Conversational analysis of medical discourse in rehabilitation: A study in Korea

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Objective: The purpose of this study is to conduct an analysis of actual communicative behaviors, including nonverbal ones, between physicians and patients in rehabilitation.

Design: Sixteen videotaped physician–patient interactions in a rehabilitation center in Korea were transcribed. And three coders placed utterances in transcripts into categories while watching the videotapes.

Results: Consistent with results of previous studies, patient active communicative behaviors varied considerably depending on individual patients. The findings revealed that, on average, patients' active communicative behaviors were less than 9% of patients' total utterances. In particular, almost half of the patients ($N = 7$) did not even ask one single question. The results also showed that physicians' empathic communicative acts averaged less than 3% of physicians' total utterances. In addition, among physicians' nonverbal behaviors, eye-contact showed significant correlation with physician empathic listening and supportive talks.

Conclusions: The findings of this study indicated a considerable lack of empathic communicative behaviors of physicians in Korea. This might have led to infrequent use of active communicative behaviors by patients. In addition, the importance of physician's partnership for enhancement of active communicative behaviors of patients was demonstrated. To better serve patients, physicians who wish to improve their communication should first identify components of their empathic communicative behaviors that need improvement and then attempt to refine their skills.

Keywords: Medical education, Physician communication, Conversational analysis, Nonverbal communication, Empathy, Rehabilitation, Disability, Korea, Confucianism

Introduction

The quality of medical care depends largely on the interaction between doctor and patient, particularly the communication. Good communication between physician and patient is critical to a patient's overall satisfaction with health care services and compliance with medical regimens.^{1–4} However, medical care has become increasingly fragmented and complex and the warmth of a traditional long-term relationship with a single physician has become rare.³

In this regard, because some aspects of rehabilitation differ sufficiently from other specialties, physician's

communication is particularly important to the success of rehabilitation. Owing to the nature of the problems presented by their patients, a longer interview time and more interaction with patients is needed by physicians in rehabilitation. Physical improvement and learning of new skills require a degree of active engagement by patients, which can be increased by providing more extensive information that is communicated more efficiently.⁵ Iezzoni *et al.*⁶ reported that patients with disabilities were significantly more likely than those without disabilities to report incomplete understanding of clinical histories and conditions, lack of thoroughness, and inadequate communication. Patients in rehabilitation are more likely to give higher ratings of satisfaction to physicians who are seen as warm, friendly, caring, and sensitive to the needs of their patients.⁷ Thus, patients

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who are undergoing rehabilitation will likely have different communication needs and expectations of physicians than those receiving acute medical care.

Despite the existence of these different communication needs among patients in rehabilitation, there does not appear to be much variation among different disability groups. In a study of patients with physical disabilities (cerebral palsy, multiple sclerosis, spinal cord injury (SCI)) and patient–physician communication, no significant differences regarding satisfaction with physicians’ communicative behaviors were observed among these three disability groups.⁸ The overall significant differences in their satisfaction were caused by patient–physician communication rather than by insurance type or disability type. These findings regarding the important role of physician communication did not differ from those found in other patient populations as well as in the general population of rehabilitation patients.⁹ Another study on breaking the bad news to patients with SCI reported similar results that SCI physicians should learn communication skills, such as empathy, warmth, and eye contact. The importance of these communicative factors is also widely recognized in the general patient–physician communication field. Therefore, in this study, although patients with SCI were not specifically targeted as subjects, the results of the study are relevant and applicable to both patients with SCI and SCI specialists.¹⁰

In the West, studies of the medical interview process using the method of conversational analysis have been conducted by many scholars.^{11–19} However, in Korea, conversational analysis of actual communicative behaviors between physicians and patients in rehabilitation, including nonverbal ones between doctors and patients, has rarely been studied. Therefore, we adopted the methodology of conversational analysis to describe the interactions between physicians and patients. This study expands on previous studies of physicians’ communications styles and patient outcomes in rehabilitation in several ways. First, in our previous research, we used patient self-reported questionnaires as the primary means of data collection. This method is known to have some of the perceptual biases of self-report measures.²⁰ We wanted to avoid these problems. Second, in prior research, we explored physician communication from the patient’s perspective. In other words, we asked patients to assess physician communication skills, and we did not include patient communication. In this study, we wanted to conduct an analysis of interactions between physicians and patients in real time, without taking the perspective of either the physician or the patient, and we also wanted to discern

how their talks affect one another as an ongoing process.²¹ Third, this study included two nonverbal behaviors of physicians (eye-contact and silence without eye-contact) in order to determine whether physicians who are patient centered are more likely to make eye-contact. If this turns out to be the case, we might be able to predict some connections among physicians’ empathic behaviors, nonverbal behaviors, and the existing findings indicating an association of physicians’ nonverbal behaviors with patient outcomes and patients’ rating of their physicians.^{2,22}

Thus, the purposes of the study are to examine (1) how effectively physicians talk to patients and how active patients are when they talk to their physicians; (2) how often physicians use nonverbal behaviors such as eye-contact and silence; (3) the relationship between a physician’s communicative behaviors and a patient’s active communicative behaviors; (4) how physicians’ nonverbal behaviors are related to physicians’ empathic behaviors.

Methods

After an extensive review of research on the analyses of actual conversations between physicians and patients, we decided to utilize one of the most popular measurement strategies, which was suggested by Street and Millay.²⁰ This approach consists mainly of transcribing and coding utterances between physicians and patients. In this study, the participating authors worked as coders. We familiarized ourselves with the various coding schemes used in the conversational analyses over a period of several months and practiced the coding scheme used in the study by conduct of two pilot trials. We then recruited physicians and rehabilitation outpatients from a university hospital in Korea. Sixteen videotaped physician–patient interactions were collected and transcribed by a trained stenographer. After simply watching videotapes of the interactions first, the transcript was given to the coders. And, while watching the videotapes a second time, each time the coder perceived the occurrence of a particular communicative behavior, the coder individually placed the matching utterance in the transcripts into mutually exclusive categories according to the operational definitions developed by the three authors of this study. The coded indexes of various utterances were then computed and analyzed for the purpose of this study.

As pointed out by Street,²³ for the nature of the complexity of the coding scheme, we were well aware of possible inter-coder variations. In order to deal with inter-coder variations, we took several steps. First, during the pilot trials, we compared our coded

utterances through conduct of several consensus meetings. After we agreed that our variations were removed, we checked the coded utterances again for the final inter-coder consensus while watching the videotapes together. All of the coders consented to the final coding scheme. Second, based on this consented rating scheme, we proceeded with coding the videotapes of the interaction for the study. During the coding process, we met to check any inter-coder variations after the first two cases had been coded. No major variations were found. Finally, we compared the finalized ratings turned in by the coders. All ratings were arrived at by consensus. Subjects included nine men and seven women with a mean age of 47 years.

Operational definitions

In this study, we examined three groups of concepts: physician communicative behaviors, physician nonverbal communicative behaviors, and patients' active communicative behaviors. Physician's communicative behaviors consist of six patient-centered components (active listening, reflective listening, empathic listening, information giving, supportive talks, and partnership building), and one non-patient-centered component (interruption). For the purposes of analysis, empathic listening, supportive talks, and partnership building were also categorized into physician empathic communicative behaviors. Physician nonverbal communicative behaviors included eye-contact and silence. Patient active communicative behaviors included asking questions, expressions of concern, and active expression of demands. The operational definitions used in the study should be clarified.

Seven physician communicative behaviors were measured: (a) active listening – brief, noncommittal statements encouraging patients to continue talking; (b) reflective listening – repeating what the patient has just said, using the same wording or phrasing; (c) information giving – provides patients with relevant medical information about their conditions and illness; (d) supportive talk – statements including praising or respecting; (e) physician's interruption – physician

behaviors that interrupt patients' talks by changing topics or expressing disagreement; (f) empathic listening – physicians respond to and address the patient's emotional state resulting from the patient's illness or difficulty. Use of this technique can result in providing a patient with feelings of being understood and accepted by a physician; (g) partnership building – physician statements, encouraging the patient to express, or indicate his or her feelings, concerns, opinions, and questions.

Patient active communicative behaviors have three components, which we modified from the existing study²⁰ for use with Korean subjects: (a) asking questions – patient communicative behaviors seeking information and clarification; (b) expressions of concern – statements in which the patient expresses worry, anxiety, fear, and negative emotions; (c) active expression of patient demands – expressing preferences, making suggestions or recommendations.

Physician nonverbal behaviors were measured using two components: (1) eye contact – the length of a doctor's eye-contact with patients, and (2) silence – the length of time doctors remain silent without making eye-contact.

Results

Table 1 shows the descriptive statistics (means, standard deviations, ranges, and percentages of total utterances) of six physician patient-centered behaviors. On average, physicians used patient-centered behaviors in <3% of total utterances, suggesting that Korean physicians do not frequently use patient-centered behaviors. Empathic listening by Korean physicians was given the lowest percentage (1.11%) of the total physician utterances, followed by active listening (2.04%). Physicians included supportive talks to their patients in only 2.55% of their total utterances, while partnership behaviors and information giving received 2.81 and 2.89% of the physician total utterances, respectively. Among physician patient-centered behaviors, reflective listening (3.23%) was the behavior used most frequently.

Table 1 Descriptive results of physician patient-centered behaviors

Physician empathic communication	Mean	SD	Range	% of Utterances
Active listening	1.50	2.34	0–9	2.04
Reflective listening	2.38	2.96	0–10	3.23
Empathic listening	0.81	1.17	0–4	1.11
Information giving	2.13	2.94	0–11	2.89
Supportive talks	1.88	3.32	0–13	2.55
Partnership building	2.06	2.41	0–8	2.81
Total physician empathic communicative behaviors	28.67	8.98	13–38	2.44

Table 2 Descriptive results of patient active communicative behaviors

Patient active communicative behaviors	Mean	SD	Range	% of Utterance
Asking questions	4.56	5.34	0–21	8.68
Expression of concerns	5.31	6.24	0–23	10.11
Active expression of demands	3.75	4.99	0–20	7.13
Total active communicative behaviors	72.67	12.50	60–85	8.64

Findings shown in Table 2 revealed that, on average, patient active communicative behaviors comprised < 9% of the total utterances. Patients tended to express their concerns (10.11% of the total patient utterances) more often, compared with asking questions (8.68%) or active expression of demands (7.13%). Patient active communicative behaviors varied considerably, depending on individual patients. As shown in Tables 2 and 3, more than one-third of patients asked only a single, or did not even ask a single question. Patient active expression of demands received the lowest percentage of the total patient utterances.

Table 4 shows the results of analysis of physician interruption and nonverbal acts. On average, physicians demonstrated interruptive behaviors 3.81 times per consultation, which constituted 5.19% of the total physician utterances. Compared with the average percentage (2.44%) of physician patient-centered behaviors, Korean physicians demonstrated more interruptive behaviors than patient-centered behaviors. Table 4 also shows two nonverbal physician behaviors (eye-contact and silence), which were measured in seconds. Physicians, on average, spent 112.75 seconds making eye contact with their patients, while they remained silent for an average of 97.81 seconds during consultations. In other words, physicians used 18.87% of total consultation time for eye contact, and, during 14.42% of the total consultation time, they did not say a word.

Table 5 shows the results of correlation analysis between physician communicative behaviors and patient active communicative behaviors. Among all physician behaviors, interruption was the most strongly and significantly related behavior affecting both

patients' expression of concerns (0.701) and active expression of demands (0.799). When we looked more closely at the empathic aspects of physician behavior (empathic listening, supportive talks, and partnership building), empathic listening by physicians showed a significant association with a patient's expression of concerns. A physician's partnership showed a strong and significant correlation with all three components of a patient's active communicative behaviors and the correlation between a patient's active expression of demands and a physician's partnership building was the strongest (0.718). Use of supportive talks showed no significant relationship with patient active communicative behaviors.

As shown in Table 6, eye-contact (an important nonverbal component of empathic behaviors) showed a strong and significant correlation with empathic listening (0.721) and supportive talks (0.795). However, partnership building showed no significant relationship with either eye-contact or silence. On the other hand, silence showed a negative correlation with these two (empathic listening and supportive talks) physician empathic behaviors, although not significantly.

Table 7 shows the frequencies of physician empathic communicative behaviors. As discussed previously, physicians did not frequently use patient-centered communications skills. When we examined the frequency of use of empathic skills by physicians, the lack of physician empathic skills was obvious. Among a total of 16 cases, in nine cases, physicians never used empathic listening, in seven cases, they did not use any supportive talks, and, in five cases, they did not use any partnership building skills.

In many cases, physicians performed an empathic act only once. In three cases, physicians used empathic listening only one time. A similar pattern was repeated in four cases for supportive talks and in five cases for partnership building.

In other words, physicians who never used empathic behaviors, or used them only once, comprised 75% for empathic listening, 68.75% for supportive talks, and 62.50% for partnership building. In summary, the majority of physicians used empathic behaviors infrequently.

Table 3 Lack of patient active communicative behaviors

	Number of acts (%), N = 16		Total
	Zero	One	
Asking questions	3 (18.75)	3 (18.75)	6 (37.5)
Expression of concerns	1 (0.06)	0 (0.00)	1 (0.06)
Active expression of demands	2 (0.13)	5 (31.25)	7 (43.75)

Table 4 Descriptive analysis of physician interruption & nonverbal behaviors

	Mean	SD	Range	% of Total Utterance
Physician's interruption	3.81	4.09	0–15	5.19
Nonverbal behaviors (seconds)				% of total length
Eye contact	112.75	88.37	9–347	18.87
Silence	97.81	107.08	0–350	14.42

Discussion

Findings of the study demonstrated that the majority of Korean physicians exercised patient-centered behaviors infrequently. In particular, a considerable lack of use of empathic behavior was observed. The majority of Korean physicians never used, or used empathic behaviors only once. These findings were consistent with those of the previous study demonstrating that the majority of Korean patients regarded their physicians as less affective.⁹ In contrast, when physicians used partnership-building skills, patients tended to show more active communicative behaviors; similar results were reported in a previous study.²⁴

The findings also showed that the more patients attempted to express their concerns and demands, the more physicians attempted to change topics by interrupting the patients. In particular, physicians were more likely to interrupt patients when patients expressed their opinions and demands. A possible explanation for this finding could be that in the current hierarchical authority structure of the medical consultation process, Korean physicians felt uneasy when patients explicitly expressed their demands and opinions. In addition, the fact that Korean physicians exercised more interruption behaviors than patient-centered behaviors suggests that Korean physicians might believe that they, as physicians, are the ones who should take control of the consultation. This finding was consistent with findings from prior research suggesting that Korean doctors were less likely to allow patients to speak at any length.⁹

Korean patients appeared to be passive. Patients used active communicative behaviors in only one-tenth of their total talks. In particular, patients' active expression of demands received the lowest percentage among patient active communicative behaviors. This may reflect uneasy feelings about asserting themselves during medical encounters.

Results regarding physician nonverbal behaviors were somewhat discouraging. During the medical encounter, physicians spent approximately 14% of the total consultation time being non-verbal, without making eye-contact, which was a considerably long period of time. One study of Japanese doctor–patient conversations reported a similar result; Japanese doctors remained silent longer than doctors in the USA did.²⁵ On several occasions, we observed that patients appeared to be very uncomfortable when his or her doctor remained silent for a long period, without eye-contact. The findings also revealed that Korean physicians made eye-contact with patients during less than one-fifth of the total consultation time. This behavior may not reflect what patients wanted from their physicians. Patients have a strong desire to see their doctors being affective.⁹ It has been suggested that a doctor's eye-contact encouraged patients to talk,²⁶ therefore, when a patient encounters a physician's 'no eye-contact behavior', active participation in the interview would be difficult. In contrast, the results demonstrate that physicians made more eye-contact when they were engaged in empathic listening and giving supportive

Table 5 Correlations among physician communicative behaviors and patient active communicative behaviors

Physician communicative behaviors	Patient communicative behaviors		
	Asking questions	Expression of concerns	Active expression of demands
Interruption	0.167	0.701**	0.799**
Active listening	0.035	0.103	0.149
Reflective listening	0.049	0.329	0.440
Information giving	0.118	−0.126	−0.166
Physician empathic behaviors			
Empathic listening	0.200	0.622*	0.186
Supportive talks	0.019	0.298	−0.211
Partnership building	0.645**	0.691**	0.718**

* $P < 0.05$.

** $P < 0.01$.

Table 6 Correlations between physician empathic behaviors and nonverbal behaviors

Physician empathic behaviors	Physician nonverbal behaviors	
	Eye-contact	Silence
Empathic listening	0.721**	-0.093
Supportive talks	0.795**	-0.154
Partnership building	0.294	0.264

* $P < 0.05$.** $P < 0.01$.

talks. In addition, as the existing studies suggest an association of physician nonverbal behaviors with patient outcomes and patient's rating of their physician,^{2,22} we can infer that patients would be more active participants in the consultation when the physician makes empathetic eye-contact; this would in turn result in more positive patient outcomes.

In summary, despite the recent development of health consumerism, in Korean medical settings, a classic Parsons' paternalistic relationship might still exist²⁷ between a passive patient and a dominant physician, with lack of empathic skills, who readily interrupts patients. A possible explanation for this could be found in the institutionalized roles of the physician as an authority figure and the patient as the passive recipient.²⁸ For a long time, Confucianism influenced every aspect of Korean life. As a result, in spite of the emerging health consumerism, some Korean patients have still diligently carried out their duties as passive patients. And, Korean physicians may still want to maintain their expected authority in the doctor-patient relationship. Therefore, the paternalistic relationship might be more firmly imbedded in the current medical setting than we thought.

However, this does not necessarily mean that Korean patients have low expectations for patient-centered care. These days, the general belief that patients' expectations of doctors in a collective culture like Korea's may not be patient-centered is not true. Equipped with health information that is widely available on the internet, consumeristic Korean patients have rather high expectations

for patient-centered care.²⁹ Therefore, like patients in the West, the majority of Korean patients expect physicians to be patient-centered.

In addition, existing studies of Korean patients have provided some evidence for the relationship between a physician's patient-centered approaches and patient outcomes. For example, a study of Korean patients' outcomes demonstrated a significant influence of patient-perceived physician empathy on patient satisfaction and compliance.³⁰ A similar conclusion was reported in another study of Korean rehabilitation patients that patient satisfaction and compliance showed a significant correlation with physicians' affective and cognitive empathic communication styles, which are important aspects of patient-centered care.⁹

This study has several limitations. Owing to the relatively small sample size and exclusive use of only outpatient subjects, the reader should be cautious in generalizing the results. Second, although we tried very hard to minimize possible inconsistencies among the coders, the nature of the long and labor-intensive coding process might hinder the accuracy and consistency of physician/patient interaction coding among the coders. Nonetheless, the findings of this study re-confirmed our previous findings that physicians are less affective and do not use patient-centered communications.

Conclusion

The findings of this study indicated a considerable lack of empathic communicative behaviors among rehabilitation physicians in Korea. This might have led to infrequent use of active communicative behaviors by patients. The results also demonstrated the importance of physician's partnership for enhancement of patient's active communicative behaviors. When physicians used partnership building skills, patients tended to exhibit more active communicative behaviors. In other words, patients were more active participants in the consultation with their physicians. In particular, empathic listening by physicians was critical in helping patients express their concerns.

Medical educators who wish to improve physicians' communication skills and the quality of care in medicine should consider development of a brief empathy training intervention program, such as the three 60-minute empathy training modules suggested by Riess *et al.*³¹ In addition, in their teaching of medical students, medical educators should place greater emphasis on patient-centered behaviors, which can facilitate active patient participation during the consultation.

Table 7 Lack of physician empathic behaviors

Empathic behaviors	Number of acts (%), N = 16		Total
	Zero	One	
Empathic listening	9 (56.25)	3 (18.75)	12 (75.00)
Supportive talks	7 (43.75)	4 (25.00)	11 (68.75)
Partnership building	5 (31.25)	5 (31.25)	10 (62.50)

Acknowledgement

This study was supported by Medical Research Institute Grant (2007–20), Pusan National University, Republic of Korea.

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