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Assessing patients´ preferences for breaking Bad News according to the SPIKES-Protocol: the MABBAN scale

Pia von Blanckenburg[a,*], Mareike Hofmann[a], Winfried Rief[a], Ulf Seifart[b], Carola Seifart[c]

[a] Department of Clinical Psychology and Psychotherapy, Philipps-University of Marburg, Marburg, Germany
[b] Hospital Sonnenblick, Marburg, Germany
[c] Institutional Review Board, Clinical Ethics, Philipps-University of Marburg, Marburg, Germany

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ABSTRACT

Objective: Quality of breaking bad news can seriously affect the course of disease. A frequently applied guideline is the SPIKES-Protocol that have been designed from the physician's perspective. Little is known about patients' preferences in breaking bad news. Our aim was to develop a questionnaire based on the SPIKES-protocol to detect patients´ preferences for breaking bad news communication.
Methods: TheMarburg Breaking Bad News Scale (MABBAN) was developed and administered to 336 cancer patients. We used exploratory factor analysis. To examine potential relationships according to demographic and medical variables, regression analyses were conducted.
Results: The novel questionnaire supported the six SPIKES-components of breaking bad news: Setting, Perception, Invitation, Knowledge, Emotions, and Strategy. Perception and Invitation clustered together to one subscale. Depending on clinical and demographic variables different components were rated as important.
Conclusion: Communication preferences in breaking bad news can be assessed using a SPIKES-based questionnaire. Physicians should improve the setting, share knowledge in all clarity, involve the patients in further planning, and consider demographical variables.
Practice implications: Using SPIKES as a framework can optimize breaking bad news conversations but it seems important to emphasize the individual preferences beyond the six steps and tailor the communication process to the individual.

1. Introduction

Breaking bad news (BBN; e.g. delivering a cancer diagnosis) is widely regarded as a demanding task for physicians [1–4]. A survey from Baile et al. [5] revealed that approximately 60 % of oncologists break bad news to patients 5–20 times per month. 14 % have to deliver bad news over 20 times per month. There is even an increasing tendency [6]. The quality of breaking bad news communication has a great impact on patients. It is able to influence patients' compliance and emotional adjustment [7], patients' comprehension [8] and satisfaction with medical treatment [9] as well as the following psychological states [10].

In order to meet the challenge of breaking bad news, a number of guidelines for physicians were developed [11,12]. One of the most frequently applied guideline is the SPIKES-Protocol [11]. It was developed for structuring the delivery of bad news and reached guideline status in the United States and in a number of other countries [13,14] including Germany [15]. The acronym SPIKES represents six steps of breaking bad news: (1) *Setting* up the interview, (2) assessing the patient's *Perception*, (3) obtaining the patient's *Invitation*, (4) giving *Knowledge* and information to the patient, (5) addressing the patient's *Emotions* with empathic response, (6) *Strategy* and *Summary*.

Including the SPIKES-protocol, most of the guidelines have been designed from the physician's perspective and research looking at the patients´ perspective is urgently needed [16]. Only few studies focus on patients' wishes for receiving bad news [17]. Experimental studies found that participants exposed to patient-centered communication perceived the communication as most satisfying [10] and less anxiety-provoking [18]. Parker and colleagues [19] conclude that patients rated the message content as most important, followed by supportive dimensions. In a large survey

* Corresponding author at: Department of Clinical Psychology and Psychotherapy, Philipps-University of Marburg, Gutenbergstr.18, 35032 Marburg, Germany.
E-mail addresses: blanckep@uni-marburg.de (P. von Blanckenburg), mareike.hofmann@uni-marburg.de (M. Hofmann), rief@uni-marburg.de (W. Rief), ulf.seifart@drv-hessen.de (U. Seifart), carola.seifart@uni-marburg.de (C. Seifart).

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of Mirza and colleagues, the SPIKES-protocol was mainly confirmed by the preferences of patients with different life-changing diagnoses [13]. Moreover, five themes emerged in that study, which were not addressed by the SPIKES guidelines (e.g. to ensure that a follow-up is planned).

Based on the SPIKES-Protocol several training programs have been developed [20]. These trainings aim to optimize the preparing and implementation of physician-patient communications about delivering. In many countries the SPIKES-guidelines has mainly been used for the education of physicians [13,15,21]. Despite the promising results of current studies [13], there is still a need for an empirical evaluation of the protocol, especially in Germany [22]. Moreover, there exist some assessment-tools of the SPIKES-Steps [13,23], but these are not empirically validated so far.

Taken together, there is a lack of research concerning the question whether the frequently used SPIKES-protocol fits to the preferences of patients for receiving bad news. Therefore, the aim of the present study was to assess patients' preferences regarding the way in which physicians deliver bad news. To achieve this objective, a self-reported questionnaire, based on the SPIKES-protocol was developed and validated. To allow a more specific approach to the needs of patients, it was examined, whether patients' preferences differ according to demographic or clinical variables.

2. Methods

The study was approved by the local ethic committees (AZ 144/10). Prior to participation, subjects gave written informed consent.

2.1. Participants and procedure

The questionnaire was filled out by cancer patients in an in- and outpatient setting of the University Hospital Marburg and the rehabilitation hospital "Sonnenblick", Marburg, Germany. The questionnaires were either filled out while waiting for chemotherapy (interdisciplinary outpatient chemotherapy setting), or in an inpatient rehabilitation setting. The participation took 60 min on average. In addition to written informed consent, inclusion criteria were confirmed diagnosis of a malignant tumor, sufficient German language skills, minimum age of 18 and the medical and functional ability to complete the survey.

2.2. Breaking bad news preferences

The items of the self-rated questionnaire (MABBAN = Marburg Breaking Bad News Scale) were a priori generated to represent the six SPIKES-subscales (Setting, Perception, Invitation, Knowledge, Emotion and Summary and Strategy) [11]. The items were generated by researchers and clinicians and piloted among 10 cancer patients. Mostly the items were rated on a Likert-Scale from 1 ("entirely") to 4 ("not at all"). The whole MABBAN-questionnaire is composed of two main parts. The first part asks for the procedure, perception and satisfaction of the first cancer disclosure according to the recommended steps of the SPIKES protocol (reality part of the MABBAN). The second part asks for the preferences for the recommended steps of the SPIKES protocol (preferences part of the MABBAN). The present study analyses the psychometric properties of the second part of the MABBAN-questionnaire while the differences between the preferences and the reality are presented elsewhere [22]. The first five items of this part were designed to find out patients' preferences for the doctor characteristics (e.g. profession, sex, level of familiarity). Four other items had a different item format (e.g. dichotomous variable). Because these nine items (characterized as "informative items") were not included in the present study, for the following statistical analysis remain 29 items.

2.3. Demographic and medical characteristics

Demographic data, including age, sex, education and marital status were asked by questionnaire. Medical data, such as the type of cancer, recurrence, current anticancer treatment, and the period after the first bad news, were obtained from the patients' medical records.

2.4. Psychological morbidity

The Hospital Anxiety and Depression Scale [24] was used to measure psychological morbidity. It has two subscales each comprising seven items, and it assesses depression and anxiety.

2.5. Data analysis

First, discriminative power (r_{itc}) was calculated for each variable. To explore the factorial structure of the questionnaire principal component analysis (PCA) with oblique rotation (Promax) was conducted because interrelations between different preference scales were expected. In the rotated factor solution items were assigned to one factor, if their main loadings were $\geq .40$ and no side loadings >.32. The number of factors to be extracted was based on both empirical (scree test, parallel analysis) and theoretical (the proposed structure of the SPIKES-protocol scales) considerations. Each model was evaluated to determine whether it (a) retained at least two salient items loadings on each factor; (b) produced adequate internal consistency ($\alpha \geq .65$); (c) maximized parsimonious coverage and simple structure (i.e. achieved maximum assignment of items to factors while minimizing the number of items that loaded on multiple factors); and (d) was interpretable. A repeated measure ANOVA was conducted to compare the subscales. To examine potential relationships in the factors according to demographic and medical variables, regression analyses were conducted. Furthermore the results were used to check the validity of the scale.

3. Results

3.1. Sample

The questionnaire was filled out by 344 cancer patients. Eight (2.32 %) of the returned questionnaires were filled in highly incompletely, so they couldn't be analyzed. Finally, 336 questionnaires were analyzed. Demographic and medical characteristics of the study population are listed in Table 1. Moreover, as patient reported outcomes, mean scores of depression and anxiety were measured. In detail, 31 % of the total sample reported a depression score of eight or higher. Half of them reported a depression score of eleven or higher, which indicate a severe depression (15.8 % of the total sample). 45.7 % of the patients reported an anxiety score of eight or higher. Thus, 16.4 % of the total sample reported an anxiety score of 11 or higher, which indicate severe anxiety symptoms.

3.2. Preliminary item analysis and selection

Discriminative powers < 0.3 are regarded as low, between 0.3 and 0.5 as medium and >0.5 as high. Accordingly, ten of the 29 items had medium, the others low discriminative power. Two items (no.124 and no.133) were excluded from the factor analysis because of their very low discriminative power ($r_{itc} = .11$ and $r_{itc} = .12$).

Table 1
Demographic and medical Characteristics of participants (n = 336).

Characteristic [a]	
Age, years (Mean, SD)	58.28 (11.9)
Sex	
Female	166 (49.6)
Male	169 (50.4)
Years of Education (*n (%)*)	
≥ 13	59 (17.8)
≥ 10	102 (30.7)
9-10	152 (45.8)
No graduation	19 (5.7)
Marital Status (*n (%)*)	
Married	247 (73.7)
Divorced	29 (8.7)
Widowed	30 (9.0)
Never married	29 (8.7)
Type of Disease (*n (%)*)	
Hemic Diseases	76 (23.7)
Breast-Ca	92 (28.7)
Colon-Rectum-Ca	36 (11.2)
Prostate-Ca	21 (6.5)
Bronchial-Ca	20 (6.2)
Uterus-Ca	4 (1.2)
Other	72 (22.4)
Cancer recurrence (*n (%)*)	
Yes	37 (11.7)
No	280 (88.3)
Date of Diagnoses (*n (%)*)	
< 6 month	119 (38.3)
6-12 month	56 (18.0)
1-5 years	88 (28.3)
>5 years	48 (15.4)
Curative Approach (*n (%)*)	
Yes	195 (61.1)
No	124 (38.9)
HADS Depression (Mean, SD)	5.85 (4.1)
HADS Anxiety (Mean, SD)	7.08 (4.1)

3.3. Exploratory factor analysis

The remaining 27 items were entered to a principal component analysis (PCA) with oblique rotation (oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = 0.75 (= "good" according to Hutcheson & Sofroniou [25]. MSA values are > 0.54 (acceptable according to Field [26]). Bartlett`s test of sphericity χ^2 (351) = 1702.611, $p \leq 0.001$ indicated that correlations between the items were sufficiently large for PCA. Items with factor loadings ≥ 0 .40 were retained. Two items were excluded because they loaded as a single item to a factor. Two items were excluded because of factor loadings below 0.40. Four items were excluded due multifactorial loadings. Another iteration was conducted. The Eigenvalue <1 criterion suggested to extract five or six factors (Eigenvalue of the 6th factor was 1.02). Six factors were theoretically explainable through the SPIKES-Concept (*Setting, Emotions, Strategy, Knowledge, Perception, Invitation*). Moreover, the parallel analysis would justify five components and the scree-plot of the eigenvalues supported a five-component solution. Therefore, factor analysis was conducted restricting the number of factors to five whereby the two items of the component *Perception* and the two items of the component *Invitation* clustered together to one component. In the final factor solution after oblique rotation the component 1 represents *Setting* (SPIKES 1), component 2 *Emotions (SPIKES 5)*, component 3 *Strategy* (SPIKES 6), component 4 *Perception/ Invitation* (SPIKES 2 and 3) and component 5 *Knowledge* (SPIKES 4). Table 2 shows the factor loadings and communalities. The five components explained 52.17 % of the variance. Internal consistency was good for *Knowledge* (Cronbachs α = 0.75) and acceptable for *Setting, Emotions* and *Strategy* (Cronbachs α ≥ 0.67). Only the consistency of *Perception/ Invitation* was low. Cronbachs α for the whole scale was α = .73 indicating acceptable reliability.

3.4. Psychometric properties

Mean and standard deviations of the remaining 19 items are shown in Table 3. Most of the correlations among SPIKES components were significant but of relatively low magnitude (see Table 4).

3.5. Patient reported outcomes: importance ratings of the SPIKES components

Analyzing the SPIKES components in regard of patient reported preferences, a repeated measure ANOVA over the different MABBAN-components revealed a significant main effect of the different components ($F(4,335) = 74.04$, $p < 001$ $\eta_p^2 = .181$). Bonferroni-adjusted pairwise comparisons indicated, that all five components differed significantly from each other. This indicated that the components were rated as different important by the patients. In detail, the patients valued SPIKES 1 *Setting* as the most important component (M = 1.08, SD = 0.19). SPIKES 4 *Knowledge* received the second rating (M = 1.17, SD = 0.40). SPIKES 6 *Strategy* was rated as third relevant (M = 1.30, SD = 0.46), followed by the component SPIKES 5 *Emotions* (M = 1.43, SD = 0.47). The component SPIKES 2/3 *Perception/ Invitation* was rated as least important (M = 1.53, SD = 0.57). The values of the agreement scores of the single items are shown in Table 3.

3.6. Relationship between demographic and clinical variables and SPIKES

To determine the unique contribution of the demographic and clinical variables to each of the SPIKES components a series of regression analyses were conducted. Table 5 shows the standardized regression coefficients (β) for each regression analysis. Age significantly and independently predicted scores on SPIKES 2/3 *Perception/ Invitation* ($p \leq .01$), SPIKES 4 Knowledge ($p \leq .05$) and SPIKES 5 *Emotions* ($p \leq .05$). The higher the age the more important were the prearrangement of the communication, the clarity of sharing the knowledge and the emotional support. The sex of the patient was significantly related to SPIKES 5 *Emotions* ($p \leq .05$) and SPIKES 2/3 *Perception/ Invitation* ($p \leq .01$). In other words getting empathy and prearrangement was more important for women. The education of the patients predicted significantly and independently scores on SPIKES 2/3 *Perception/ Invitation* ($p \leq .01$) and SPIKES 4 *Knowledge* ($p \leq .01$). Patients with lower education preferred clearer information and a prearrangement of the communication. Whether the patient's cancer had recurred or not was not related to components. Patients' values in the HADS-questionnaire were related to the component SPIKES 5 *Emotions* ($p \leq .01$). Thus, patients with higher anxiety scores wish more emotional support, whereas patients with higher depression scores wish less emotional support.

4. Discussion and conclusion

4.1. Discussion

The present study focused on covering patients' preferences regarding the disclosure of bad news. A newly developed questionnaire based on the SPIKES-protocol [11]- the MABBAN - was evaluated. To investigate whether the items of the questionnaire depict the SPIKES-components an exploratory factor analyses were conducted. Moreover, preference scores as patient reported outcomes were analyzed and showed, that the SPIKES-protocol

Table 2
Summary of final exploratory factor analysis results for the questionnaire (n = 336).

SPIKES component	Item (»The doctor should . . . «)	rotated factor loading [a]					h^2	r_{itc}
		1	2	3	4	5		
Setting	» . . . take enough time«	**.75**					.52	.27
	» . . . reassure if the patient could understand everything«	**.70**					.55	.36
	» . . . give the patient enough possibilities to ask questions«	**.61**					.45	.31
	» . . . explain the details of the disease comprehensible and in detail«	**.60**					.40	.32
	» . . . ensure an undisturbed atmosphere«	**.42**					.35	.24
Emotions	» . . . show compassion«		**.78**				.59	.31
	» . . . show interest in the patient's feelings«		**.75**				.57	.38
	» . . . try to be empathic«		**.62**				.54	.35
	» . . . give the patient the possibility to show his/her feelings during the conversation«		**.56**				.42	.34
Strategy	» . . . inform about alternative treatment methods«			**.74**			.56	.32
	» . . . inform about possible therapies«			**.68**			.50	.37
	» . . . involve the patient in further planning«			**.65**			.49	.40
	» . . . inform about effects of the tumor on life circumstances«			**.57**			.52	.34
Perception/	» . . . ask for the patient's previous knowledge and what he further wants to know«				**.76**		.58	.29
Invitation	» . . . announce the conversation«				**.70**		.51	.35
	» . . . ask about the patient's concerns«				**.56**		.55	.45
	» . . . inform that he has to deliver bad news at the beginning of the talk«				**.50**		.31	.26
Knowledge	» . . . characterize the expected course of disease in all clarity«					**.89**	.76	.25
	» . . . characterize the diagnosis in all clarity«					**.86**	.75	.32
Eigenvalues		3.84	1.95	1.49	1.36	1.26		
% of variance		20.22	10.26	7.86	7.16	6.66		
α [b]		.67	.68	.68	.58	.75		

Note. Items translated from German. extraction method: principal component analysis. Item-factor loadings ≥ 0.32 are shown and interpreted. [a] rotation method: Promax with Kaiser Normalization. h^2= communalities. r_{itc}= corrected item total correlation. [b] Cronbachs Alpha (Reliability).

Table 3
Means, Standard deviations and agreement of the preferences (n = 336).

SPIKES component	Item (»The doctor should . . . «)	Agree "entirely" (%)	*M (SD)*
1 Setting			
	» . . . reassure if the patient could understand everything«	94.6	1.05 (0.23)
	» . . . give the patient enough possibilities to ask questions«	93.8	1.06 (0.24)
	» . . . explain the details of the disease comprehensible and in detail«	93.1	1.07 (0.27)
	» . . . ensure an undisturbed atmosphere«	86.9	1.17 (0.49)
2 Perception/	» . . . ask for the patient's previous knowledge and what he further wants to know«	72.8	1.42 (0.80)
3 Invitation	» . . . announce the conversation«	68.5	1.53 (0.91)
	» . . . ask about the patient's concerns«	75.9	1.32 (0.64)
	» . . . inform that he has to deliver bad news at the beginning of the talk«	54.4	1.83 (1.08)
4 Knowledge	» . . . characterize the expected course of disease in all clarity«	82.7	1.22 (0.53)
	» . . . characterize the diagnosis in all clarity«	89.6	1.12 (0.36)
5 Emotions	» . . . show compassion«	46.1	1.85 (0.93)
	» . . . show interest in the patient's feelings«	76.5	1.28 (0.54)
	» . . . try to be empathic«	76.6	1.29 (0.59)
	» . . . give the patient the possibility to show his/her feelings during the conversation«	77.9	1.29 (0.60)
6 Summary/	» . . . inform about alternative treatment methods«	69.4	1.47 (0.81)
Strategy	» . . . inform about possible therapies«	82.4	1.25 (0.61)
	» . . . involve the patient in further planning«	84.0	1.19 (0.48)
	» . . . inform about effects of the tumor on life circumstances«	79.2	1.29 (0.62)

Table 4
SPIKES component correlations (n = 336).

	Setting	Perception/ Invitation	Knowledge	Emotions
SPIKES 1 Setting	–			
SPIKES 2/3 Perception/ Invitation	.239**	–		
SPIKES 4 Knowledge	.157**	.163**	–	
SPIKES 5 Emotions	.336**	.285**	.115**	–
SPIKES 6 Strategy	.263**	.282**	.242**	.221**

Note. * $p \leq 0.05$; ** $p \leq 0.01$.

mainly fits to the preferences of patients for receiving bad news. Furthermore, the results showed specific preferences depending on demographic and clinical patient variables (e.g. age, sex).

The questionnaire supported the structure of the components SPIKES 1 *Setting,* SPIKES 4 *Knowledge,* SPIKES 5 *Emotions,* and SPIKES 6 *Strategy & Summary*. Only SPIKES 2/3 *Perception* and *Invitation* were clustered together to one subscale. As theoretically expected, the correlations of the subscales were significant, but relatively low. Internal consistency was good for one subscale, three scales reached acceptable values and the consistency of the subscale *Perception/ Invitation* was low. These values may arise through a relative broad construct of the SPIKES-Steps. The moderate to high discriminative power of the items as well as the correlation between the scales suggest that the five subscales

Table 5
Standardized regression coefficients from regression analysis from demographical and clinical variables on the SPIKES components (n = 336).

Predictor variable	β coefficients				
	Setting	Perception/ Invitation	Knowledge	Emotions	Strategy
Age	.054	**−.175****	**−.129***	**−.146***	−.121
Sex	.066	**.155****	−.077	**.137***	−.087
Education	.017	**.162****	**.173****	.012	.096
Cancer recurrence	−.048	.023	−.068	−.029	−.092
HADS- Anxiety	−.058	−.133	−.051	**−.215****	−.145
HADS- Depression	.072	.094	.123	**.191***	.073

Note. β coefficients represent the correlation of the predictor variables with the component scores adjusting for the other variables in the model.
* $p \leq 0.05$; ** $p \leq 0.01$.

are related, but not redundant as well as consistent dimensions of patients' preferences for breaking bad news communication.

Due to the accordance between the SPIKES-protocol and the scales of the MABBAN, conclusions may be drawn that could be important for the use of the SPIKES protocol in hospitals. Most of the patients affirmed the items. This could be concluded that the SPIKES-protocol confirms the main preferences of German cancer patients. Moreover, the detected preferences in this study met the preferences for breaking bad news reported in the literature (for review [27]). Because there are often discrepancies in how patients prefer to receive bad news and hoy they get them in reality [22,28], the MABBAN can be helpful to ask for patients preferences within the different steps of the SPIKES protocol and include this knowledge into clinical practice and into the training programs [29,30].

Analyzing the patient reported outcomes, our sample showed the highest preference for the first step of breaking bad news conversation: *Setting*. To ensure an adequate precondition for understanding the given information some circumstances of the situation must be emphasized. First, there has to be enough time for the conversation. If not, physicians are not able to reinsure if the patient understood everything, to explain details or answer questions of the patient (or their relatives). Loge et al. [31] reported that forty-four percent of the patients stated that the disclosure lasted less than five minutes. Obviously, this is not enough in order to meet the patients' needs. The structural contest physicians work within in a modern hospital lead to increasing workload, organizational tasks and time pressure [32]. This lowers the time for physician-patient communications. Up to now research is lacking about how much time "good" breaking bad news-conversation needs.

Similar to the findings of Mirza and colleagues [13], sharing knowledge and clarity were of high importance, whereas the invitation component was of less importance. Especially, the item, "The doctor should inform that he has to deliver bad news at the beginning of the talk" was agreed only by half of the patients. In addition to further research, 69.4 % of the patients wish to be informed about alternative treatment methods, which is a high number and should be recognized by the treating doctors.

In regard of the component *Emotions*, the items "The doctor should try to be empathic" and "The doctor should show interest in the patients feelings" were highly agreed (77 % agreement), whereas the item "The doctor should show compassion" was agreed by less than half of the patients. This is line with other results: A study by Martins and colleagues found, that an empathic professional (keeps eye contact, shows empathy) was preferred over an emotionally burdened expert (touches the patient, feels very sad) [28]. Thus, patients seem to wish that professionals do not pity them and do not wish empathic physical touch [13].

Moreover, specific recommendations for specific patient groups can be made. Patients of advanced age prefer getting information in a very clear way, want to be prepared for the communication and wish higher emotional support. For women, emotional support and prearrangement was more relevant than for men. This finding is consistent with results, that women wish to speak about theiremotions in difficult discussions (e.g. breaking bad news, end of life issues) rather than men [33]. Patients with lower education preferred clear information and a prearrangement of the communication. Patients with higher anxiety scores had a higher preference for emotional support. Interestingly, patients with higher depression scores wish less emotional support. A possible explanation can be that depressive patients tend to avoid emotions [34] and therefor dont want to focus on potentially bad feelings with their doctors. Patients with an initial diagnosis and patients with recurrence did not differ in their preferences too receive bad news. Nevertheless, our findings indicate that patients' preferences seem to vary primarily according to demographic variables as age, education, sex and psychological symptoms, and less according to stage of the course of cancer disease. Thus, it seems to be important to use SPIKES as a framework during bad news education but to emphasize the individual preferences beyond the six steps and tailor the communication process to the individual [16].

Some limitations of the present study should be kept in mind. First, this study has a retrospective design and patient's preferences are only examined once. As reported in previous research the informational need of cancer patients changes during the course of their treatment [35]. It is possible that the retrospectively reported preferences of patients differ regarding to their different stages of their cancer course and the time lag since the disclosure of their diagnosis. Second, the patient population is somewhat heterogeneous. The study examined patients with (a) different time slots since when their got the diagnosis, (b) both recurrent and first diagnosis and (c) different types of cancer. Nevertheless, this could also be seen as a strength, because of the relatively large sample size and a greater external validity because of the range of demographic and clinical characteristics. Third, all items of the MABBAN were developed on the basis of presuppositions. Thus, other aspects can also be important in breaking bad news which are not part of the SPIKES protocol [13,22].

In further research, patients should be asked about their preferences on several occasions during their course of disease. Moreover, further research should analyze the MABBAN in different groups of patients with different diagnoses others than cancer.

4.2. Conclusion

The Marburg Breaking Bad News Scale (MABBAN) mostly affirmed the steps of the SPIKES-protocol and revealed five scales main categories of patients' preferences: *Setting, Perception/ Invitation, Knowledge, Emotions,* and *Strategy & Summary*. The MABBAN can be helpful to ask for patients preferences within the different steps of the SPIKES protocol. The results emphasize the importance of a differentiated disclosure of unfavorable news e.g. a cancer diagnosis.

4.3. Practice implication

The implication of these findings for clinical practice is that all SPIKES components were seen as highly relevant by the patients. Especially, clinicians should take enough time, reassure the comprehension, give the possibility to ask questions and ensure an undisturbed atmosphere. Moreover, clinicians should ask about patients concerns, explain the diagnosis in a clear way, give the patient the possibility to show his/ her feelings and involve the patients in further planning. Our findings indicate that patients' preferences seem to vary primarily according to demographic variables and less according to stage of the course of disease. Thus, it seems to be important to use SPIKES as a framework during bad news education but to emphasize the individual preferences beyond the six steps and tailor the communication process to the individual. This knowledge should also be included into clinical training programs

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Informed consent and patient details

"I confirm all patient/ personal identifiers have been removed or disguised so the patient/ person(s) described are not identifiable and cannot be identified though the details of the story."

CRediT authorship contribution statement

Pia von Blanckenburg: Writing - original draft. **Mareike Hofmann:** Writing - original draft. **Winfried Rief:** Conceptualization, Supervision. **Ulf Seifart:** Conceptualization. **Carola Seifart:** Investigation, Conceptualization, Methodology.

Declaration of Competing Interest

WR received honaria from Berlin Chemie, Astra Zeneca and heel for consulation and presentations on placebo effects and medication adherence. US received honoraria from Amgen and Lilly for presentations on lung cancer. All remaining authors have declared no conflict of interest.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.pec.2020.02.036.

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