Breaking Bad News: Flipped Calendar as a Patient Information Provision Education Media Using the Spikes Method a Universitas Gadjah Mada Academic Hospital

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Abstract

Background: The quality of Breaking Bad News (BBN) communication has a significant impact on patient treatment adherence, emotional condition, understanding, and satisfaction with medical care. Effective communication skills and appropriate communication techniques are essential for providing optimal care. The SPIKES protocol is a communication protocol used as a standard and strategy for delivering difficult patient communication, comprising several stages: setting up, perception, invitation, knowledge, emotions, strategy, and summary.

Objective: This study aimed to determine the effect of using the BBN flip chart calendar as educational media, combined with the SPIKES method, at Universitas Gadjah Mada Academic Hospital (UGM Academic Hospital). The specific research objectives were: (a) to understand the perceptions and expectations of doctors and nurses when providing education related to BBN, and (b) to determine the effect of using the BBN flip chart calendar educational media on patients.

Method: This study was an experimental investigation to assess the effectiveness of using the BBN flip chart calendar as educational media in conjunction with the SPIKES protocol. The type of research was a quantitative study to understand the implementation of the BBN flip chart educational media at UGM Academic Hospital.

Result: The intervention group and the control group do not show statistically significant differences. The primary reason for these outcomes could be that behavioral changes are difficult to modify with a single communication practice. Continuous evaluation and feedback are needed on the effectiveness of BBN to improve the quality of health workers.

Keywords: breaking bad news, communication, SPIKES method

1. INTRODUCTION

BBN delivery is very emotional and stressful for professional caregivers, especially those who care for patients directly (1). BBN is health-related information that can cause cognitive and behavioral disabilities, as well as emotional changes in the recipient of the news (2). The quality of BBN delivery can affect the course of the disease (3). BBN is information delivered by a doctor to a patient and/or the patient's family (4). Baile et al. in Von Blanckenburg et al. (3) stated in their study that 60% of oncologists deliver bad news around 5-20 times each month, and 14% must deliver bad news more than 20 times each month, a figure that is increasing. The quality of BBN communication has a significant impact on

patient treatment compliance, patient emotional condition, understanding, and satisfaction with medical care (5). Communication skills and appropriate communication techniques are essential to provide optimal care. Communication techniques will affect several aspects, including the patient's perception of the diagnosis, the decision-making process regarding the choice of treatment, and psychological adaptation during therapy. Accurate and effective techniques are needed that can identify patient needs and expectations and how to adapt according to the information to be provided at each stage (4). Darrason et al. (5) suggest that the use of standardized communication improves the quality of the patient's role. Oliveira et al. (6) study conducted in obstetrics and gynecology at the Clinicas hospital stated that the implementation of institutional training in delivering bad news changed the perception of doctors in setting the environment when communicating BBN.

Based on the description of the problem in the background, researchers can formulate the following research objectives: to determine the effect of using educational media for BBN flip-sheet calendars with the SPIKES method at the UGM Academic Hospital. The specific objectives include determining the effect of using educational media for BBN flip-sheet calendars on patients.

2. MATERIALS AND METHODS

This research was an experimental study to determine the effectiveness of using the BBN flip chart calendar educational media with the SPIKES protocol. The quantitative research was conducted to determine the effect of using the SPIKES method (with flip-sheet media) on the perceptions of doctors and nurses regarding the delivery of bad news to patients (BBN). The study was conducted at the UGM Academic Hospital from June to October 2024. The sample population of this study was general practitioners and nurses who worked in the Inpatient Department and Intensive Care Unit of UGM Academic Hospital. Inclusion criteria for doctors: General practitioners who work in the Inpatient and Intensive Care Unit at UGM Academic

Hospital, have ever delivered bad news to patients and/or their families, and are willing to be respondents.

Exclusion criteria: Currently studying further, Currently or will apply for a study permit or study assignment within the next 1 year, not willing to be respondents Nurse inclusion criteria: nurses who work in the Inpatient Department or ICU or High Care Unit (HCU) UGM Academic Hospital, have accompanied doctors when delivering bad news to patients and/or their families, willing to be respondents. Exclusion criteria: currently studying further, currently or will apply for a study permit or study assignment, or resign within the next 1 year, or not willing to be a respondent. Withdrawal criteria: respondents are excluded from the study if their demographic data do not match the inclusion and exclusion criteria, if the respondent states that they are not willing to have their interview results included as research data, but are only willing to have their quantitative data (questionnaires) included as data.

Quantitative research will be conducted with the case-control method, with the number of samples obtained being 53 cases and 53 controls. The sampling method is done by total sampling, where the results of all samples that meet the inclusion and exclusion criteria are analyzed.

The course of the study: (1) This research, using research instruments for doctors and nurses, while collecting secondary data from respondents who receive BBN education, contains demographic data. (2) Monitoring is an activity to conduct checks during data collection, data transfer, and data analysis to ensure that the data obtained is valid and credible. Improvements to the SOP and research protocol will be made if necessary during the study. (3) Coding, during the study, will be carried out for both demographic data and questionnaire data related to quantitative research. (4) Data entry, entering quantitative data in the Research Form into the SPSS statistical software. (5) Data Checking, in addition to doing monitoring during the data collection process, at the end of the data collection, data checking will be carried out to ensure the validity of the data, data accuracy, and completeness of the data that has been obtained.

(6) Data analysis, the research data that has been collected is analyzed first to determine whether the data is in accordance with the predetermined criteria through 3 steps, namely: preparation, tabulation, and application of data in accordance with the research approach. Quantitative analysis is carried out descriptively and tested with chi-square values, with a significant range of $p < 0.05$.

3.   RESULTS

This research began in early June 2024 and ended in October 2024, which was conducted at the Inpatient department, Emergency department, Anesthesia, and Intensive Therapy department of the UGM Academic Hospital in Yogyakarta. During the study, 108 quantitative respondents were obtained, 87 pre-intervention and 53 post-intervention respondents.

a.   Respondent Characteristics

Table 1 presents the demographic characteristics of the respondents, including age, gender, length of service, and educational level. One hundred and forty-two participants consisted of 17 males (12.14%) and 123 females (87.86%), with an average age of 30.27 ± 5.71 (23-48 years). The length of work was less than 5 years for as many as 75 (53.57%) respondents, 26 (13%) respondents worked in the range of 5 to 10 years, and 22 (16%) respondents had worked for more than 10 years.

Table 1. Analysis of respondent characteristics data from June – October 2024 (n=140)

	(n)	(%)	Control group n=87		Intervention group n=53	
			n	(%)	n	(%)
Age						
≤ 35 years old	117	83.57	72	61.54	45	38.46
> 35 years old	23	16.43	15	65.21	8	34.78
Gender						
Male	17	12.14	12	8.57	5	3.57
Female	123	87.86	75	53.57	48	34.29
Length of work						
5-10 years	75	53.57	46	32.86	29	20.71
5-10 years	26	18.57	13	9.29	13	9.29
≥ 10 years	22	15.71	16	11.43	6	4.29
Education level						
Diploma 3	51	36.69	34	66.67	17	33.33
Bachelor degree	88	63.31	53	60.23	35	39.77

b.   Self-Evaluation in Delivering Bad News

The following is the descriptive analysis data for self-evaluation of respondents in delivering bad news. The study obtained 140 respondents. Eighty-seven respondents (Control Group) without BBN education with the SPIKES method, and 53 participants (intervention Group) with BBN education with the SPIKES method through socialization on the Zoom platform.

Table 2. Participant knowledge regarding the provision of BBN

Statement	Control group n=53 (%)		Intervention group n=53 (%)	
	Mean	(SD)	Mean	(SD)
Knowledge				
I understand the purpose of delivering bad news	4,28	(0.06)	4.26	(0,61)
I understand the steps of communicating bad news	4.05	(0.078)	4.11	(0.58)
I understand the benefits of delivering bad news	4.30	(0.63)	4.32	(0.65)
I understand the importance of preparing an appropriate environment for delivering bad news	4.39	(0.68)	4.33	(0.65)
Setting the environment is important in preparing to deliver bad news	4.36	(0.067)	4.20	(0.09)
Assessing the patient's and/or family's perceptions of their medical condition is important	4.39	(0.07)	4.32	(0.07)
I understand that making assumptions about the patient's condition without asking how the patient and family feel is not good	4.28	(0.06)	4.34	(0.07)
It is important to ask the patient who has the right to receive information regarding their health condition and treatment plan	4.50	(0.06)	4.4	(0.07)
Understanding the current medical condition, prognosis, and treatment plan, as well as the side effects of the therapy to be undertaken, is important	4.50	(0.07)	4.38	(0.07)
Skills				
I use simple language that is easily understood by the family and/or patient when communicating	4.43	(0.07)	4.36	(0.07)
I deliver bad news by considering the family's preparation	4.25	(0.06)	4.25	(0.08)
When communicating, I ensure that the patient and family have understood what I am saying	4.49	(0.07)	4.39	(0.08)
I can use appropriate non-verbal language when delivering bad news	4.03	(0.58)	4	(0.08)
I can understand the patient/family's response to bad news	4.23	(0.06)	4.16	(0.06)
Attitude				
When I deliver bad news, I can show empathy to patients and families	4.26	(0.07)	4.17	(0.06)
I can show confidence when delivering bad news	3.9	(0.06)	4	(0,04)
I can show a calm attitude when delivering bad news	4.13	(0.06)	4.11	(0.04)

Description: normality test with the Kolmogorov-Smirnov test. Mean score (M) in the range between 1-5, where 5=Strongly Agree, 4=Agree, 3=Disagree, 2=Disagree, 1=Strongly Disagree

Based on quantitative data, a>0.05 value was obtained, so there was no significant difference between the groups that were given socialization and those that were not. A very weak negative correlation (-0.140) indicates that there is a slight inverse relationship between BBN education and the measured results. However, because this correlation is very weak, its impact may not be meaningful in a practical context.

4. DISCUSSION

Differences in age and gender may influence the results. For example, responses to BBN education between younger and older age groups, or between men and women. Work experience may influence how health workers receive and implement BBN education. Those with longer experience may be more accustomed to difficult

situations and have better communication skills. It was suggested by Ferine et al (7) that age and work experience may influence doctors' ability to deliver bad news. More experienced doctors tend to have better communication skills and are more confident in dealing with patients' emotional reactions.

Based on quantitative data, a p-value of>0.05 was obtained, indicating no significant difference between the groups that received socialization and those that did not. A very weak negative correlation (-0.140) indicates that there is a slight inverse relationship between BBN education and the measured results. However, because this correlation is very weak, its impact may not be meaningful in a practical context. This is different from the research of Galal et al (8), where the implementation of the SPIKES protocol in the pharmacy curriculum showed an overall increase in student performance in delivering bad news. There was a significant increase in the self-assessment of pharmacy students after receiving training on providing education using the SPIKES method. There was a significant average increase in the overall score. From the results of the study, the knowledge component showed a significant average. There was also a significant increase in student self-confidence in the post-training survey.

Based on research by Sousa et al (9), the lack of training in BBN causes difficulties in providing education. The existence of the SPIKES protocol is considered important and effective in communicating bad news and increasing the relationship of trust between doctors and patients. In a systematic review conducted by Mahendiran et al (10), it was found that the SPIKES protocol was associated with increased satisfaction, knowledge, and performance. This is in line with research by Ribeiro et al. (11), which states that simulation, feedback/debriefing, lectures, and protocols can improve physician performance in communicating bad news. A validated way to measure and classify study results in this area was also found. For patients, a structured education system has a greater influence than unstructured information.

5. CONCLUSIONS

The intervention group and the control group do not show statistically significant differences. The primary reason for these outcomes could be that behavioral changes are difficult to modify with a single communication practice.

6. RECOMMENDATION

To improve the quality of BBN communications, SPIKES communication should be used repeatedly. A BBN Flip Chart calendar could be helpful as a reminder and learning tool for healthcare professionals in the implementation of BBN communication.

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