Supportive Care in Cancer (2019) 27:583–589
https://doi.org/10.1007/s00520-018-4348-1

ORIGINAL ARTICLE

# Preference of cancer patients and family members regarding delivery of bad news and differences in clinical practice among medical staff

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Received: 20 December 2017 / Accepted: 6 July 2018 / Published online: 18 July 2018

## Abstract

**Objectives** To study the preferences of cancer patients and their families in way of being informed of their condition and, by comparing their preferences with the medical staff's clinical practices, explore the factors underlying the latter's preferences.

**Methods** A survey was conducted with 216 cancer patients, 242 families, and 176 clinical staff members with the Medical Status Communication questionnaire (Simplified Chinese edition).

**Results** The clinical staff scored lower than the cancer patients and their families in terms of the total score, way of communication, emotional support, and additional information ($F = 16.134$, $p < .001$; $F = 28.604$, $p < .001$; $F = 13.839$, $p < .001$; $F = 16.745$, $p < .001$). Factors underlying the medical staff's clinical practices included, as revealed by the multiple linear regression analysis, gender ($p = .03$), and willingness to improve the way of communication about cancer ($p = .006$).

**Conclusions** A gap existed between the medical staff's clinical practice and the preferences of the cancer patients and their families. The medical staff should receive adequate training in cancer communication skills and techniques for improvement in this respect. When designing training for skills in delivering bad news to cancer patients, the well-being of cancer patients and their families must be thoroughly considered, and patient demands for information should be satisfied in the context of the information explosion of the current age.

**Keywords** Cancer · Preference · Truth telling

## Introduction

Bad news is defined as any information that produces a negative perception in the recipient's present or future expectations [1]. A cancer diagnosis, recurrence, metastasis, and termination of treatment are all bad news. Methods of delivering bad news to patients not only affect the patient's understanding of the disease but also affect their long-term psychological adaptation [2]. Good delivery of bad news can reduce the patient's mental distress and increase the patient's satisfaction toward medical treatment and treatment compliance [3]. However, studies had shown that many clinicians are dissatisfied with their own skill at communicating bad news [4–6].

Because the importance of patient-centered communication modes is increasingly being emphasized, studies in Western and few Asian countries have focused on the preferences of cancer patients toward the delivery of bad news. The results of a study by Butow [7] showed that patient preferences for communication during diagnostic consultation were

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not always consistent with published guidelines. The results of a study by Parker et al. [8] showed that communication preferences of cancer patients included three aspects: content of communication, provision of support, and simplicity. The results of a study by Fujimori et al. [9] showed that communication preferences of cancer patients included four aspects: method of disclosure, emotional support, additional information, and setting.

In recent years, the incidence of and mortality from cancer in China has shown a steadily increasing trend. In 2015, there were 4,292,000 new cases of cancer and 2,814,000 deaths from cancer in China, equivalent to an average of 12,000 new cases of cancer and 7500 deaths from cancer per day [10]. However, studies related to the communication preference of cancer patients are rare in Mainland China. [11] This study investigates the preferences of Chinese cancer patients and their families about the delivery of bad news, compares them with clinical practice among medical staff, and analyzes the factors that affect clinical practice among medical staff, to provide a basis for Chinese medical staff to deliver bad news appropriately, reasonably, and accurately in clinical practice.

## Methods

### Research participants

Using a purposive sampling method, 661 staff members from the oncology, radiation oncology, breast surgery, and gynecological oncology departments at a level 3A hospital (medical center level) in Guangzhou City were surveyed between December 2016 and July 2017. Patients with a confirmed cancer diagnosis and their families were purposively sampled by asking doctors for names of patients to whom they had told the truth about their diagnosis. Patients and families were included if they were older than 18 years old, could communicate in Chinese, and provided written informed consent. Family members were identified by patients as the person most involved in their care, i.e., the one who stayed overnight with them during admission or who accompanied them to outpatient appointments. All physicians caring for cancer patients in these four departments were invited to join this study. Physicians and patients were not paired.

### Ethical considerations

The study protocol was approved by the institutional review boards of the study hospitals (NFEC-201709-K15). The researchers explained the study purpose to potential participants. Enrollment was not initiated until potential participants signed the informed consent form. Participants could withdraw from participation at any time. Nonparticipation would not affect their rights to receive treatment or practice medicine at study sites. The researchers guaranteed that this study would not lead to any participant risks. The data were collected anonymously using blinded codes, were only used for academic research, and were not disclosed elsewhere.

### Research tools

In this study, the Medical Status Communication questionnaire (Simplified Chinese edition) developed by Chun-Kai Fang and Wan-Ju Tang was used to evaluate medical status communication preferences in subjects. The Chinese edition of the questionnaire used the Medical Status Communication questionnaire prepared by Yosuke Uchitomi and added content for evaluating communication methods in clinical practice among medical staff [12]. The questionnaire evaluates patient and family member preferences and communication methods in clinical practice among medical staff [13], and covers four dimensions: method of disclosure, emotional support, additional information, and setting. The questionnaire contains 70 items. A 5-point scoring method was used, with 1 representing “completely unimportant” and 5 representing “very important.” Higher scores represent greater preference for each medical status communication method. This questionnaire exhibited good inherent consistence when it was used in Japan between 2005 and 2007 in the surveys [9] with 529 cancer patients, with the validity ranging from 0.77 to 0.93. And when used in researches [13] in Taiwan between 2011 and 2013, this questionnaire displayed an inherent validity of 0.95, with the value for each time ranging from 0.78 to 0.90. However, this questionnaire is not reported to have been used in European or North American countries. This study will examine the reliability and validity of this questionnaire.

### Statistical analysis

IBM SPSS 23.0 software was used for data entry and analysis. A one-way ANOVA was used to compare overall differences in cancer patient, family member, and medical staff scores. Dunnett’s *t* test was used for pairwise comparison between groups. Multiple linear regression was used to analyze the factors affecting communication methods in clinical practice among medical staff.

## Results

A total of 265 questionnaires were administered to patients, and 216 valid questionnaires were received, for a valid survey response rate of 81.5%. A total of 265 questionnaires were administered to patients, and 242 valid questionnaires were received, for a valid survey response rate of 91.3%. A total of 186 questionnaires were administered to patients, and 176 valid questionnaires were received, for a valid survey response rate of 94.6%. Other results are shown below.

### General characteristics

The age of patients ranged from 16 to 79 years (average 44.13 ± 10.94 years). The age of the family members of patients ranged from 18 to 60 years (average 35.50 ± 9.99 years). The age of medical staff ranged from 22 to 59 years (average 32.37 ± 7.24 years). Medical staff had work experience ranging from 1 to 35 years (average 9.13 ± 7.91 years). Among the medical staffers, doctors and nurses numbered 74 and 102, respectively, accounting for 42 and 58%, respectively. Medical staffers who are willing to participate in truth-telling training are 165 (93.8%), and those who do not, 11 (6.2%).

### Internal consistency of the Taiwanese version of modified Japanese truth-telling scale among study participants

In this study, the overall consistency of the scale (Cronbach's alphas) was between 0.93 and 0.96, and the consistency of each subscale (Cronbach's alphas) was between 0.69 and 0.97, indicating that this scale had good reliability (Table 1).

### Comparison of patient and family member preference score and medical staff in clinical practice score

For total score and the method of disclosure and additional information dimensions, the difference in delivery preference between cancer patients and family members and medical staff in clinical practice was statistically significant ($p < .05$). The score for medical staff in clinical practice was significantly lower than the delivery preference score of cancer patients and family members. For the emotional support dimension, the difference in delivery preference between cancer patients and family members and medical staff in clinical practice was statistically significant ($p < .05$). The delivery preference of family members was significantly different from the delivery preference of cancer patients ($p < .05$). For the "setting" dimension, the difference in delivery preference between cancer patients, family members, and medical staff in clinical practice was not statistically significant (Table 2).

**Table 1** Internal consistency of the Taiwanese version of the modified Japanese truth-telling scale among study participants ($N = 661$)

| | Cronbach's alpha | | |
|---|---|---|---|
| | Physicians ($n = 176$) | Family members ($n = 242$) | Patients ($n = 216$) |
| Total scale | 0.964 | 0.933 | 0.929 |
| Method of disclosure | 0.928 | 0.868 | 0.806 |
| Emotional support | 0.963 | 0.844 | 0.878 |
| Additional information | 0.966 | 0.881 | 0.882 |
| Setting | 0.721 | 0.720 | 0.692 |

### Descriptive analysis of patient and family member preference and medical staff in clinical practice

To better compare the differences between medical staff in clinical practice and the delivery preference of patients and family members, the questionnaire items were ranked according to score. This paper lists the items with the 10 highest and 10 lowest scores among patient and family member preference and medical staff in clinical practice (Tables 3 and 4).

### Factors affecting cancer status communication in clinical practice of medical staff

This study found that sex ($p = .03$) and willingness to improve skill in cancer status communication ($p = .006$) significantly affected cancer status communication in the clinical practice of medical staff.

## Discussion

Table 2 shows that for the total score and the method of disclosure and additional information dimensions, the preference of cancer patients and family members differs significantly from the clinical practice of medical staff ($p < .05$). The clinical practice score of medical staff was significantly lower than the preference score of the patients and family members. This suggests that the clinical practice of medical staff is significantly different from the preference of patients and family members, which may be related to lack of medical status communication training programs aimed at medical students and medical staff and few medical staff having been trained in Mainland China (Table 5) [14].

Comparing the results in Table 2 with the results from Taiwanese studies [13], with the exception of setting, the overall score and the scores for the other three dimensions (method of disclosure, emotional support, and additional information) were much lower among the three Mainland Chinese groups. This suggests that the autonomy of Mainland Chinese patients in terms of informed consent was relatively weak. A possible explanation is that physicians in Mainland China usually acquiesce to family members substituting for the patient for information and consent, owing to Chinese cultural traditions and the current medical environment. This behavior further perpetuates or maintains the dependence of patients on their family members. Patients with this negative tendency in decision-making may simply be repressing their personal

**Table 2** Total scores for delivery of bad news among patients, family members, and medical staff and comparison of each dimension (one-way ANOVA)

| Truth-telling scale | Medical staff's practice (mean ± *SD*) | Families' preference (mean ± *SD*) | Patients' preference (mean ± *SD*) | *F* | *p* |
|---|---|---|---|---|---|
| Total score | 239.727 ± 44.9921 | 257.607 ± 26.6081*** | 253.921 ± 26.698$^{@@@}$ | 16.134 | < .001 |
| Method of disclosure | 73.358 ± 15.968 | 80.537 ± 10.081*** | 81.926 ± 9.493$^{@@@}$ | 28.604 | < .001 |
| Emotional support | 62.222 ± 16.305 | 67.942 ± 7.913*** | 64.837 ± 8.606### | 13.839 | < .001 |
| Additional information | 55.153 ± 14.338 | 60.669 ± 7.392*** | 59.280 ± 7.316$^{@@@}$ | 16.745 | < .001 |
| Setting | 48.994 ± 9.012 | 48.459 ± 7.171 | 47.954 ± 6.282 | .946 | .389 |

***$p < .001$ when comparing family members and medical staff, $^{@@@}p < .001$ when comparing patients and medical staff, and medical staff; $^{\#\#\#}p < .001$ when comparing patients and family members

autonomy to some extent due to being accustomed to Chinese cultural traditions, and their desire and ability to participate in decision-making must be encouraged and fostered [15]. Thus, the awareness of Chinese patients of their rights must be strengthened and fostered, and only by enhancing autonomy and self-reliance can cultural barriers be eliminated and informed consent be truly implemented. A study by Butow [16] also showed that self-awareness of informed consent was weak among Chinese-Australians and was restricted by the opinions of family members.

The results shown in Table 3 indicate that among the 10 most important items of patient preferences, four items were classified as additional information, five items were classified as method of disclosure, and only one item was classified as emotional support. Compared to results from Japan and Taiwan, emotional support of the patient and family members by medical staff was highly emphasized in Japan [17], and provision of emotional support (RE) was the most important component of the SHARE model. In Taiwan, the importance of emotional support was also emphasized [13]. However, the importance of additional information stood out in the results of this study.

A possible reason is that, with the development of the Internet, China is in the middle of an information explosion and an era of rapid availability of information [18]. The Internet has changed the lack of information in traditional society and has rendered information redundant and difficult to follow. However, medical information on the Internet is both good and bad, and it is difficult for patients to verify the truth and quality of such information. This suggests that

**Table 3** Items with the 10 highest scores among patient and family member preference and medical staff in clinical practice

| Rank | Patients' preference | Dimension | Families' preference | Dimension | Physician's practice | Dimension |
|---|---|---|---|---|---|---|
| 1 | Information about the latest treatment | A | Information about the latest treatment | H | Speaking words of encouragement | RE |
| 2 | Answering your questions | H | Information about all treatment options available to you | A | Information with concern for your feelings | RE |
| 3 | Telling the treatment plan | A | Speaking words of encouragement | RE | Not using the word "cancer" repeatedly | RE |
| 4 | Communicating clearly the main points of bad news | H | Telling with concern for your feelings | RE | Information about the latest treatment | A |
| 5 | Information about the recommended treatment | H | Information about the recommended treatment | H | Breaking bad news in a sympathetic manner | A |
| 6 | Explaining the risks and side effects of treatment | A | Information about the treatment plan | A | Breaking bad news in a setting with family | RE |
| 7 | Breaking bad news with detail | H | Answering your questions | H | Information about the treatment plan | A |
| 8 | Information with concern for your feelings | RE | Checking to see that you understand | A | Checking to see that you understand | A |
| 9 | Being a trusting physician | H | Communicating the main points of bad news clearly | H | Information about the recommended treatment | H |
| 10 | Telling about all treatment options available to you | A | Telling what you can hope for | RE | Being a trusting physician | H |

Note: Dimension A: additional information; dimension H: how to deliver the bad news; dimension RE: reassurance and emotional support

**Table 4** Items with the 10 lowest scores among patient and family member preference and medical staff in clinical practice

| Rank | Patients' preference | Dimension | Families' preference | Dimension | Physician's practice | Dimension |
|---|---|---|---|---|---|---|
| 61 | A physician at the first meeting breaking bad news | S | Information about your life expectancy | H | Telling all the bad news | H |
| 62 | Telling all the bad news | H | Telling all the bad news | H | Saying, "you are OK" | RE |
| 63 | A physician at the first meeting breaking bad news | S | A physician at the first meeting breaking bad news | S | A physician at the first meeting breaking bad news | S |
| 64 | Breaking bad news by telephone | S | Breaking bad news by telephone | S | Breaking bad news only to you | S |
| 65 | Breaking bad news only to you | S | Talking in a business-like manner | S | Talking in a business-like manner | S |
| 66 | Talking in a business-like manner | S | Breaking bad news only to you | S | Breaking bad news by telephone | S |
| 67 | Telling only the bad news | S | Breaking bad news in a vague manner | S | Dealing with your questions in an irritated manner | S |
| 68 | Dealing with your questions in an irritated manner | S | Dealing with your questions in an irritated manner | S | Breaking bad news in a vague manner | S |
| 69 | Breaking bad news in a vague manner | S | Telling only bad news | S | Breaking bad news before it is definite | S |
| 70 | Breaking bad news before it is definite | S | Breaking bad news before it is definite | S | Telling only bad news | S |

Note: dimension S: setting; dimension H: how to deliver the bad news; dimension RE: reassurance and emotional support

providing information fully is an important factor in medical status communication. Patients require complete information to understand their own health situation and require information to manage and make decisions about their health, lower their risk of disease, and enhance their feeling of control over their health.

Thus, delivery of bad news must keep up with the times and not only consider the emotional changes in patients and family members and provide support but also provide valid scientific information and explain the options available. Studies have shown that information can serve as an important treatment tool in a medical context [19–21]. Enhancing communication of information between physician and patient can effectively reduce conflict between them [20, 21]. It is clear that information is vitally important to the physician-patient relationship. This concept is fundamentally consistent with the shared decision-making model.

Tables 3 and 4 suggest that 7 of the 10 most important items among patient and family member preferences are the same. This provides a good recommendation to clinical medical staff

**Table 5** Multiple linear regression analysis of factors affecting cancer status communication in clinical practice of medical staff

| Predictor | Unstandardized coefficients | | 95.0% CI for B | | *p* |
|---|---|---|---|---|---|
| | B | SE | Lower bound | Upper bound | |
| Constant | 322.165 | 59.054 | 205.567 | 438.763 | .000 |
| Age | .490 | 1.546 | − 2.563 | 3.542 | .752 |
| Years of working | − 1.213 | 1.304 | − 3.787 | 1.361 | .354 |
| Sex | − 20.558 | 9.420 | − 39.157 | − 1.959 | .030 |
| Monthly truth-telling frequency | 1.057 | 3.355 | − 5.567 | 7.681 | .753 |
| Willingness to participate in truth-telling training | − 37.599 | 13.555 | − 64.362 | − 10.836 | .006 |
| Professional title | − 12.058 | 8.019 | − 27.892 | 3.776 | .135 |
| Occupation | 5.386 | 11.852 | − 18.015 | 28.786 | .650 |
| Education level | − 8.013 | 7.587 | − 22.993 | 6.966 | .292 |
| Marital status | 9.163 | 8.514 | − 7.647 | 25.973 | .283 |
| Family per capita monthly Income | 1.742 | 3.362 | − 4.895 | 8.380 | .605 |

$R^2 = 0.147$, adjusted $R^2 = 0.095$; $F = 2.847$, $p = .003$

*CI* confidence interval, *SE* standard error for medical status communication. Patients and family members care most about treatment methods, planning, and options. Therefore, it is important for medical staff to explain these in great detail during medical status communication. If medical staff takes the items that patients and family members prefer most and least into consideration in clinical practice and implement them, they will effectively increase communication outcomes and patient and family member satisfaction, increase patient compliance, and reduce treatment-related disputes.

This study found that gender ($p = 0.03$) and willingness to improve the skills for truth-telling ($p = 0.006$) had statistical significance for clinical staffers' practice in truth-telling (statistical method of multiple linear regression for analyzing the factors influencing clinical staffers' practice in truth-telling). Thus, it is recommended to increase interest and participation in medical status communication skill training among all medical staff. Emphasizing the fostering of medical status communication ability among medical staff will increase the service quality of medical treatment [13].

Tables 3 and 4 show that most patients wish for medical staff to answer their questions during the medical status communication process and do not like it when medical staff members exhibit an impatient attitude. They are concerned with the method of treatment, planning, options, and the danger, side effects of treatment, and wish for medical staff to explain these in detail. They wish for medical staff to communicate honestly, give detailed explanations, and provide realistic, comprehensive, and accurate information. They prefer clear-cut delivery of bad news by clinical staffers, but do not like the latter discussing their expected length of survival. Similarly, most family members are concerned with the patient's method of treatment, planning, and options, with one difference from patient preference being that most family members of patients wish for medical staff to care for the feelings of the patient during the medical status communication process, avoiding constant use of the word "cancer." Most medical staff tend to care for the emotions and feelings of patients during the medical status communication process, emphasizing the opinions of the family but reducing the explanation of treatment methods, planning, and options. This differs from the preference of patients and family members, and warrants increased attention in the clinic.

### Study limitations

The limitation of this study is that it only used convenience sampling to survey a total of 661 staff members from four oncology-related departments at a single hospital in Guangzhou, and the samples are not sufficiently representative. The number of participants is small, which makes further inference difficult. The scale used in this study is not native to China but has good reliability and validity, so its reference value is acceptable.

### Clinical significance

Additionally, a highlight of this study is that it is the first study in China that surveyed the medical status communication preferences of three groups at the same time and is therefore valuable. The results of this study demonstrate the differences between the clinical practice of medical staff and the preferences of patients and family members and inform the necessity of medical status communication training. This study suggests that Chinese people have two levels of awareness that need to be strengthened, namely, patient self-awareness and medical staff awareness of medical status communication skills training.

In practice, communicating cancer status is a difficult task and many medical staff members have not had sufficient training in communicating cancer status to patients, and also lack an understanding of the preferences of patients and family members. Communication skills training can help physicians perform clinical work; continued training is highly beneficial, and these skills must be continuously consolidated and strengthened [22]. Thus, it is recommended to design a cancer status communication skills training program on a foundation that fully considers the preferences of cancer patients and family members to improve the communication ability of clinicians. Currently, China still does not have a native cancer status communication skills training model. In other countries, the most widely used and most effective standardized medical status communication training skills training model are the American SPIKES model [23] and the Japanese SHARE model [24]. The SHARE model had yielded relatively ideal outcomes in Japan and Taiwan [17, 25]. As indicated in the Chinese Cancer Psychological Treatment Guidelines, the SHARE model is better suited to the busy medical environment and cultural background of family members participating in decision-making in China than the SPIKES model [26]. The Japanese SHARE model contains four aspects: supportive environment, how to deliver the bad news, additional information, and reassurance and emotional support. Thus, it is recommended that the next step is for China to introduce the SHARE model for giving clinicians training in cancer status communication skills and validating their outcomes.

## Conclusion

In this study, the clinical practice of medical staff had significant differences from the disease status communication preference of patients and family members. Therefore, it is suggested that courses for training in truth-telling be devised with the preferences of cancer patients and their family members taken into account in order that truth-telling skills among clinical staffers can be improved and that maximum satisfaction among cancer patients and their family members can be achieved. In addition, it is also revealed by this research that truth-telling to Chinese patients is swayed by their dependents' opinions; cultural difference in this regard should be considered as to truth-telling.

**Acknowledgments** The authors would like to thank all participating patients, family members, and medical staff, and are grateful to Professor Woung-Ru Tang of the Department of Nursing, Chang Gung University, Taiwan, for providing the medical status communication questionnaire (Simplified Chinese edition).

## Compliance with ethical standards

The study protocol was approved by the institutional review boards of the study hospitals (NFEC-201709-K15).

**Conflict of interest** The authors declare that they have no conflict of interest.

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