（9.8）
	Part-time employment	24　（5.6）
	Homemaker	120（28.0）
	Unemployed	179（41.8）
	Other	27　（6.3）
Education	Junior high school	47（11.0）
	High school	184（43.2）
	Technical school/Junior college	80（18.8）
	University/Graduate school	110（25.8）
	Other	5　（1.2）
Economic status	Wealthy	17　（4.0）
	Somewhat wealthy	64（15.1）
	Average	211（49.8）
	Poor	100（23.6）
	Very poor	32　（7.5）
Disease period（years）		15.40±11.54
Disease Group	Intractable neuromuscular disease group 1: Parkinson's disease	190（44.4）
	Intractable neuromuscular disease group 2: Other disease	56（13.1）
	Musculoskeletal/Rheumatic disease group	72（16.8）
	Chronic disease group	83（19.4）
	Other diseases group	27　（6.3）
Number of diseases	1 disease	176（41.1）
	2 diseases	113（26.4）
	3 or more diseases	139（32.5）
Number of hospital visits（per month）	Once a month or less	223（53.6）
	Twice or three times a month	103（24.8）
	More than three times a month	90（21.6）
Communicative and critical health literacy（range, 1–4; ↑, better）		2.99±0.59
I have talked about my usage of CAM with my physicians.	Yes	277（65.3）

[a] Used CAM within last 10 years.
[b] No answer and missing entries were excluded.

categorized as "yes"（1）, and "Not at all" was categorized as "no"（0）to calculate the total score of 3 items as the "physician's negative reaction" score.

7）Patient willingness to communicate with the physician

Each patient was asked to answer the question "Are you willing to communicate with a physician about CAM in the future?" on a four-point scale（very willing to communicate/willing to communicate/not very willing to communicate/not willing to communicate at all）. To analyze the related factors, the answers were categorized on a binary basis（presence or

Table 2　Patients' experiences of responses by physicians regarding CAM use（*n*＝277）

		n（%）
1．Response of the physician at the time of communication in the past		
Negative response	＜Physician denied effects of CAM therapy, with no reason or information provided＞	83（30.2）[a]
	＜I was denied the cure of disease and the effects of the CAM therapy＞	71（25.8）
	＜My physician became visibly angry＞	60（21.8）
Empathic response	＜Sympathy for the effort and reasoning of patient＞	217（79.2）[a]
	＜Providing information, considering together with the patient＞	183（66.5）
	＜Convincing explanation of why CAM therapy would have no effect＞	123（46.0）
2．Desire for communication with the physician		
Do you want to communicate about alternative medicine with your physician?		
	＜I want to communicate about it very much＞	38（13.8）
	＜I want to communicate about it＞	137（49.8）
	＜I do not want to communicate about it very much＞	74（26.9）
	＜I do not want to communicate about it at all＞	26（9.5）
3．Reasons for not disclosing（number who agreed）		
	＜My physician does not understand or is not interested＞	225（57.4）[b]
	＜I have no time to talk to my physician＞	139（35.1）
	＜I am afraid that my physician will deny the efficacy＞	122（31.0）
	＜I do not know how to talk about it＞	109（27.8）
	＜I am afraid that my physician will get angry＞	104（26.5）
	＜I am shy around my physician＞	95（24.2）

[a] Percentage of 277 respondents who had experienced disclosure in the past, answering "often" or "sometimes."
[b] Participants who answered "true" or "true, if anything." (No answer and missing entries were excluded.)

absence of willingness to communicate): Responses of "very willing to communicate" and "willing to communicate" were considered "wish to communicate" (1), and "not very willing to communicate" and "not willing to communicate at all" were considered "do not wish to communicate" (0).

2　Multivariate analysis of the factors related to patient willingness to communicate

For patients who had communicated with their physicians regarding their CAM use, analyses were performed to determine whether the "patient's communicative and critical health literacy" or the "physician's reaction in the past" (negative reaction, empathic reaction) was associated with the "patient's willingness to communicate." A logistic regression analysis was performed with the patient's communicative and critical health literacy, the reason for not disclosing, and the physician's reaction in the past (negative or empathic reaction) as the independent variables, and the patient's willingness to communicate the use of CAM as the dependent variable. Significant variables identified by univariate analyses were used in a multivariate analysis adjusted by gender, age, education, disease group, the WHO Quality of Life-BREF (QOL-26) mean score, and subjective efficacy. Missing data were excluded from analyses, and forced entry was employed.

These statistical analyses were performed at a two-tailed significance level of 5%, using the statistical package SPSS 19.0 J for Windows.

3　Ethical considerations

The questionnaire was delivered to patients who, in the opinion of the patients' association staff and the investigator, would not be physically or mentally stressed by responding to the questionnaire. Since health problems and use of CAM may involve personal philosophy, the patients were informed that they would not need to answer the relevant questions if not willing to do so. In addition, an informed consent form specified that no CAM would be recommended. This study was conducted after approval of the protocol by the Ethics Committee of School of Medicine, the University of Tokyo (Approval No. 3394, "Study on the actual usage of CAM by patients with intractable or chronic disease and relevant communication with physicians").

Table 3　Logistic regression analysis of the relationship between past reactions by physicians and future motivation to communicate about CAM to physicians（n＝277）[a)]

	OR[b)]	Univariable 95% CI[c)]	P[d)]	OR	Multivariable[e)] 95% CI	P
Communicative and critical health literacy	1.66	(1.06-2.60)	0.028*	1.61	(0.97-2.65)	0.030*
Reasons for not disclosing usage of CAM I agree.(Ref: I disagree.)						
＜There is no interest or understanding of my physician＞		(0.39-1.08)	0.094			
＜There is no time to talk to my physician＞		(0.51-1.51)	0.629			
＜I am afraid that my physician will deny the efficacy＞		(0.42-1.32)	0.311			
＜I do not know how to talk about it＞		(0.34-1.12)	0.113			
＜I'm afraid the physician will get angry＞		(0.40-1.31)	0.278			
＜I hesitate to disclose it to my physician＞		(0.49-1.64)	0.723			
Response of the physician						
Negative response	0.81	(0.65-1.02)	0.076			
Empathic response	1.35	(1.06-1.73)	0.018*	1.33	(1.02-1.73)	0.033*

[a)] CAM use was disclosed to a physician by 277 patients.
[b)] OR: Odds Ratio; the reference category is in parentheses（OR: 1）.
[c)] CI: Confidence Interval
[d)] *P＜0.05
[e)] Adjusted for gender, age, disease, subjective effects, and QOL.

RESULTS

1　Demographics

The demographic information of 428 patients is shown in **Table 1**. There were 165 males（38.6%）and 263 females（61.4%）, with a mean age of 62.3±11.9 years（20-85）. The duration of disease was 15.4±11.5 years, and patients exhibited the following diseases:（1）intractable neuromuscular disease group 1（n＝190）: Parkinson's disease;（2）intractable neuromuscular disease group 2（n＝56）: spinocerebellar degeneration, multiple system atrophy, multiple sclerosis, muscular dystrophy, etc.;（3）musculoskeletal/rheumatic disease group（n＝72）: ossification of posterior longitudinal ligament, intervertebral disc herniation, rheumatoid arthritis, Behçet's disease, systemic lupus erythematosus, etc.;（4）chronic disease（n＝83）: diabetes mellitus, heart disease, kidney disease, etc.; and（5）other diseases（n＝27）. Mean communicative and critical health literacy was 2.99±0.59.

Of the 428 patients who had used CAM, 277（65.3%）had communicated with the physician regarding CAM, more specifically, 53（12.5%）often, and 224（52.8%）sometimes talked to the physician about CAM. Further, 147 patients（34.7%）had never discussed CAM with their physician.

2　Physicians' reaction during prior communication（Table 2）

1）Physicians' negative and empathic reactions

Physicians' negative reactions included denial of efficacy with no reason or information provided to 83 patients（30.2%）, assertion that "there is no effective therapy for your disease" to 71 patients（25.8%）, and physician's anger or discomfort to 60 patients（21.8%）. Conversely, empathic reactions of the physician included empathy for, and understanding of, the patient's feeling and reasoning in 217 patients（79.2%）, providing information or considering together with the patient for 183 patients（66.5%）, and providing convincing explanation of ineffectiveness in 123 patients（46.0%; multiple answers allowed）.

2）Patients' willingness to communicate with a physician regarding CAM in the future

As for the patients' willingness to communicate regarding their use of CAM, 38 patients（13.8%）were very willing, 137 patients（49.8%）were willing, 74 patients（26.9%）were not very willing, and 26 patients（95%）were not willing at all; 175 patients（63.6%）who had talked to the physician about CAM wished to communicate a physician about it in the future.

3）Reasons for reluctance to disclose CAM use

The reasons for reluctance to disclose the use of CAM were "My physician does not understand or is not interested" for 225（57.4%）,"I have no time to talk to

my physician" for 139（35.1%）,"I am afraid that my physician will deny the efficacy" for 122（31.0%）,"I do not know how to talk about it" for 109（27.8%）,"I am afraid that my physician will get angry" for 104（26.5%）, and "I am shy around my physician" for 95（24.2%）.

3 Analysis of the patient willingness to communicate about CAM use–association between physician reaction and patient willingness to communicate（Table 3）

A logistic regression analysis of factors related to the patients' willingness to communicate about their use of CAM was performed, with the physicians' reaction as an additional independent variable, showing that the patient's communicative and critical health literacy（P=0.030, OR=1.61）and physician's empathic reaction（P=0.033, OR=1.33）were significantly associated with the patients' willingness to communicate about CAM. In other words, patients who had higher communicative and critical health literacy and had experienced an empathic reaction by the physician were more likely to wish to communicate with a physician about CAM in the future.

DISCUSSION

This study was conducted to determine the effect of physicians' reactions to patients' disclosure of CAM use on future communication regarding CAM. First, an empathic reaction by the physician was identified by patients in a preliminary interview to be "empathically listen to the reason for, and duration of CAM use and my physical condition" and "thoughtfully discuss the risk, if any,"and was found in a quantitative survey to be significantly associated with patients' willingness to communicate about CAM in the future. With regard to this, it was reported that physicians' empathy and understanding during a medical interview favorably affected patient satisfaction,[23] and the importance of physician support for patient's choice of CAM and "functioning as a team" was discussed.[24] Empathic reactions by physicians may be important for building up and strengthening a trusting relationship with a patient, and for sharing in the decision-making process of whether to use CAM.

The next issue was negative reactions by the physicians. Contrary to the assumption that a negative reaction by a physician in the past would cause trauma in patients and result in reluctance to communicate in the future,[16] a reduction in patient initiative/aggressiveness toward various treatment options, or an increased willingness to struggle with disease, the present study showed that past experience with negative reactions of a physician was not associated with patient's willingness to communicate about it in the future. Despite the past experience with a physician's negative reaction, patients may recognize the need to share information with physicians, and to use CAM in accordance with correct information obtained through the empathic reaction/provision of information provided by another physician, resulting in an enhanced willingness to communicate about CAM.

Furthermore, patients' communicative and critical health literacy was associated with empathic reactions by the physicians, indicating that communicative and critical health literacy may play an important role in efficiently transmitting worries about the usage of CAM to surrounding people and drawing information or encouragement.[25]

Since patients' willingness to communicate was particularly affected by the experience of a physicians' emphatic reaction, it is desirable to empathize with the patients' feeling and reasoning, and to actively provide emotional support. It may be necessary to provide information and advice in accordance with patients' beliefs, knowledge, and perspective in a timely manner. For instance, it is effective to understand the patient's view of his/her disease and treatment by asking why he/she uses CAM, rather than denying efficacy or recommending suspension without careful consideration prior to establishment of a trusting relationship with the patient, and to respect the patient's choice unless immediate suspension is required.[26]

In addition, if the efficacy of CAM is to be denied, consideration should be given to attitude and communication of this, including appreciation of the patient's reasoning and empathy/concern for why the patient would like to use CAM, so that the patient is not psychologically isolated and can continue feeling valued while treated. Guidelines for physicians to appropriately address patients using CAM are available in Western countries and may serve as useful references in Japan.[27,28]

1 Limitations and strengths

Since this study was conducted in chronic disease patients who were members of a patients' association, generalization of the results requires caution. In particular, patients who are members of a patients' association may often exhibit higher communicative and critical health literacy, and better communication with

physicians. In addition, since CAM was analyzed in a comprehensive manner, rather than on an individual therapy basis, and the therapies had different levels of evidence, association between a therapy and the physicians' reaction was not fully determined. Furthermore, causality was unknown due to the nature of the cross-sectional survey, warranting a future longitudinal survey with the above-mentioned limitations taken into consideration.

However, despite these limitations, this study has several strengths. First, the use of CAM in Japan, which exhibits a different sociocultural background from Western countries, was investigated from the patients' perspective. The finding that physician-patient communication regarding CAM is not easy is consistent with research in Western countries. Given the recent high interest in CAM, not only in the East, but also in the West, the findings from the present study may be widely useful in countries outside of Japan.

Next, since a mixed method consisting of an interview survey followed by a questionnaire survey was employed, opinions about the actual physician reaction could be directly obtained from patients to discern the factors related to disclosure and patients' willingness to communicate. This aspect of patient psychology, such as anxiety that affects communication with physicians, should be a concern of healthcare professionals when they handle patients, and this finding may serve as basic data for medical education.

Furthermore, the effect of patients' communicative and critical health literacy on physician-patient communication regarding CAM, which had not been well studied, was clarified. Patient education, with a focus on communicative and critical health literacy, will enable patients to evaluate information on CAM, to use CAM safely, and to communicate well with physicians. In addition, the findings from this study will be widely applicable, for instance, by providing suggestions for difficult physician-patient communication scenarios, other than those regarding CAM.

CONCLUSION

Patients who had experienced an empathic reaction by their physician, and exhibited higher communicative and critical health literacy, were more likely to wish to communicate with a physician about CAM in the future. Experience with a negative reaction by a physician was not associated with patients' willingness to communicate about CAM. Therefore, an empathic reaction by the physician, with the patient's reasoning for the use of CAM and philosophy taken into consideration, as well as enhancement of patients' communicative and critical health literacy, are important to promote physician-patient communication regarding CAM.

【Conflict of interest】 The authors declare that they have no competing interests.

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