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Development and preliminary evaluation of communication skills training program for oncologists based on patient preferences for communicating bad news

MAIKO FUJIMORI, PHD,[1,2] YUKI SHIRAI, PHD,[1,3] MARIKO ASAI, PHD,[4] NOBUYA AKIZUKI, MD, PHD,[5] NORIYUKI KATSUMATA, MD, PHD,[6] KAORU KUBOTA, MD, PHD,[7] AND YOSUKE UCHITOMI, MD, PHD[8]

[1]Psycho-Oncology Division, Research Center for Innovative Oncology, National Cancer Center Hospital East, Kashiwa, Chiba, Japan
[2]Psycho-Oncology Division, National Cancer Center Hospital, Chuoh-ku, Tokyo, Japan
[3]Department of Adult Nursing and Palliative Care Nursing, University of Tokyo, Bunkyo-ku, Tokyo, Japan
[4]Graduate School of Clinical Psychology, Teikyo Heisei University, Toshima-ku, Tokyo, Japan
[5]Department of Psycho-oncology, Chiba Cancer Center, Chuo-ku, Chiba, Japan
[6]Department of Medical Oncology, Nippon Medical School, Musashikosugi Hospital, Nakahara-ku, Kawasaki, Kanagawa, Japan
[7]Medical Oncology Division, Nippon Medical School Hospital, Bunkyo-ku, Tokyo, Japan
[8]Department of Neuropsychiatry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Kita-ku, Okayama, Japan

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ABSTRACT

Objective: The purposes of this study were to develop a communication skills training (CST) workshop program based on patient preferences, and to evaluate preliminary feasibility of the CST program on the objective performances of physicians and the subjective ratings of their confidence about the communication with patients at the pre- and post-CST.

Methods: The CST program was developed, based on the previous surveys on patient preferences (setting up the supporting environment of the interview, making consideration for how to deliver bad news, discussing about additional information, and provision of reassurance and emotional support) and addressing the patient's emotion with empathic responses, and stressing the oncologists' emotional support. The program was participants' centered approach, consisted a didactic lecture, role plays with simulated patients, discussions and an ice-breaking; a total of 2-days. To evaluate feasibility of the newly developed CST program, oncologists who participated it were assessed their communication performances (behaviors and utterances) during simulated consultation at the pre- and post-CST. Participants also rated their confidence communicating with patients at the pre-, post-, and 3-months after CST, burnout at pre and 3 months after CST, and the helpfulness of the program at post-CST.

Results: Sixteen oncologists attended a newly developed CST. A comparison of pre-post measures showed improvement of oncologists' communication performances, especially skills of emotional support and consideration for how to deliver information. Their confidence in communicating bad news was rated higher score at post-CST than at pre-CST and was persisted at 3-months after the CST. Emotional exhaustion scores decreased at 3-months after CST. In addition, oncologists rated high satisfaction with all components of the program.

Address correspondence and reprint requests to: Yosuke Uchitomi, Department of Neuropsychiatry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2-5-1 Shikata-cho, Kita-ku, Okayama 700-8558, Japan. E-mail: uchitomi@okayama-u.ac.jp

Significance of results: This pilot study suggests that the newly developed CST program based on patient preferences seemed feasible and potentially effective on improving oncologists' communication behaviors what patients prefer and confidence in communicating with patients.

KEYWORDS: Communication skills training, Patients', preference, Bad news, Patient-physician relationship

INTRODUCTION

The communication skills of physicians delivering bad news about cancer, such as an advanced cancer diagnosis, can affect the degree of a patient's distress (Uchitomi et al., 2001; Schofield et al., 2003; Morita et al., 2004). However, many physicians do not have a standard strategy for delivering bad news to patients (Baile et al., 2000) and find it difficult to communicate bad news with cancer patients and their relatives (Fujimori et al., 2003).

Therefore, communication skills training (CST) has been designed to enhance physicians' communication skills when delivering bad news and has been shown to improve both the objective performance of physician and subjective ratings of their confidence about communicating with patients (Baile et al., 1999; Fallowfield et al., 2002; Jenkins & Fallowfield, 2002; Back et al., 2007; Lenzi et al., 2010). However these CST programs do not necessarily have a strong theoretical basis (Girgis et al., 1999; Cegala & Lenzmeier, 2002) and reflect patient preferences (Butow et al., 1996; Parker et al., 2001). Consequently, the provision of CST cannot always improve patients' distress and satisfaction with care (Shilling et al., 2003; Fellows et al., 2004). Meanwhile, patient preferred communication features have been linked with lower psychological distress and higher satisfaction levels (Schofield et al., 2003). Therefore, interventions in enhancing physicians' communication skills that are based on the patients' preferences are needed (Cegala et al., 2002; Schofield et al., 2003).

According to our previous reports about patient preferences for physicians' styles of communicating bad news, cancer patients have preferred that physicians communicate bad news while taking into account setting up the supportive environment of the interview, giving consideration on how to communicate the bad news, providing various information which patients would like to know, and providing reassurance and emotional support to patients and their relatives (Fujimori et al., 2005; 2007; 2009). We also suggested the most difficult communication issues for physicians in clinical oncology were breaking bad news (for example, a diagnosis of advanced cancer, recurrence, and stopping anti-cancer treatment), providing emotional support, and dealing with patients' emotional responses (Fujimori et al., 2003).

The purposes of this study were to develop a CST workshop program for oncologists to improve patient preferred communication skills when breaking bad news based on the previous studies and to evaluate preliminary feasibility the CST program on the objective performances of physicians and the subjective ratings of their confidence about the communication with patients at the pre- and post- CST.

METHODS

CST Program Development

The CST program was designed to aim that oncologists learn to patients' perceive preferences and needs for communication of each patient, based on our previous surveys on the preferences of Japanese cancer patients regarding the disclosure of bad news (Fujimori et al., 2005; 2007; 2009). The conceptual communication skills model was consisted of four dimensions, referred to as SHARE: S, setting up the supporting environment of the interview; H, make consideration for how to deliver the bad news; A, discuss about various additional information which patients would like to know; and RE, provision reassurance and addressing the patient's emotion with empathic responses. Especially, the program stressed RE, because it is the most important patient preference (Fujimori et al., 2007; Fujimori & Uchitomi, 2009) and also one of the most difficult communication skills for physicians (Fujimori et al., 2003). The conceptual model had been confirmed content validity by two psychiatrists, a psychologist and two oncologists who were experienced attending staff in clinical oncology with knowledge about communication between patients and oncologists.

The program is participants' centered approach and consisted of a 1-hour computer-aided didactic lecture with text and video, 8-hours role plays with simulated patients, discussions and an ice-breaking; a total of 2-days, based on previous studies (Fujimori et al., 2003; Fellows et al., 2004) and discussion about feasibility by two psychiatrists and a psychologist who were experienced attending staff in clinical oncology with knowledge about communication between patients and oncologists. The program provides the suitable communication in the three situations of breaking bad news to patients: diagnosis

of advanced cancer, recurrence, and stopping an anticancer treatment. These situations were found difficult to deal with in practice by physicians (Fujimori et al., 2003). To role-play, many scenarios were drawn up tailored to each participants' specialties. The participants were divided into groups of four each with two facilitators.

The facilitators were psychiatrists, psychologists, and oncologists, all of whom had had clinical experience in oncology for 3 or more years and had participated in specialized 30-hours training workshops on facilitating workshops on communication skills in oncology. The simulated patients, who had had experience in medical school for 3 or more years, were also participated 30-hours training workshops. To strengthen in improving physicians' empathic responses, facilitators lead a discussion and role plays on the potential needs and emotion of the patient and communication which patients prefer physicians' empathic responses during a lecture and discuss the SPs express during role plays.

Evaluation of the CST Program

Participants

Oncologists in Japan attended the CST program at National Cancer Center Hospital East. All participants were expected by their hospital directors and local district medical directors to promote palliative care in their hospitals and surrounding area. After giving written informed consent, the oncologists participated in the study.

Measurement

The Objective Performance of Communication Skills. Before and after participating in the workshop, oncologists' performances, such as behaviors and utterances, were recorded using a video-camera during a consultation with simulated patients, while they were asked to tell a patient an inoperable advanced cancer. Their consultation video files were assessed in random order by two blind-raters independently, who trained more than 60-hours in order to standardize the interpretation and application of the assessment based on the manuals, using two assessment tools. First, we prepared the 32 items for the impressions of participants' performances during simulated consultation, which were based on the patient preferences: setting up the supporting environment of the interview, consideration for how to deliver the bad news, discussing additional information, and providing reassurance and addressing the patient's emotion with empathic responses (Fujimori et al., 2007). The average Spearman correlation coefficients of each intra-coder were 0.79 and 0.76. The average Spearman correlation coefficient of inter-coder was 0.78, except for five items which showed the correlation coefficients were less than 0. Thus, we only evaluated 27 items.

The Roter interaction analysis system (RIAS) (Roter et al., 1995) was also used for analyzing the objective utterances of communication skills. The RIAS has 42 mutually exclusive items for physicians and patients' utterances. In the RIAS, the unit of analysis is the "utterance," defined as the smallest discriminable speech segment. Every utterance is assigned to one of the mutually exclusive items that were aligned with our training, and then researchers condense them into fewer theoretically meaningful clusters depending on the purpose of their studies. The Japanese version of RIAS was used to evaluation of consultations in Japanese oncology setting by Ishikawa et al. (2002). In this study, we focused on the 23 items and added three items; silence, warning sign, and ask for perception about bad news, of the following behaviors for physicians; setting up the interview, medical and the other information given, active listening, and reassurance and empathic responses. The average Spearman correlation coefficients of each intra-coder were 0.86 and 0.82. The average Spearman correlation coefficient of inter-coder was 0.83, except for one item which showed the correlation coefficients were less than 0. Thus, we only analyzed 25 items.

Confidence in Communication with Patients. Confidence in communication with patients was assessed with a questionnaire consisting of 21 items by Baile et al. (1997). It measures the self-efficacy of communication skills in breaking bad news. All items were rated on a 10-point Likert scale from 1 to 10, ranging from "not at all" to "extremely." The previous studies had adopted this questionnaire to evaluate CST programs (Fujimori et al., 2003; Baile et al., 1997).

Burnout. The Maslach Burnout Inventory (MBI) is a well validated, self-administered, and a standardized instrument for evaluating burnout (Maslach & Jackson, 1986). The Japanese version of MBI was validated by Higashiguti et al. (1998). It consists of 22 items and three subscales: depersonalization (five items), personal accomplishment (eight items), and emotional-exhaustion (nine items). Each item was measured on a seven-point Likert scale ranging from 0 to 6 according to frequency with which feeling/attitudes are experienced.

Evaluation of the Workshop. Nine components of the workshop (lecture on communication skills, giving feedback to others, getting feedback from others, using role play, facilitators' general approach,

facilitators' suggestion, simulated patients, scenarios, and relevance of the workshop to their own clinical practice) were evaluated. Each item was measured on a 11-point Likert scale from 0 to 10, ranging from "not at all" to "usefulness" (Fujimori et al., 2003).

Procedure

Before the workshop, participants were informed about this study and gave consent in writing for participant of this study. After that, they were required to participate in a simulated consultation in which they were asked to give the diagnosis of inoperable advanced cancer to a simulated-patient and to complete a pre-training survey regarding demographic characteristics, confidence in communication with patients, and MBI. Demographic characteristics included age, sex, marital status, specialty, clinical experience, and clinical experience in oncology. After workshop, participants were required to participate in a simulated consultation similar to the first, fill in the questionnaires consisted of confidence in communication, and evaluate the workshop. Three-months after the workshop, all participants were asked to answer a set of questionnaires that consisted of confidence and MBI.

Analysis

The scores of participants' possessed skill at pre-CST were compared using paired t-test with the scores at post-CST. We also estimated the confidence of participants and compared the rating score at pre-CST with post-CST and 3-months after CST using repeated measures analysis of variances (ANOVAs). When ANOVAs showed a significant difference, post hoc tests were performed. Each factor score of MBI was compared at pre-CST with 3-months after CST using t-test. The statistical analysis was used the SPSS 19.0 software.

RESULTS

Participant Characteristics

Sixteen oncologists participated in the workshop. Their characteristics were shown in Table 1.

Performance of Communicating Bad News

In each pair of bad news consultations, the score of 13 out of 27 categories of SHARE significantly increased, related to mainly "make consideration for how to deliver the bad news" and "provision reassurance and addressing the patients' emotion with empathic responses" (Table 2). In each participant, the mean of 9.7 skills were had higher score at the post-CST. In RIAS, the utterances assigned 11 of 25 categories significantly increased, related to "setting up interview," "reassurance and empathic responses," "medical and the other information giving," "reassurance and empathic responses," and "how to deliver the bad news" (Table 2). The utterances of each participant increased in the mean of 10.5 skills at post-CST.

Confidence for Communicating Bad News

All items of the confidence related to communication with patient of participants were significantly higher scores at post-CST than at pre-CST and maintained at the high level in 3-months after CST (Table 3).

Burnout

Compared with pre-CST, the mean score of all subscales at 3-months after CST decreased (emotional exhaustion: 11.64 ± 3.77 and 10.29 ± 3.75, respectively; $p = 0.04$, depersonalization: 18.60 ± 9.41 and 14.47 ± 9.48, respectively; $p = 0.08$, personal accomplishment: 33.13 ± 9.65 and 28.80 ± 12.66, respectively; $p = 0.01$).

Table 1. *Participant characteristics (N = 16)*

		Median (range), years	N	%
Age		36 (29–55)		
Clinical experience		10 (3.8–25.0)		
Clinical experience in oncology		8 (2.3–25.0)		
Sex	Male		11	68.8
	Female		5	31.3
Specialty	Digestive		7	43.8
	Thoracic		4	25.0
	Head & Neck		2	12.5
	Urology		1	6.3
	Gynecology		1	6.3
	Medical oncology		1	6.3

Table 2. *Mean Score of Total Peformances for Physicians During Consultations by Assessing SHARE and RIAS Categories*

	Pre-CST		Post-CST				
	Mean	S.D.	Mean	S.D.	t	p	% of physicians who improve the skill
SHARE categories							
Setting up the supporting environment of the interview	9.14	2.35	10.64	1.50	1.66	n.s. [a]	42.9
Greeting a patient cordially	2.79	1.84	3.71	1.07	2.06	* [b]	28.6
Looking at patient's eyes and face	3.50	0.94	3.86	0.53	1.16	n.s.	28.6
Taking sufficient time	2.85	1.35	3.07	1.21	0.42	n.s.	28.6
Make consideration for how to deliver the bad news	13.94	8.03	22.13	6.44	3.45	** [c]	85.7
Encouraging a patient to ask questions	2.43	1.74	2.43	1.60	0.00	n.s.	21.4
Not beginning bad news without preamble	1.50	1.55	4.00	0.00	6.01	**	85.7
Asking how much you know about patient's illness before breaking bad news	1.79	1.93	2.93	1.63	2.00	*	35.7
Not using technical words	2.64	1.44	3.21	0.97	1.85	*	42.9
Using actual images and test data	1.29	1.86	2.50	1.95	2.58	*	35.7
Writing on paper to explain	1.36	1.91	0.57	1.45	−1.32	n.s.	7.1
Checking to see that patients understand	1.43	1.55	2.64	1.82	2.46	*	64.3
Checking to see whether talk is fast-paced	0.57	1.45	1.78	1.71	2.08	*	50.0
Communicating clearly the main points of bad news	0.93	1.33	2.07	1.27	3.08	**	50.0
Discuss about additional information	14.64	3.71	16.21	2.83	1.13	n.s.	42.9
Answering patient's fully	3.50	1.16	3.71	0.83	0.59	n.s.	14.3
Explaining the status of patient's ilness	2.93	1.38	3.29	0.99	0.92	n.s.	42.9
Telling the prospects of cancer cure	3.86	0.36	3.07	1.54	−1.76	† [d]	14.3
Providing information on support services	0.00	0.00	0.14	0.53	1.00	n.s.	7.1
Discussing patient's daily activities and work in the future	1.29	1.33	1.29	1.64	0.00	n.s.	35.7
Explaining a second opinion	0.00	0.00	1.14	1.88	2.28	*	28.6
Checking questions	3.07	1.44	3.57	0.76	1.07	n.s.	35.7
Provision reassurance and addressing the patient's emotion with empathic responses	18.50	7.30	24.64	3.59	3.56	**	85.7
Asking about patient's worry and concern	0.86	1.46	2.07	1.69	2.19	*	64.3
Saying words to prepare mentally	1.57	1.91	3.29	1.14	3.12	**	57.1
Remaining silent for concern for patient feelings	1.36	1.82	2.29	1.49	1.87	*	57.1
Accepting patient's expressing emotions	2.43	1.45	3.50	0.76	2.90	**	71.4
Saying words that soothe the patient feelings	2.79	1.42	3.21	1.25	1.31	n.s.	35.7
Telling in a way with hope	3.43	1.45	3.71	0.61	0.72	n.s.	14.3
Telling what patient can hope for	3.50	1.16	3.79	0.58	0.84	n.s.	21.4
Assuming responsibility for patient's care until the end	2.57	1.45	2.79	1.37	0.56	n.s.	35.7
RIAS categories							
Setting up the interview	1.93	0.92	2.71	1.44	1.92	*	42.9
Greeting/social conversation	1.93	0.92	2.71	1.44	1.92	*	42.9
Reassurance and empathic responses	14.90	8.97	22.93	9.21	2.64	*	71.4
Empathy	0.50	0.65	1.00	1.24	1.71	†	42.9
Show compassion for worry and concern	0.21	0.43	0.71	0.73	2.19	*	42.9
Reassurance	3.29	1.98	3.50	1.99	0.43	n.s.	35.7
Tell partnership	1.00	0.00	0.71	0.73	−0.84	n.s.	21.4
Show understanding	4.79	3.83	8.21	4.98	2.28	*	71.4
Show supportive response	2.00	3.21	4.93	7.12	1.89	*	42.9
Show concern for patient	0.71	0.99	1.50	1.88	1.71	†	35.7
Show respect/gratitude	0.14	0.53	0.00	0.00	−1.00	n.s.	0
Validation	1.07	1.07	1.21	1.19	0.38	n.s.	35.7
Silence	1.14	2.25	0.71	0.99	0.81	n.s.	21.4
Open-ended question about psychosocial feelings	0.14	0.53	0.43	0.65	1.17	n.s.	35.7
Medical and the other information giving	10.43	2.38	9.22	3.66	1.43	n.s.	28.6
Information giving about medical condition	3.93	1.28	5.00	2.63	1.41	†	71.4
Information giving about therapeutic regimen	5.43	1.99	3.07	1.38	−3.49	**	7.1
Information giving about psychosocial feelings	0.29	0.47	0.79	0.70	1.99	†	7.1

Continued

Table 2. *Continued*

	Pre-CST		Post-CST				% of physicians
	Mean	S.D.	Mean	S.D.	t	p	who improve the skill
Counseling and direction about medical condition/ therapeutic regimen	0.79	1.05	0.36	0.50	−1.47	†	14.3
How to deliver the bad news	9.50	4.54	16.79	5.42	3.90	**	92.9
Open-ended question about medical condition	0.50	0.94	1.64	0.93	5.55	**	78.6
Open-ended question about lifestyle	0.00	0.00	0.29	0.47	2.28	*	28.6
Counseling and direction	3.86	1.56	5.00	1.88	1.63	†	57.1
Ask for opinion	0.14	0.36	0.57	0.85	1.71	†	28.6
Ask for permission	0.71	1.14	0.86	1.03	0.38	n.s.	42.9
Ask for understanding	0.14	0.36	1.07	1.33	2.51	**	100
Ask for perception about bad news	0.43	0.51	1.00	0.78	2.83	**	100
Warning	0.43	0.65	1.21	0.80	3.29	**	100
Comfirm comprehension/inform exactly/rephrase	3.29	2.05	5.14	2.32	2.68	**	50.0

a: n.s.= not significant
b: *$p < .05$
c: **$p < .01$
d: †$p < .10$

Evaluation of the Workshop

Participants reported to form a high estimate (mean scores; 7.88–9.13) of all CST components (Table 4).

DISCUSSION

This study developed CST program based on patient preferences and the newly developed CST program seemed feasible and potentially effective and might be applied to medical education for physicians, especially in Japanese culture which are characterized by a family-centered communication style, an emotionally demanding patient preference and a little more 'paternalistic' physician-patient relationship (Fujimori et al., 2005; 2007; 2009).

Two assessment tools for performances, which are the SHARE as an assessment of impressions of participants' performances and the RIAS as an assessment of participants' utterances, showed the similar results. As we intended, our developed CST program might be strengthened in improving physicians' empathic responses and active listening skills. Especially, more than 70% of participants have improved performances of "not beginning bad news without preamble" and "accepting patient's expressing emotions" categories of SHARE, and "show understanding," "open-ended question about medical condition," "ask for understanding," "ask for perception about bad news," and "warning" categories of RIAS. Taken together with these results, the newly developed CST program might be expected for physicians to be able to provide an emotional support for patients, resulting in their reduce distress such as depression and anxiety.

In contrast, physicians' behaviors and utterances related to most categories of "discussing about additional information" of SHARE did not change between pre- and post-CST. One possible reason might be that participants of this study might have already had these communication skills, because the scores of "telling the prospects of cancer care" category of SHARE had been already rated high scores at pre-CST. Another possible reason might be that this program does not have insufficient effect on "providing information of support services" of SHARE. Most participants might not have enough knowledge about the psychosocial support services and daily activities. If so, it might be effective to add in the CST program a lecture of information which most patients had not possess.

All subjective confidence ratings about communication increased significantly after CST and maintained 3-months after it. This result showed that this CST program allowed participants to work on these areas in a manner that was inspiring confidence, and had an either equaling or surpassing efficacy on participants' confidence compared to our previous program which showed 18 of 21 items had improved after CST and maintained 3-months after CST (Fujimori et al., 2003).

As the results of participants' burnout, the emotional-exhaustion and depersonalization showed positive changes 3-months after CST, however the personal accomplishment also decreased significantly. This result did not replicate the result of our

Table 3. *Scores of the Participants' Self-Rating Confidence Scale for Communication with Patient*

	Pre-CST		Post-CST		3-months after CST				
	Mean	S.D.	Mean	S.D.	Mean	S.D.	F	p	Multiple comparison
Creating comfortable setting	4.13	2.07	7.20	1.47	7.20	1.97	15.59	** [a]	t1 [b] < t2 [c], t3 [d]
Assessing patient's ability to discuss bad news	4.93	2.02	7.07	1.39	7.27	1.28	17.94	**	t1 < t2, t3
Detecting verbal cues	5.13	1.77	7.20	1.32	7.73	1.28	21.95	**	t1 < t2, t3
Encouraging family presence	6.40	1.59	8.07	1.58	8.27	1.16	11.46	**	t1 < t2, t3
Assessing current knowledge	5.73	1.58	7.40	1.24	7.93	1.33	16.04	**	t1 < t2, t3
Detecting patient's anger	5.40	1.96	6.73	1.53	7.27	1.49	7.83	**	t1 < t2, t3
Including family in discussion	6.53	1.36	7.87	1.88	8.40	1.18	12.29	**	t1 < t2, t3
Detecting nonverbal cues	4.53	1.85	6.80	1.57	7.20	1.74	17.87	**	t1 < t2, t3
Assessing how much the patient wants to know	4.33	1.95	6.73	1.44	7.00	1.81	23.87	**	t1 < t2, t3
Detecting anxiety	4.40	1.55	6.73	1.49	7.13	1.51	28.06	**	t1 < t2, t3
Planning discussion in advance	5.73	1.58	7.73	1.94	8.07	1.71	17.50	**	t1 < t2, t3
Detecting patient's sadness	4.80	1.52	6.67	1.59	7.20	1.52	21.50	**	t1 < t2, t3
Confirming patient's understanding of cancer	5.00	1.65	7.13	1.46	7.67	1.45	20.43	**	t1 < t2, t3
Checking to see that information was received accurately by patient	4.73	1.62	6.87	1.55	7.53	1.46	26.05	**	t1 < t2 < t3
Providing information in small increments	4.87	1.85	6.47	1.73	7.53	1.36	18.33	**	t1 < t2 < t3
Avoiding medical jargon	5.80	1.66	7.33	1.88	8.07	1.33	13.00	**	t1 < t2 < t3
Reinforcing and clarifying information	5.80	1.37	7.40	1.64	8.13	1.19	15.48	**	t1 < t2 < t3
Responding empathetically to patient's feelings	5.27	1.67	7.47	1.46	8.27	1.10	27.95	**	t1 < t2 < t3
Planning a strategy for disclosing information	5.33	1.84	7.53	2.01	8.13	1.46	18.71	**	t1 < t2, t3
Handling patient's emotional reactions	4.33	1.72	7.13	1.55	7.40	1.30	28.80	**	t1 < t2, t3
Managing your own response to patient distress	4.50	1.83	7.07	1.44	7.21	1.37	30.33	**	t1 < t2, t3

a: **p < .01
b: t1 = Pre-CST
c: t2 = Post-CST
d: t3 = 3 months after CST

previous study which showed participants' emotional-exhaustion worsened 3-months after CST (Jenkins & Fallowfield, 2002) and this CST program was suggested improving the physicians' emotional-exhaustion and depersonalization, like the speculations in previous studies that physicians' burnout had decreased after CST (Baile et al., 1997; Ramirez et al., 1995). Although this study also cannot explain the reason why the participants' personal accomplishment for their job decreased 3-months after CST, it is possible that participants have intensified their attempts to be empathic with patients and realized that the consultations were more challenging. It might have to be assessed at longer follow-up to provide a more satisfactory explanation of the phenomenon.

Table 4. *Usefulness of the CST Program*

	Mean	S.D.	range
Diadic lecture on communication skills	7.88	1.67	5–10
Giving feedback to others	8.38	1.26	7–10
Getting feedback from others	8.94	1.12	7–10
Using role play	9.00	1.15	7–10
The facilitators' general approach	9.13	1.09	7–10
The facilitators' suggestion	9.13	1.09	7–10
Simulated patient	9.00	1.10	7–10
Scenarios	8.31	1.30	6–10
Relevance of the workshop to their own clinical practice	8.25	1.34	6–10

The participants evaluated the CST program fully positively on all components, suggesting that they were generally satisfied with the content, methodology, and facilitators of the workshop: a learner-centered model as well or better as our previous study (Fujimori et al., 2003). These results of this study showed the CST program suggested to useful to physicians.

Two limitations of this study should be noted. First, this preliminary study did not set up the control group and the participants are small because the aims of this study were development and feasibility evaluation of CST program based on patient preferences. Our next step study will perform randomized control trial, as the results of this study suggested a newly developed CST program was the feasible and potentially effective. Second, this study did not evaluate the impact of this CST program on

patients' outcomes such as patients' distress and satisfaction. Future research efforts should be evaluated the patients' outcomes.

In conclusion, a newly developed CST program based on patient preferences is suggested being feasible and potentially effective on communication behaviors of oncologists, confidence in communicating with patients, and emotional exhaustion. A randomized control study to conclude the developed CST program is effective was needed further.

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Effectiveness of Japanese SHARE model in improving Taiwanese healthcare personnel's preference for cancer truth telling

Woung-Ru Tang[1], Kuan-Yu Chen[2], Sheng-Hui Hsu[3], Yeong-Yuh Juang[4], Shin-Che Chiu[5], Shu-Chun Hsiao[6], Maiko Fujimori[7] and Chun-Kai Fang[8,9]*

[1]*School of Nursing, College of Medicine, Chang Gung University, Taoyuan, Taiwan*
[2]*Department of Psychiatry, Taipei City Hospital, Taipei, Taiwan*
[3]*Department of Psychiatry, Koo Foundation Sun Yat-Sen Cancer Center, Taipei, Taiwan*
[4]*Department of Psychiatry, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan*
[5]*Department of Radiation Oncology, Mackay Memorial Hospital, Hsinchu, Taiwan*
[6]*Cancer Control and promotion division, Bureau of Health Promotion, Department of Health, Taipei, Taiwan*
[7]*Psycho-Oncology Division, Research Center for Innovative Oncology, National Cancer Center Hospital East, Chiba, Japan*
[8]*Department of Psychiatry and Suicide Prevention Center, Mackay Memorial Hospital, Taipei, Taiwan*
[9]*Department of Medicine, Mackay Medical College, New Taipei, Taiwan*

**Correspondence to: Department of Psychiatry and Suicide Prevention Center, Mackay Memorial Hospital, Taipei, Taiwan. E-mail: chunkai.fang0415@gmail.com*

Abstract

***Background*: Communication skills training (CST) based on the Japanese SHARE model of family-centered truth telling in Asian countries has been adopted in Taiwan. However, its effectiveness in Taiwan has only been preliminarily verified. This study aimed to test the effect of SHARE model-centered CST on Taiwanese healthcare providers' truth-telling preference, to determine the effect size, and to compare the effect of 1-day and 2-day CST programs on participants' truth-telling preference.**

***Method*: For this one-group, pretest–posttest study, 10 CST programs were conducted from August 2010 to November 2011 under certified facilitators and with standard patients. Participants (257 healthcare personnel from northern, central, southern, and eastern Taiwan) chose the 1-day ($n = 94$) or 2-day ($n = 163$) CST program as convenient. Participants' self-reported truth-telling preference was measured before and immediately after CST programs, with CST program assessment afterward.**

***Results*: The CST programs significantly improved healthcare personnel's truth-telling preference (mean pretest and posttest scores ± standard deviation (SD): 263.8 ± 27.0 vs. 281.8 ± 22.9, $p < 0.001$). The CST programs effected a significant, large ($d = 0.91$) improvement in overall truth-telling preference and significantly improved method of disclosure, emotional support, and additional information ($p < 0.001$). Participation in 1-day or 2-day CST programs did not significantly affect participants' truth-telling preference ($p > 0.05$) except for the setting subscale. Most participants were satisfied with the CST programs (93.8%) and were willing to recommend them to colleagues (98.5%).**

***Conclusions*: The SHARE model-centered CST programs significantly improved Taiwanese healthcare personnel's truth-telling preference. Future studies should objectively assess participants' truth-telling preference, for example, by cancer patients, their families, and other medical team personnel and at longer times after CST programs.**

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Introduction

Truth telling is a common but difficult clinical task for doctors, and it can only be gradually improved through training. The most renowned current standardized communication skills training (CST) program is the US SPIKES model [1,2]. The SPIKES model, developed at the US.MD Anderson Cancer Center and based on CST, suggestions from experts, and a literature review [2], was designed to train oncologists to break bad news about cancer [1,2]. The model proposes a truth-telling procedure in six steps: setting (setting up the interview), perception (assessing the patient's perception), invitation (obtaining the patient's invitation), knowledge (giving knowledge and information to the patient), empathy (addressing patient emotions with empathy), and strategy and summary (summarize treatment plan if patient is ready) [1]. Truth telling is usually implemented in approximately 60 min. Since this model was proposed in 2000, it has been widely used in Western countries [1] such as the US and Europe. Furthermore, its effectiveness has been verified in the US [3–5], the UK [6,7], Germany [8], Japan [9,10], and China [11].

However, truth telling in Western countries is influenced by an emphasis on patient autonomy, which is significantly

different from the family-centered truth-telling culture in Asian countries [11]. Therefore, the Japan Psycho-Oncology Society (JPOS) developed the SHARE model on the basis of studies of cancer patients' preferences for truth telling [12,13]. The SHARE model emphasizes four important dimensions of truth telling: supportive environment, how to deliver bad news, additional information, and reassurance and emotional support [12]. The last dimension (reassurance and emotional support) is particularly emphasized throughout the SHARE model-centered truth-telling process to reflect cancer patients' preferences [12,13]. Implementing SHARE truth telling takes approximately 10–15 min. Only a preliminary study has verified the SHARE model [14], but it may meet the needs for developing CST in Taiwan better than the SPIKES model because Japanese culture is similar to Taiwanese folk customs, and its shorter time to implement truth telling conforms better to Taiwan's busy medical environment. The SHARE model is currently used as the education model for CST not only in Taiwan but also in several major cities in South Korea and China (e.g., Beijing and Xian). The SHARE and SPIKES truth-telling models are compared in Table 1.

To develop a good truth-telling technique, doctors, including clinically experienced attending physicians, must receive periodic training in standardized communication skills. To date, no large-scale study has verified the effectiveness of SHARE model-centered CST. To fill this gap in knowledge, the authors conducted this study for the following reasons: (i) to test the effect of Japanese SHARE model-centered standardized CST on Taiwanese healthcare personnel's preference for truth telling; (ii) to determine the size of this effect; and (iii) to compare the effect of 1-day and 2-day CST programs on participants' truth-telling preference.

Methods

Design and participants

This one-group pretest–posttest study was part of a larger project undertaken by the Taiwan Psycho-Oncology Society (TPOS) to promote CST programs to improve the level of oncologists' truth telling in Taiwan. The study was approved by the institutional review board of Chang Gung Memorial Hospital (101-1173C) to hold 10 CST programs led by certified facilitators using standard patients from September 2010 to November 2011. The TPOS informed all hospitals in Taiwan about the CST (the purpose, time, place, and registration information). This information was also published on the TPOS website and at its annual meeting. Participants were 257 healthcare personnel from northern, central, southern, and eastern Taiwan. The majority of participants was doctors ($n = 143$, 57.4%) and had signed up to participate because of personal interest ($n = 180$, 70%).

Communication skills training programs

The SHARE model used in our study was developed by TPOS in collaboration with JPOS. The SHARE CST was translated into Chinese and used in intensive training of healthcare personnel (at least 50 h of CST, train-the-trainer workshops, facilitator workshops, and facilitator internships). Some translated sentences were also modified to more closely reflect Taiwanese culture. For instance, 'Let's fight this together' was changed to 'Let's work together.' The first 22 facilitators trained by the TPOS were assessed by Dr. Fujimori (main developer of the SHARE model) and Dr. Fang (last author and head of the TPOS) and awarded Taiwan–Japan certificates.

Table 1. Comparison of the SPIKES and SHARE models

	SPIKES	SHARE
Institute where developed	MD Anderson Cancer Center, USA	Japan Psycho-Oncology Society and National Cancer Center Hospital East, Japan
Year developed	2000	2007
Basis for development	Literature search and expert input	Patients' preferences for truth telling
Core values	Patient autonomy, order of truth telling, and providing detailed information	Confucian-based values of Asian culture and reassurance and emotional support for patients and their families during truth telling
Training period	3–5 days	1–2 days
Instructor/trainee ratio	One instructor/five trainees	Two instructors/four trainees (instructors: one expert in psychology and one expert in oncology)
Types of cancer in training materials	$n = 5$ (breast cancer, prostate cancer, lymphoma, lung cancer, and melanoma cancer)	$n = 26$ (trainees choose to engage in role play according to the type of cancer role play)
Teaching methods	Didactic lessons and role play	Didactic lessons and role play
CST-related empirical studies	Verified by many studies	Verified by a preliminary study
Time to execute truth telling	Approximately 60 min	Approximately 10–15 min
Countries where used	Europe, USA, and China	Japan, Taiwan, South Korea, and China

CST, communication skills training.

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These 22 facilitators were the first CST facilitators in Taiwan and conducted CST in this study. To match the Japanese SHARE model CST to the medical culture of Taiwan, all teaching materials provided by JPOS were revised by all TPOS directors on the basis of local data in Taiwan, feedback from CST facilitators and participants, and suggestions of clinical experts. However, the CST process, training of facilitators and standard patients, and use of teaching strategies meet JPOS recommendations.

Considering the positive effects of CST, the Bureau of Health Promotion in Taiwan has sponsored and supported high-quality CST training programs held by the TPOS at various medical institutions in Taiwan since 2011. SHARE CST uses small classes (four participants, two facilitators, and one standard patient). Role play is used to enable participants to learn the important skills of truth telling (Table 2). In Japan, SHARE CST was designed with 1-day and 2-day versions. Although the TPOS tried to promote the 2-day CST, it was not well received in Taiwan's busy medical environment. However, one of our study aims was to compare the effectiveness of 1-day and 2-day CST programs; thus, this study provided two CST programs as options for healthcare personnel (Table 2). Both versions included the same class modules and standard teaching materials and were led by the same facilitators. The only difference was that the 1-day and 2-day versions included 1 and 2 h of role playing for each participant, respectively (Table 2). Participants chose the CST programs according to their needs.

Truth-telling questionnaire

Participants' truth-telling preference was assessed using the 70-item Japanese truth-telling questionnaire [12], which has four subscales: method of disclosing bad news, providing emotional support, providing additional information, and setting. Self-reported responses are scored on a 5-point Likert scale from 1 (extremely unimportant) to 5 (extremely important). Higher scores indicate greater respondent preference for truth telling except for the setting subscale. The questionnaire was shown to have good internal consistency among 529 outpatients with cancer; subscale reliabilities were 0.77–0.93 [12]. The scale was translated into Chinese by Dr. Tang, with Dr. Fujimori's authorization, and found to have good reliability and validity with Taiwanese medical students and attending physicians [15].

Questionnaire scores were used in this study to indicate CST effectiveness. We reasoned that if healthcare personnel's truth-telling perceptions changed after SHARE model-centered CST to more closely match cancer patients' preferences for truth telling, as embodied in the SHARE model, the CST would have been effective, and healthcare personnel's future truth telling would be successful with patients. Dr. Fujimori agreed with this reasoning. The questionnaire was administered as the pretest to all participants before the introduction to the CST program (Table 2). The questionnaire was again completed as the posttest after the last role play and before group feedback. Participants completed questionnaires in 10–30 min. In this study, the internal consistencies (Cronbach's alphas) of the overall truth-telling scale and its subscales were 0.92–0.94 and 0.79–0.91, respectively.

Statistical methods

Data were analyzed by descriptive statistics. For continuous data, such as age and clinical experience, variables were described by means and SDs. For categorical data, such as gender and education level, variables were described by frequency distribution and percentage. These descriptive statistics were used to analyze participants' preference for truth telling. The difference between participants' pretest and posttest truth-telling scores (before and after participating in CST programs) was analyzed by paired-sample t-test. Cohen's d $d = \frac{M1 \cdot M2}{\sigma}$ was calculated to determine the effect size of the CST [16]. The difference between the truth-telling preferences of participants in the 1-day and 2-day CST programs was analyzed by multiple regression analysis.

Results

Participants' characteristics

The 257 participating healthcare personnel were on average 38.60 years old (SD = 8.09). The majority were women (52.5%) and had graduated from college (61.1%), with half having abundant clinical experience (≥10 years, 50.2%). The largest proportion was doctors (57.2%), followed by nurses (22.2%). The majority served in medical centers (52.8%). Nearly two-thirds of participants took the 2-day CST program ($n = 163$, 63.4%), whereas the rest took the 1-day CST program ($n = 94$, 36.6%). Most participants were satisfied with the programs (93.8%) and were willing to recommend them to other colleagues (98.5%) (Table 3).

Participants' truth-telling preferences

Comparison of all participants' truth-telling scores before and after participating in the CST programs shows that their overall truth-telling scores and subscale scores improved significantly ($p < 0.001$) (Table 4). The effect size was 0.91 $\left(d = \frac{281.89 \cdot 263.88}{19.89}\right)$.

We also compared the effect of CST program dose (1-day vs. 2-day program) on participants' truth-telling preference. Because healthcare personnel in the 1-day and 2-day CST programs differed in some basic demographic variables (e.g., age, gender, education level, marital status, clinical experience, and workplace hospital level) (data not shown), these were treated as confounding variables.

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Table 2. SHARE model-centered communication skills training programs

	1-day CST program (6 h)		2-day CST program (12 h)	
Time	**Procedures**	**Note**	**Procedures**	**Note**
Day one morning	Facilitators' preworkshop meeting and participant check-in (30 min)	A large-scale classroom is required with a capacity of 50.	Facilitators' preworkshop meeting and participant check-in (30 min)	A large-scale classroom is required with a capacity of 50.
	Participant pretest (10 min)	Each group has four participants assigned to one classroom. Participants assemble in the large classroom to complete truth-telling questionnaire and basic demographic data.	Participant pretest (30 min)	Each group has four participants assigned to one classroom. Participants assemble in the large classroom to complete truth-telling questionnaire and basic demographic data.
	Introduction to workshop (10 min)	The principal investigator gives the introduction in the large classroom.	Introduction to workshop (10 min)	The principal investigator gives the introduction in the large classroom.
	Grouping; introduction to SHARE modules (50 min)	The facilitator of each group starts grouping participants. Facilitators introduce the SHARE model in small-group teaching. SP complete check-in procedure.	Grouping; introduction to SHARE modules (50 min)	The facilitator of each group starts grouping the participants. Facilitators introduce the SHARE model in small-group teaching. SP complete check-in procedure.
	First role-playing practice (60 min)	Each role-playing practice includes only one participant and one SP. The participant and SP practice the truth-telling process, whereas the other three participants observe.	First role-playing practice (60 min)	Each role-playing practice includes only one participant and one SP. The participant and SP practice the truth-telling process, whereas the other three participants observe.
	Second role-playing practice (60 min)			
Day one afternoon	Third role-playing practice (60 min)		Second role-playing practice (60 min)	Day 1 includes four role-playing practice sessions, with each participant practicing once.
	Fourth role-playing practice (60 min)		Third role-playing practice (60 min)	
	Participant posttest (10 min)	Participants return to large classroom to complete truth-telling questionnaire and survey on program satisfaction.	Fourth role-playing practice (60 min)	
	Group feedback (50 min)	Mutual feedback from SP, participants, and facilitators. Sharing of feedback.		
	Certificates issued (10 min)	Facilitators personally issue certificates to participants in their groups. The workshop closes for participants.		
Day two morning			Participant, SP, and facilitator check-in	Grouping is initiated right after check-in.
			Fifth role-playing practice (60 min)	Day 2 includes four role-playing practice sessions so all participants can practice again.
			Sixth role-playing practice (60 min)	
			Seventh role-playing practice (60 min)	
Day two afternoon			Eighth role-playing practice (60 min)	
			Participant posttest (30 min)	Participants return to large classroom to complete truth-telling questionnaire and survey on program satisfaction.
			Group feedback (80 min)	Mutual feedback from SP, participants, and facilitators. Sharing of feedback.
			Certificates issued (10 min)	Facilitators personally issue certificates to participants in their groups. The workshop closes for participants.
			Facilitators' postworkshop meeting (30 min)	Facilitators share CST experiences with each other. If any incident happened during CST, facilitators should reach a consensus on how to manage the situation in the future.

CST, communication skills training; SP, standard patients.

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Descriptive analysis showed that participants in the 2-day program had better posttest truth-telling scores (Table 4), but this difference was not significant ($p > 0.05$) in multiple regression analysis when confounding variables were controlled, except for the setting subscale (Table 5).

Table 3. Participant characteristics ($N = 257$)

Characteristic	Mean ± standard deviation (range)	*n* (%)
Age (years)	38.60 ± 8.09 (24–64)	
Gender		
Male		122 (47.5)
Female		135 (52.5)
Education level		
Junior college		12 (4.7)
College		157 (61.1)
≥Graduate school		88 (34.2)
Marital status		
Never married		94 (36.6)
Married		161 (62.6)
Divorced		2 (0.8)
Clinical experience (years)		
1–3		39 (15.2)
4–6		55 (21.4)
7–9		34 (13.2)
≥10		129 (50.2)
Job title		
Doctor		147 (57.2)
Psychologist		19 (7.4)
Nurse		57 (22.2)
Social worker		21 (8.2)
Other		13 (5.0)
Workplace hospital level		
Medical center		131 (52.8)
Nonmedical center		117 (47.2)
Motivation to participate in CST		
Personal interest		180 (70.0)
Assigned		77 (30.0)
CST program (hours)		
6		94 (36.6)
12		163 (63.4)
Satisfaction with the program		
Extremely dissatisfied		7 (2.7)
Neutral		9 (3.5)
Satisfied		82 (31.9)
Extremely satisfied		159 (61.9)
Willing to recommend CST to colleagues		
Yes		253 (98.5)
No		4 (1.5)

CST, communication skills training.

Discussion

Our results show that, after participating in the CST program, healthcare personnel's preference for truth-telling improved significantly, consistent with previous reports on the effectiveness of CST [3,6,17–22]. However, our study evaluated CST effectiveness on the basis of participants' truth-telling preference, whereas other studies assessed participants' self-efficacy [3], confidence in truth telling [17], communication skills with patients [22], and confidence in communication [9,10]. Although the outcomes measured are different, the effectiveness of CST was verified. To more objectively compare the effectiveness of CST in cross-institutional and cross-national studies, future studies should develop and apply consistent assessment outcomes.

Moreover, our results show that the CST had a large ($d = 0.91$), significant effect. This large effect might have been associated with our theoretical framework (SHARE model-centered CST), facilitator quality (facilitators were certified after receiving at least 50 h training), low ratio of facilitators to participants (2 : 4), quality of standard patients (standard patients received intense training and were assessed regularly), and solid, standard teaching materials that were regularly revised according to empirical evidence or experts' comments.

Moreover, 70% of participants had volunteered to attend the CST program. Their motivation to learn may have been stronger than in previous studies. In addition, our participants included doctors with abundant clinical experience and other healthcare personnel, such as psychologists, nurses, and social workers. Including professionals from different fields has been suggested as preferable in CST programs because these professionals provide different perspectives that may enable participants to learn from one another [23]. These reasons may have contributed to the large effect of CST in our study.

Table 4. Comparison of pretest and posttest truth-telling scores ($N = 257$)

	Total sample		1-day CST ($n = 94$)		2-day CST ($n = 163$)	
	Pretest (mean ± SD)	Posttest (mean ± SD)	Pretest (mean ± SD)	Posttest (mean ± SD)	Pretest (mean ± SD)	Posttest (mean ± SD)
Overall scale	263.88 ± 27.0	281.89 ± 22.9*	263.56 ± 30.63	283.56 ± 25.12	264.00 ± 24.62	280.86 ± 21.45
Method of disclosure	77.37 ± 8.87	83.48 ± 7.46*	77.23 ± 9.81	83.52 ± 7.87	77.49 ± 8.29	83.41 ± 7.23
Emotional support	70.78 ± 8.54	76.74 ± 7.08*	70.33 ± 9.10	76.61 ± 7.01	71.01 ± 8.18	76.79 ± 7.13
Additional information	68.26 ± 8.16	72.94 ± 6.91*	67.91 ± 8.72	73.00 ± 6.68	68.45 ± 7.80	72.87 ± 7.05
Setting	47.46 ± 8.50	48.73 ± 9.00*	48.09 ± 10.27	50.44 ± 11.31	47.04 ± 7.32	47.79 ± 7.19

CST, communication skills training; SD, standard deviation.
*$p < 0.001$.

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Table 5. Multiple regression on truth-telling preference by communication skills training dose ($N = 257$)

	CST dose β (2-day vs. 1-day)	p
Overall scale	−3.325	0.168
Method of disclosure	−0.108	0.892
Emotional support	−0.281	0.706
Additional information	−0.961	0.183
Setting	1.736	0.046

CST, communication skills training.
1-day CST is used as the baseline value.
Adjusted for age, gender, education level, marital status, clinical experience, and workplace hospital level.

Our study did not find a significant difference in the truth-telling preference of participants in the 1-day and 2-day CST programs ($p > 0.05$), except for the setting subscale. This finding contrasts with a previous finding that the communication skills of oncologists participating in a 3-day CST program were significantly superior to those of participants in a 1.5-day CST program [19]. The setting subscale items (e.g., ensuring that the telephone does not ring, using technical words, and breaking bad news at the first meeting) are basic communication skills but are often neglected by physicians in Taiwan [15]. Thus, Taiwanese clinicians may need more practice in long CST programs to change their truth-telling preference related to the setting. Our findings suggest that a shorter training program is as equally effective as a longer training program. If this hypothesis is supported in future empirical studies, shorter CST programs can be promoted, which will be particularly beneficial in extremely busy medical environments, such as in Taiwan.

However, our finding that the effectiveness of the two CST programs did not differ significantly may be explained by the selection of assessment times and inadequate selection of outcome variables. We measured participants' outcomes immediately after the programs, but the effectiveness of the two CST programs might differ if the outcomes were measured at longer times, for example, 3 or 6 months after CST. Unfortunately, our plan for long-term assessments was hindered by the difficulty and expense of passing Institutional Review Board (IRB) review at the 62 hospitals across Taiwan from which our participants were recruited. In Taiwan, IRB approval is needed for studies on hospital personnel [24].

Another reason for failure to detect a difference in effectiveness of the 1-day and 2-day CST programs might be inadequate selection of outcome variables. In addition to measuring participants' truth-telling preference, future studies are advised to concurrently assess their self-efficacy [3], confidence in communication [9,10], or anxiety while truth telling. We also suggest that other researchers refer to specific suggestions proposed in a review of CST programs [25] using Kirkpatrick's Triangle to evaluate CST effectiveness at four levels: participants' reactions, participants' learning, participants' behavior, and patients' outcomes. At the first level, participants' satisfaction with the CST (each module) can be assessed. At the second level, standard patients can be invited to assess the truth-telling skills of participants before/after their participation in the CST programs. At the third level, actual clinical situations before/after the CST program can be videotaped to record participants' actual consultations for patients with cancer. At the fourth level, cancer patients can be invited to assess doctors' truth-telling skills, their understanding of the patients' needs, and the fit of their responses. In this study, we used only first-level assessment. Future studies may gradually expand the scope to second-level, third-level, or even fourth-level assessment to more effectively and comprehensively evaluate CST effectiveness.

This study had some limitations. First, participants only completed one posttest immediately after the end of the CST programs. Therefore, the long-term CST effectiveness (e.g., at 3 or 6 months) is unknown. Second, because of time and equipment limitations at the study sites, we did not videotape the participants' truth-telling process and did not include standard patients' assessment of participants' truth-telling skills. Instead, we used only first-level assessment. Future researchers may choose higher-level assessments as suggested [24] to evaluate the benefit of CST more completely. Third, 70% of our participants had volunteered to participate in the CST program. Their self-selection and motivation to learn may have biased our assessment of the effectiveness of the CST program. However, this possibility is minimized by our findings that voluntary and nonvoluntary (assigned) participants did not differ significantly in either their overall truth-telling preference scores or most subscale scores and by the 1-day and 2-day CST programs having the same percentage of voluntary and assigned participants (data not shown).

Conclusions

SHARE model CST improved Taiwanese healthcare providers' preferences for cancer truth telling. Truth-telling knowledge and skills should be replenished every few years for all healthcare personnel, including clinically experienced attending physicians. Further studies are needed to assess the long-term benefit of CST on patients' outcomes and to compare the effectiveness of different CST programs and the factors affecting physicians' method of truth telling.

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Conflict of interest

The authors have declared that there is no conflict of interest.

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Short Communication

Characteristics associated with empathic behavior in Japanese oncologists

Kyoko Kondo [a,b], Maiko Fujimori [a,c], Yuki Shirai [a,d,e], Yu Yamada [a,f], Asao Ogawa [a], Nobuyuki Hizawa [b], Yosuke Uchitomi [g,*]

[a] Psycho-Oncology Division, Research Center for Innovative Oncology, National Cancer Center Hospital East, Kashiwa, Japan
[b] Department of Pulmonary Medicine, Institute of Clinical Medicine, University of Tsukuba, Tsukuba, Japan
[c] Psychiatry Division, National Cancer Center Hospital, Chuo-ku, Japan
[d] Tokyo Healthcare University Graduate School, Megro-ku, Japan
[e] The Graduate School of Medicine, The Department of Adult Nursing/Palliative Care Nursing, The University of Tokyo, Bunkyo-ku, Japan
[f] Department of Psycho-Oncology, Saitama Cancer Center, Kitaadachi-gun, Japan
[g] Department of Neuropsychiatry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Kita-ku, Japan

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ABSTRACT

Objective: Oncologists must have empathy when breaking bad news to patients who have incurable advanced cancer, and the level of empathy often depends on various individual characteristics. This study aimed to clarify the relationship between these characteristics and empathic behavior in Japanese oncologists.
Methods: We videotaped consultations in which oncologists conveyed news of incurable advanced cancer to simulated patients. Oncologists' empathetic behaviors were coded, and regression analysis was performed to determine the existence of any relationships with factors such as age, sex, and specialism.
Results: Sixty oncologists participated. In a multivariate model, only age was related to the empathy score ($r = 0.406$, $p = 0.033$); younger oncologists scored higher than did older oncologists.
Conclusions: We found that empathic behaviors were more frequent in younger oncologists.
Practice implications: This information could be useful in determining the best approach for implementing future empathy and communication training programs for experienced oncologists in Japanese medical institutions.

1. Introduction

Patients with incurable advanced cancer suffer intense emotional anguish, particularly when first receiving the bad news of their disease. However, physicians' empathy—defined in medical settings as "a predominantly cognitive attribute that involves an understanding of experiences, concerns and perspectives of the patient" [1]—is reportedly related to relatively high patient satisfaction and relatively low distress, especially when bad news is being delivered [2–4].

Oncologists' characteristics—such as age, sex, and specialism—may be associated with their empathic behavior. Previous studies analyzed empathy using self-reported questionnaires or audio-recorded conversations, with researchers investigating oncologists' reactions to patients' verbal distress cues. However, self-report questionnaires lack objectivity; furthermore, empathy has non-verbal aspects. Indeed, cancer patients' behavior is richly varied, making it difficult to identify empathy through oncologists' reactions to verbal expressions. Therefore, video-recorded conversations between oncologists and simulated patients (SPs) reacting to oncologists' behavior in a standardized way would allow us to make comparisons between consultations, leading to more useful information.

To examine how oncologists' characteristics influence their empathic behavior when breaking bad news, we analyzed video-recorded conversations between oncologists and SPs.

2. Methods

This study was approved by the Ethics Committee of the National Cancer Center of Japan.

2.1. Participants

2.1.1. Oncologists

Sixty oncologists from the National Cancer Center Hospital in Tokyo and the National Cancer Center Hospital East participated.

* Corresponding author at: Department of Neuropsychiatry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2-5-1 Shikata-cho, Kita-ku, Okayama 700-8558, Japan. Tel.: +81 86 235 7242; fax: +81 86 235 7246.
E-mail address: uchitomi@md.okayama-u.ac.jp (Y. Uchitomi).

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Table 1
Empathy score of oncologists during bad news consultations ($N = 60$).

	Range	Median	*SD*	Correlation to the total
9 items total[a]	6–35	20.5	7.8	–
Empathy score item[b]				
Encouraging patients to ask questions	0–4	4	1.6	0.657
Asking about your worries and concerns	0–4	0	1.4	**0.748**
Saying words to prepare you mentally	0–4	3	1.9	0.634
Remaining silent to consider your feelings	0–4	1	1.7	0.689
Accepting your expression of emotion	0–4	3	1.7	**0.702**
Saying words that soothed your feelings	0–4	3	1.7	**0.755**
Telling the news in a hopeful way	0–4	4	1.0	0.265
Telling what you can hope for	0–4	4	1.1	0.373
Assuming responsibility for your care until the end	0–4	2	1.6	0.536

[a] Sum of 9 items of empathy score (range; 0–36).
[b] Responses were based on a 5-point scale (0 = not at all, 4 = extremely).
Correlations greater than 0.7 are in bold.

Investigators (*M.F. & Y.Y.*) met with each interested oncologist and fully described the study to them. Oncologists who volunteered to participate signed a consent form and gave information on 4 characteristics: age, sex, specialism, and years in practice.

2.1.2. Simulated patients (SPs)

Trained adult SPs participated in the study. Two male and four female adult SPs, all of whom had received at least 3 years of training as simulated cancer patients, participated in this study. The scenario was of middle-aged or elderly patients with advanced cancer, who had undergone numerous diagnostic procedures such as biopsy, having a consultation with their oncologists when being informed of their diagnosis. We videotaped each consultation. None of the SPs had encountered the oncologists previously.

2.2. Survey measures

Empathy score: To score empathy, we used the behavior rating scale, which was based on our previous survey on Japanese cancer patients' communication style preferences when receiving bad news [5–7]. The behavior rating scale included 32 items in 4 subscales, with each item rated on a 5-point scale (0 = not at all to 4 = extremely). The scale assesses the quality and quantity of each empathic behavior, encompassing verbal and non-verbal communication (*e.g.*, atmosphere, tone of voice, expressions, and glances throughout the interview). All items were chosen through discussion with research experts in the field and experienced oncologists and psycho-oncologists. Of the subscales, we chose to use "Reassurance and Emotional support," which consists of 9 items, with a total empathy score ranging from 0 to 36 (Table 1). This subscale correlates with the Interpersonal Reactivity Index, a self-reported questionnaire used for assessing empathy ($r = 0.676$, $p < 0.05$). Two independent coders received over 3 months of training in using the scale manual and videotaped 17 interviews as a preparatory experiment, which accounted for approximately 30% of the analyzed data. Inter-rater and intra-rater reliability for these preliminary interviews were high for the behavior rating scale ($\kappa = 0.826$ and 0.800, respectively).

2.3. Statistical analyses

Univariate analysis between empathy scores and characteristics was performed using Spearman's rank correlation coefficients and the Mann–Whitney *U* test, where appropriate; all characteristics (age, sex, specialism, and years in practice; $p < 0.05$) were retained. The correlation between age and years of practice was strong ($r = 0.924$, $p < 0.001$); thus, we only included age as an independent variable in the multiple regression model to control for multicollinearity. Multiple regression analysis was then performed with empathy score as the dependent variable and the characteristics as independent variables. All p values are two-tailed. Analyses were conducted using SPSS version 15.0J (PASW Collaboration and Deployment Services).

3. Results

3.1. Participant characteristics

Sixty Japanese oncologists (50 men; mean age = 36 years) participated in this study (Table 2). Most were surgeons (57%), whereas others specialisms included internal medicine (42%) and radiology (3%).

3.2. Empathy score

Across all consultations, the median empathy score was 20 (Table 1).

Table 2
Characteristics of oncologists ($N = 60$).

		N	%
Age (years)			
Range	28–65		
Mean	36		
SD	6.7		
<35		29	48.0%
36–45		22	37.0%
46<		9	15.0%
Sex			
Male		50	83.0%
Female		10	17.0%
Specialism			
Surgery		34	56.7%
Gastroenterology		18	30.0%
Otorynolaryngology		6	10.0%
Urology		3	5.0%
Gynecology		3	5.0%
Breast oncology		3	5.0%
Respiratory		1	1.7%
Internal medicine		25	41.7%
Gastroenterology		12	20.0%
Respiratory		6	10.0%
Breast oncology		5	8.3%
Hematology		1	1.7%
Radiation oncology		1	1.7%
Radiology		1	1.7%
Physicians' experience (years)			
Range	4–31		
Mean	10		
SD	6.4		
<10		30	50.0%
11–20		21	35.0%
21–30		8	13.3%
>31		1	1.7%