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A Review of Student Feedback Literacy in Higher Education: Theoretical Foundations, Challenges, and the Role of Training and Technology in Improving Learning Quality

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Abstract

Background: Breaking bad news (BBN) is a complex oncology communication competency requiring clinicians to convey information, assess patient preferences, respond to emotions, involve families appropriately, and plan ongoing care. Because BBN is often taught informally, this study examined educational approaches and the challenges of culturally adapting them within Iran's medical education system.

Materials and Methods: In this scoping review, we followed the Joanna Briggs Institute framework and PRISMA-ScR guidance and searched PubMed/MEDLINE, Scopus, Web of Science, ERIC, SID, Magiran, and Google Scholar from inception through July 2025. Search terms covered BBN, oncology, communication training, SPIKES, SHARE, OncoTalk, simulation, standardized patients, role-play, and cultural adaptation. Evidence was charted and synthesized descriptively and thematically.

Results: BBN education combines structured communication frameworks with interactive methods. SPIKES provides a stepwise structure for difficult conversations; SHARE emphasizes patient preferences and emotional support; and OncoTalk represents skills-based training through practice and feedback. Approaches included standardized-patient simulation, peer role-play, workshops, video feedback, and debriefing. These approaches generally improved selected observable behaviors, including open questioning, empathy, and responses to emotional cues. However, evidence on long-term retention, clinical transfer, patient-reported outcomes, satisfaction, and burnout remained limited or heterogeneous. In Iran, key challenges included variation in disclosure preferences, family involvement, emotional and spiritual concerns, limited time and privacy, insufficient practice, inadequate faculty preparedness, and limited curricular integration.

Conclusion: BBN education should combine structured frameworks with experiential methods. In Iran, adaptation must address patient preferences, family involvement, language, cultural context, organizational conditions, and curricular capacity while protecting patients' rights to information and participation. Long-term intervention studies using validated performance assessments are needed to evaluate effectiveness, feasibility, skill retention, clinical transfer, and patient-centered outcomes.

Key Words*:* Breaking bad news, communication skills, Iran, Medical Education, Oncology.

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1- INTRODUCTION

Oncology is a sensitive and demanding field of clinical medicine in which physicians routinely encounter life-threatening diagnoses, prognostic uncertainty, treatment failure, disease recurrence, and end-of-life care. In this context, breaking bad news—including disclosing a cancer diagnosis, disease progression, treatment failure, or the transition from curative to palliative care—is among the most challenging communication tasks in cancer care. Breaking bad news extends beyond the simple transmission of medical information; it requires assessing patients' understanding and preferences, disclosing information clearly and gradually, responding empathically to emotional reactions, and involving patients in care planning and decision-making (1, 2).

The quality of communication in these situations can influence patients' understanding of their illness, trust in the healthcare team, participation in decision-making, satisfaction with care, and psychological adjustment, as well as the adjustment of their family members. Empathic and patient-centered communication has been associated with favorable outcomes in cancer care. Conversely, inadequate or non-empathic communication may lead to misunderstandings about the illness, psychological distress, reduced trust, and difficulties in treatment decision-making (3–5).

Despite the importance of this competency, training in breaking bad news (BBN) is often limited, unstructured, or acquired primarily through observation and individual clinical experience. In recent years, educational approaches such as interactive workshops, role-play, standardized-patient simulation, SPIKES-based training, video review, and structured feedback have been used to enhance communication competencies. The SPIKES protocol comprises six steps: setting up the interview, assessing the patient's perception, obtaining the patient's invitation, giving knowledge and information, addressing emotions with empathic responses, and discussing strategy and summary (1). Structured communication-skills training in oncology, particularly when combined with experiential practice and targeted feedback, may improve trainees' observable communication behaviors and confidence (6, 7).

However, implementing these approaches in Iran requires consideration of cultural, organizational, and educational factors. In some Iranian clinical settings, family members play important roles in caregiving and decision-making and may request gradual disclosure or nondisclosure of diagnostic information (8, 9). Iranian studies also indicate that patients differ in their preferences regarding whether they wish to receive cancer-related information, the amount and manner of disclosure, and the extent of their involvement in treatment-related decisions (8–10). Recent evidence from Iran suggests that although most patients preferred to be informed of their cancer diagnosis, many patients' preferences were not fulfilled; in some cases, families were involved in decisions not to disclose the diagnosis. Therefore, rather than assuming the preferences of either patients or their families, physicians should assess each patient's preferences directly and clarify the patient's desired level of information and family involvement (8–10). This context may require physicians to balance family concerns with respect for patients' preferences, their right to information, and their participation in treatment-related decisions.

Moreover, limitations within medical education and clinical settings in Iran—including insufficient emphasis on practical communication-skills training,

limited opportunities for supervised practice and feedback, and the need to strengthen educational approaches—may affect trainees' preparedness for difficult clinical conversations (11). Therefore, reviewing educational approaches to breaking bad news in oncology and analyzing the cultural, organizational, and educational challenges associated with their implementation in Iran may inform the development of practical, culturally responsive, and feasible communication-skills training programs for oncology residents and specialists.

1-1. Objective

This review aims to examine educational approaches for teaching breaking bad news in oncology and to analyze the challenges and requirements for implementing these approaches in a culturally responsive manner within the Iranian medical education system.

2- MATERIALS AND METHODS

This study was conducted as a scoping review. The methodology was guided by the Joanna Briggs Institute (JBI) guidance for scoping reviews, and the review was reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist (12, 13). A scoping review approach was selected because of the broad scope of the topic, the diversity of educational approaches used to teach breaking bad news in oncology, and the need to identify cultural, organizational, and educational challenges associated with implementing these approaches in Iran. PRISMA-ScR is a reporting guideline specifically developed for scoping reviews.

2-1. Information Sources and Search Strategy

A systematic search was conducted from database inception to 31 July 2025 in Persian and English. International databases, including PubMed/MEDLINE, Scopus, Web of Science, Embase, ERIC, and PsycINFO, were searched. Persian databases, including SID, Magiran, IranMedex, and IranDoc, were also searched.

The search strategy was developed using controlled vocabulary, including Medical Subject Headings (MeSH) and Emtree terms, as well as Persian and English free-text keywords. Terms related to "breaking bad news," "diagnosis disclosure," "clinical communication," "communication skills," "medical education," "simulation," "standardized patients," "role-play," "feedback," "oncology," "cancer," "Iran," "family," "culture," and "implementation barriers" were combined using the Boolean operators AND and OR.

To address the two complementary aims of the review, the searches were conducted in two streams. The first stream identified international evidence on educational approaches for teaching breaking bad news in oncology. The second stream identified Iranian evidence related to cancer diagnosis disclosure, patient preferences, family roles, and cultural, organizational, and educational barriers. Reference lists of included articles and relevant review articles were also hand-searched to identify additional eligible sources.

2-2. Eligibility Criteria

Studies were included if they addressed education or training in breaking bad news or difficult communication in oncology or cancer care and reported at least one of the following: educational methods, program content, educational outcomes, barriers, or facilitators to implementation. Studies addressing cancer diagnosis disclosure, patient preferences, family roles, cultural issues, or implementation challenges in Iran were also included.

Quantitative, qualitative, mixed-methods, interventional, curriculum-evaluation, educational program-development, and relevant review studies published in Persian or English were eligible for inclusion. Studies focusing exclusively on cancer treatment, pharmacotherapy, diagnosis, or clinical outcomes without an educational or communication component were excluded. Conference abstracts, letters, editorials without relevant empirical data, protocols without results, and single-case reports were also excluded.

2-3. Study Selection and Data Extraction

All retrieved records were imported into reference-management software, and duplicate records were removed. Study selection was conducted in two stages: title and abstract screening, followed by full-text assessment of potentially eligible studies.

Two reviewers independently screened the titles, abstracts, and full texts according to the predefined eligibility criteria. Disagreements regarding study inclusion or exclusion were initially resolved through discussion and re-evaluation of the full text. When consensus could not be reached, a third reviewer was consulted to make the final decision. Dual independent screening and a predefined procedure for resolving disagreements were used to improve transparency and reduce the risk of selection bias.

Data from the included studies were independently extracted by two reviewers using a structured data-extraction form. The extracted data included author, year of publication, country and setting, study design, participant group, communication context, educational model or method, evaluation approach, educational outcomes, and reported barriers or facilitators. Disagreements during data extraction were resolved through discussion and consensus, with consultation with a third reviewer when necessary.

2-4. Data Synthesis

The extracted data were analyzed and presented descriptively. First, the characteristics of the included sources—including publication year, country, study design, setting, target population, communication context, type of educational intervention, and evaluation methods—were summarized in tables. A descriptive numerical summary was then provided to show the distribution of studies according to publication year, country, study design, participant group, and educational approach.

A basic qualitative content analysis was conducted to synthesize the findings. Data related to educational approaches for breaking bad news, components of educational interventions, reported outcomes, barriers, and implementation facilitators were reviewed iteratively and coded. Similar codes were organized into categories and overarching themes based on conceptual similarity. Educational approaches were categorized as communication-framework-based training, interactive workshops, role-play, standardized-patient simulation, video review, structured feedback, and debriefing.

Barriers and facilitators related to implementing breaking-bad-news training programs in Iran were categorized into three domains: cultural and ethical factors, organizational and resource-related factors, and educational and curricular factors. These findings were interpreted narratively. The results were presented in tables and narrative form to facilitate comparison of study characteristics, educational approaches, reported outcomes, and requirements for the cultural adaptation and implementation of training programs.

Given the heterogeneity of the included sources with respect to study design, participants, intervention type, outcome measures, and reported findings, a meta-analysis was not considered appropriate. Consistent with the evidence-mapping purpose of a scoping review, critical appraisal of methodological quality was not used as a criterion for excluding sources (13,14).

2-5. Ethical Considerations

As this study was based exclusively on published literature and did not involve direct contact with human participants or the use of identifiable personal data, ethical approval was not required. Principles of research and publication ethics—including accurate citation, academic integrity, transparency in reporting the search and selection processes, and faithful representation of the findings—were observed.

3- RESULTS

This scoping review aimed to identify educational frameworks and approaches for breaking bad news (BBN) in oncology and to examine the challenges and requirements associated with their culturally adapted implementation within the Iranian medical education system. In accordance with Joanna Briggs Institute (JBI) recommendations for the extraction, analysis, and presentation of evidence from scoping reviews, the identified evidence was organized descriptively and analytically (14). Accordingly, the findings are presented across four interrelated domains: (1) communication frameworks and models for breaking bad news; (2) educational methods, strategies, and their effectiveness; (3) cultural, organizational, and curricular challenges in Iran; and (4) implementation requirements and educational implications derived from the evidence synthesis. Communication frameworks are compared in **Table 1**, educational methods are summarized in **Table 2**, and the challenges and requirements associated with their implementation in Iran are presented in **Table 3**.

3-1. Communication Frameworks and Models for Breaking Bad News in Oncology

Breaking bad news in oncology is not limited to communicating a cancer diagnosis. It may also involve discussions about prognosis, disease recurrence or progression, treatment failure, limited therapeutic options, changes in treatment goals, and the transition to palliative care (1, 2). Accordingly, this process involves more than the delivery of information; it also requires assessing the patient's understanding, exploring individual preferences, responding to emotional reactions, and planning ongoing care (2, 4).

The reviewed literature indicated that structured frameworks can help learners organize difficult conversations; however, they cannot replace clinical judgment, communication flexibility, or attention to cultural differences (1–3). Three frameworks or approaches were particularly relevant to BBN education in oncology: SPIKES, a stepwise protocol; SHARE, a model based on patient preferences and cultural context; and OncoTalk, a skills-based approach to oncology communication training. Their principal characteristics and differences are summarized in **Table- 1**.

3-1-1. The Six-Step SPIKES Protocol

The SPIKES protocol is one of the best-known structured frameworks for teaching clinicians how to deliver bad news to patients with cancer (1, 2). It consists of six steps:

1. Setting up: Preparing an appropriate environment, ensuring privacy, allocating sufficient time, and determining who should be present.

2. Perception: Assessing the patient's prior understanding and perception of the illness.

3. Invitation: Exploring the patient's willingness to receive information and the level of detail desired.

4. Knowledge: Providing information gradually and clearly, avoiding complex terminology, and using an appropriate warning shot.

5. Emotions and empathy: Recognizing and responding empathetically to the patient's emotional reactions.

6. Strategy and summary: Summarizing the discussion, agreeing on the next steps, and emphasizing continuity of care.

This structure helps learners address the principal components of a difficult conversation in an organized manner (1). However, SPIKES should not be implemented as a rigid checklist because patients differ in their readiness, preferences regarding information, emotional state, prognosis, and desired role of family members (2, 3). In Iran, the Invitation, Knowledge, and Strategy and Summary stages should therefore be accompanied by an explicit assessment of patients' preferences regarding disclosure and family participation (8–10).

3-1-2. The SHARE Model

The SHARE model was developed in Japan on the basis of cancer patients' preferences regarding how bad news should be communicated (15,16). It emphasizes four main components:

- Creating a supportive environment.
- Attending to how the bad news is delivered.
- Providing additional information according to the patient's needs.
- Offering ongoing reassurance and emotional support.

SHARE highlights the importance of adapting communication to patients' preferences and cultural context (15, 16). However, it should not be regarded as a ready-made model for Iran without local assessment. The role of family members, patients' preferences regarding the amount of information they wish to receive, and the desired involvement of relatives in decision-making should be examined independently in Iranian studies (8–10).

3-1-3. The Skills-Based OncoTalk Approach

OncoTalk is better understood as a skills-based educational program than as a stepwise communication protocol comparable to SPIKES. It focuses on practicing conversations about bad news, prognosis, goals of care, and transitions to palliative care, using practice, observation, and feedback to improve communication behaviors (6, 17).

In the evaluation of OncoTalk, a four-day workshop was associated with an increase in observable skills related to breaking bad news and discussing transitions to palliative care. For example, the use of the word "cancer" increased in the assessed scenarios, and independent raters were able to distinguish a substantial proportion of the pre- and post-workshop interactions (6). These findings support skills-based training; however, direct transferability to the Iranian medical education system would require adaptation of the scenarios, language, family roles, and organizational context.

Table-1: Comparison of Communication Frameworks and Approaches for Breaking Bad News.

Framework or approach	Main components and focus	Educational and clinical application	Main strengths	Considerations for cultural adaptation in Iran
SPIKES (1, 2)	Setting, perception, invitation, knowledge, emotions/empathy, and strategy/summary	Organizing discussions about diagnosis, prognosis, recurrence, treatment failure, and palliative care	Clear and teachable structure; helps cover the essential components of a difficult conversation	Patient preferences and the desired role of family members should be incorporated at different stages (8–10)
SHARE (15, 16)	Supportive environment, manner of disclosure, additional information, and reassurance/emotional support	Patient-centered communication and attention to information preferences	Highlights cultural context and the patient's experience	Direct use in Iran requires cultural adaptation and local evaluation
OncoTalk (6, 17)	Practice of communication microskills, emotional responses, prognostic discussions, and goals of care	Practical training for oncologists, fellows, and oncology faculty	Focuses on observable performance and feedback	Requires trained facilitators, locally relevant scenarios, and adequate resources

3-2. Educational Methods and Strategies for Teaching Breaking Bad News

The identified educational methods included didactic teaching, interactive workshops, case-based discussion, role-play, standardized-patient simulation, repeated practice, structured feedback, video review, and debriefing (5–7, 18–22). The overall pattern of evidence indicated that theoretical instruction, when delivered without opportunities for practice and feedback, is unlikely to be sufficient to produce sustained changes in communication behavior (3, 5, 18).

Systematic reviews and the Cochrane review indicated that some communication-skills training programs can improve the use of open questions and expressions of empathy. However, effects on other communication behaviors, patient satisfaction, skill retention, and burnout have not been consistent across studies (18, 23). Thus, the available evidence supports multimodal programs that combine brief theoretical instruction, practice, feedback, and performance assessment rather than demonstrating the definitive superiority of any single educational method.

3-2-1. Standardized-Patient Simulation

Standardized-patient simulation provides an opportunity to practice sensitive conversations in a controlled and relatively safe environment (7, 19). Learners can rehearse situations such as communicating a diagnosis, explaining prognosis, discussing recurrence, addressing treatment failure, or introducing a change in treatment goals without risking harm to an actual patient.

This approach also allows direct observation of performance, immediate feedback, and the use of structured assessment criteria (7, 19). However, the costs of training standardized patients, the need for trained assessors, time constraints, and differences between simulated interactions and real patient

experiences are important limitations (19). Accordingly, standardized patients should be described as a useful tool for practice and performance assessment rather than as an absolute "gold standard."

3-2-2. Peer Role-Play

Peer role-play is a relatively low-cost method in which learners rotate through the roles of clinician, patient, family member, and observer (20). It can promote understanding of the patient's experience, provide opportunities to practice responses to emotions, and strengthen perspective-taking.

The effectiveness of peer role-play depends on the quality of the scenarios, learner engagement, the educational climate, and facilitator skills (20). Without structured feedback, role-play may become superficial or overly artificial.

3-2-3. Video Feedback and Debriefing

Video feedback allows learners to observe and analyze behaviors such as interrupting the patient, eye contact, pauses, posture, tone of voice, and responses to emotional reactions (21, 22). Debriefing should focus on specific, observable, and modifiable behaviors and should be conducted in a confidential and non-punitive environment.

Evidence on video review and debriefing supports their value for reflective learning and performance improvement. However, the durability of their effects may depend on the design of the intervention, the number of sessions, and the assessment approach used (21, 22).

3-2-4. Evidence from Educational Trials

In a randomized trial conducted by Fallowfield and colleagues, an intensive three-day communication-skills training course for oncologists was associated with improvements in several communication behaviors, including the use of open and focused questions, expressions of empathy, and appropriate responses to patients' cues (24). At 12–15 months of follow-up, some of these communication skills were retained in clinical practice; however, the sustainability of improvements varied across behaviors, and the use of empathic responses declined at follow-up (32). These findings highlight the potential importance of reinforcement and periodic refresher training.

Similarly, a Cochrane review found that communication-skills training may improve selected supportive behaviors, particularly the use of open questions and expressions of empathy. However, the evidence was insufficient to establish consistent effects on burnout, patient satisfaction, or patients' physical and psychological health outcomes (25).

Table-2: Educational Methods for Teaching Breaking Bad News and Related Evidence.

Educational method	Delivery and mechanism	Reported outcomes	Strengths	Limitations
Standardized-patient simulation (7, 19)	Clinical scenarios performed by trained standardized patients, followed by feedback	Improvement in selected communication skills, self-efficacy, and observable performance	Controlled environment; opportunities for repetition and assessment	Cost; need for trained actors and assessors
Peer role-play (20)	Rotation through clinician, patient, family member, and	Development of perspective-taking and practice in responding	Low cost and feasible in different settings	Potentially artificial interactions and

Educational method	Delivery and mechanism	Reported outcomes	Strengths	Limitations
	observer roles	to emotions		superficial feedback
Video feedback and debriefing (21, 22)	Recording of the interaction and analysis of verbal and nonverbal behaviors with a facilitator	Increased self-awareness and improvement in selected communication behaviors	Objective and reflective feedback	Time-consuming and dependent on confidentiality
Skills-based workshop (5, 6, 18, 23)	Brief theoretical instruction, case discussion, practice, and feedback	Improvement in selected communication behaviors and empathy	Integrates knowledge and performance	Requires repetition and skilled facilitators
Interactive lecture or online module (5,18)	Presentation of models, expert examples, and scenario analysis	Increased knowledge and cognitive preparation	Suitable for large groups	Insufficient for behavioral change without practical training

3-3. Challenges and Requirements for the Cultural Adaptation of Breaking-Bad-News Education in Iran

Iranian studies and related literature identified challenges to implementing BBN education at three interconnected levels: cultural and ethical, organizational and environmental, and curricular and educational. These levels do not operate independently. For example, limited time and an inadequate physical environment may reduce clinicians' ability to explore patients' preferences and respond to emotional reactions (8–11, 23, 26–28).

3-3-1. Cultural, Social, and Ethical Challenges

In Iranian studies, family members are frequently described as important participants in information disclosure and treatment decision-making (8–10, 23). Some families may request that the diagnosis be concealed, disclosed gradually, or presented with limited detail in an effort to protect the patient emotionally. Conversely, many patients wish to be informed about their diagnosis and treatment, although the preferred amount and manner of information vary between individuals (8–10).

This situation creates a challenge for clinicians attempting to balance respect for patients' preferences, family involvement, and relatives' protective concerns. On the basis of these findings, BBN education in Iran should include not only the delivery of information but also the assessment of patients' preferences, negotiation of the boundaries of family involvement, and professional communication with relatives (8–10, 23).

3-3-2. Emotional and Spiritual Challenges

Cancer may be associated with fear, concerns about death, hopelessness, social stigma, and difficulty accepting an unfavorable prognosis (9, 26, 27). These factors may complicate the delivery of bad news and discussions about prognosis or palliative care (2, 3, 5).

Training should help learners balance honesty, empathy, realistic hope, and acknowledgment of uncertainty (2, 4, 5). Skills such as active listening, therapeutic

silence, validation of emotions, naming feelings, and responding to patients' and families' concerns may be useful in these situations (2, 4). However, claims that BBN training directly reduces burnout should be made cautiously because the Cochrane review did not find sufficient evidence to support such an effect (23).

3-3-3. Organizational and Environmental Barriers

Limited time, workload, and inadequate privacy may constrain the delivery of difficult conversations (10, 27, 28). These factors may reduce clinicians' opportunities to assess patients' perceptions, provide information gradually, respond to emotional reactions, and plan follow-up care.

Nevertheless, a distinction should be made between reporting a barrier and demonstrating a causal relationship with a specific outcome. For example, lack of privacy may be described as a barrier to confidentiality and communication quality; however, directly attributing family aggression or burnout to the absence of private rooms would require specific supporting evidence (28).

3-3-4. Curricular and Assessment Gaps

In many educational settings, BBN is not taught as an independent, longitudinal, and assessable competency. Learners may acquire this skill through observing faculty behavior, fragmented clinical experiences, and trial and error (11, 29, 30). This may contribute to the transmission of inconsistent communication patterns and the persistence of informal learning.

Written examinations alone cannot adequately assess a learner's ability to manage an emotionally complex conversation. Performance-based assessment, direct observation, feedback, and simulated scenarios can provide complementary information about communication competence (30, 31). However, specific proposals, such as adding BBN stations to objective structured clinical examinations (OSCEs) or integrating longitudinal training, should be presented in the Discussion as educational implications rather than as established outcomes of the available studies.

Table-3: Challenges and Requirements for Cultural Adaptation of BBN Education in Iran.

Level of challenge	Nature of the challenge	Reported evidence or examples, References	Potential consequence	Educational or implementation requirement
Cultural and ethical	Family involvement and variation in patients' preferences regarding disclosure	Requests for concealment or gradual disclosure in some families and patients' desire to know about their illness (8–10, 23)	Tension between patients' right to information and families' protective preferences	Training in assessing patients' preferences and managing family involvement
Emotional and spiritual	Fear of hopelessness, death, stigma, and difficulty discussing prognosis	Emotional burden of cancer and concerns about patient and family reactions (9, 24, 25)	Avoidance of discussion or use of unrealistic reassurance	Practice in empathy, emotional responses, and realistic hope

Level of challenge	Nature of the challenge	Reported evidence or examples, References	Potential consequence	Educational or implementation requirement
Organizational and environmental	Limited time, workload, and inadequate privacy	Difficulty providing an appropriate environment and sufficient time for discussion (10, 25, 26)	Rushed or incomplete communication and reduced confidentiality	Attention to time, setting, and team support in program design
Curricular and educational	Informal learning, insufficient practice, and limited feedback	Learning through observation and inadequate performance assessment (11, 27–29)	Inadequate preparation for difficult conversations	Longitudinal, practice-based education and performance assessment
Support for healthcare professionals	Repeated exposure to death and difficulty managing patients' and families' reactions	Emotional pressure associated with caring for patients with advanced illness (27, 28)	Possible reduction in empathic capacity or increased avoidance	Faculty development, peer support, and self-care education

BBN: Breaking Bad News.

3-4. Implementation Requirements and Educational Implications

The synthesis indicated that effective BBN education in Iran cannot be achieved by teaching a single communication protocol alone. A communication framework should be combined with appropriate educational methods and adapted to the cultural and organizational context. Three major requirements emerged from the available evidence.

First, communication frameworks should be culturally adapted and used flexibly. SPIKES can provide a basic structure for the conversation, but it should be accompanied by an assessment of patients' preferences and the desired involvement of family members (1, 8–10). SHARE may provide a useful example of attention to cultural context and emotional support; however, its use in Iran requires local adaptation and evaluation (15, 16).

Second, experiential education should be prioritized. Combining brief theoretical instruction with locally relevant scenarios, peer role-play, simulation, structured feedback, and debriefing may provide greater opportunities to develop observable communication behaviors than passive instruction alone (5–7, 18–22). Evidence from clinical trials and educational reviews also supports improvements in selected skills, particularly open questioning and empathy, although certainty regarding all outcomes and long-term skill retention remains limited (18, 23, 24).

Third, curricular integration should be accompanied by attention to the clinical environment. BBN education should be visible and assessable within formal medical education, while confidentiality, time for conversations, faculty preparedness, and the role of the healthcare team should be considered in program design (11, 28–31).

These requirements are presented as implications derived from the mapping and synthesis of evidence and should not be interpreted as evidence that a specific

Iranian program has been proven effective. Designing and evaluating a culturally adapted Iranian program will require intervention studies, validation of assessment tools, and further investigation of the preferences of patients, families, and healthcare professionals.

3-5. Summary of Findings

This scoping review showed that BBN education in oncology is shaped by the interaction of three major components: the communication framework, the educational method, and the clinical context. SPIKES provides a stepwise structure for organizing the conversation, SHARE emphasizes patient preferences and cultural context, and OncoTalk represents a skills-based approach to oncology communication training (1, 6, 15–17). These frameworks and approaches are compared in Table 1.

The available evidence generally supports interactive and practice-based methods—particularly simulation, role-play, video feedback, and debriefing—for improving selected observable communication behaviors (5–7, 18–22). However, evidence regarding skill retention, transfer to real clinical settings, patient satisfaction, and effects on burnout remains limited or heterogeneous (19, 23). The main findings related to these educational methods are summarized in Table 2.

In Iran, variation in patients' preferences, the role of family, emotional and spiritual considerations, organizational limitations, and weaknesses in formal education and assessment represent the principal considerations for the cultural adaptation of BBN education (8–11, 23, 26–33). These challenges and the corresponding educational requirements are summarized in Table 3. Overall, the findings support an approach that combines structured communication frameworks with experiential education, repeated practice, feedback, and adaptation to the Iranian cultural and healthcare context. Detailed recommendations for curriculum development and implementation should be discussed in the Discussion section.

4- DISCUSSION

4-1. Interpretation of the Main Findings

This scoping review aimed to identify educational approaches for teaching breaking bad news (BBN) in oncology and to examine the challenges and requirements associated with their culturally responsive implementation within the Iranian medical education system. The findings suggest that BBN education is shaped by the interaction of three principal components: communication frameworks, educational methods, and the cultural and organizational context in which communication occurs. As shown in Table 1, SPIKES and SHARE primarily provide structured approaches for organizing difficult conversations and responding to patients' preferences, whereas OncoTalk represents a skills-based educational program. Table 2 indicates that interactive methods—including standardized-patient simulation, role-play, video feedback, and debriefing—provide opportunities to translate theoretical knowledge into observable communication behaviors. The challenges and implementation requirements summarized in Table 3 further indicate that the feasibility of these approaches in Iran is influenced by family involvement, patients' disclosure preferences, organizational conditions, faculty preparedness, and the extent to which communication skills are integrated into the curriculum.

These findings support the view that BBN is a complex clinical competency rather than a simple information-delivery task. During difficult conversations, clinicians must assess patients' understanding, explore their preferences regarding disclosure, respond to emotional reactions,

manage family involvement, communicate prognostic uncertainty, and establish a plan for ongoing care (1–6). BBN education should therefore extend beyond the presentation of communication protocols and include active listening, empathy, emotional responsiveness, gradual information delivery, shared planning, and the management of uncertainty (2, 4,5, 24).

4-2. Communication Frameworks and Their Flexible Use

The frequent identification of SPIKES and SHARE in the literature highlights the continuing value of structured communication frameworks (Table 1). SPIKES provides a sequence involving setting, perception, invitation, knowledge, emotions or empathy, and strategy or summary (1, 2). This structure may be particularly useful for less experienced learners because it provides a cognitive roadmap and reduces the likelihood that essential elements—such as assessing patients' understanding or responding to their emotions—will be overlooked.

However, the findings indicate that SPIKES should be taught as a flexible framework rather than as a fixed checklist. Patients differ in their readiness to receive information, preferred level of detail, health literacy, emotional state, prognosis, and preferred role of family members (2, 3). Applying the same sequence and communication style to all patients may therefore be inconsistent with patient-centered care.

This issue is particularly relevant in Iran. Iranian studies suggest that many patients wish to know about their diagnosis and treatment, whereas some family members may prefer nondisclosure or gradual disclosure (8–10, 23). Furthermore, local evidence indicates that patients' preferences and expectations may differ substantially from those reflected in standardized Western protocols. Language nuances, local idioms, and communication in the patient's preferred language or dialect may carry considerable therapeutic significance (8–10, 33). These findings emphasize the need to adapt communication training to patients' cultural and linguistic expectations rather than directly importing Western guidelines without contextualization (34, 35).

The SHARE model emphasizes the setting, the manner of disclosure, additional information, and reassurance or emotional support (15, 16, 33). Its relevance to the Iranian context lies in demonstrating how communication frameworks can be developed on the basis of patients' preferences and cultural context (15, 33, 34). Nevertheless, SHARE should not be transferred directly to Iran without local adaptation and evaluation. Cultural similarities between non-Western countries should not be assumed to indicate identical preferences regarding disclosure, family participation, or decision-making (34, 36).

Taken together, the findings do not support a mechanical combination of SPIKES and SHARE. Rather, they suggest that the strengths of the two approaches may be used complementarily: SPIKES can provide an overall structure for the conversation, whereas SHARE can strengthen attention to supportive communication, patient preferences, and emotional needs. Developing an Iranian adaptation would require participatory research involving patients, family members, oncologists, nurses, and medical education specialists.

4-3. Skills-Based Education and Evidence of Effectiveness

The findings presented in Table 2 indicate that BBN education is more likely to improve performance when it incorporates practice, observation, feedback, and repetition (5–7, 18–23, 35, 37). Didactic instruction can introduce communication principles and the stages of SPIKES or

SHARE, but it cannot, by itself, adequately prepare learners to respond to crying, anger, silence, denial, prognostic uncertainty, or family requests for nondisclosure (3, 5, 18).

In a randomized trial, Fallowfield and colleagues reported that an intensive three-day communication-skills training course for oncologists improved the use of open and focused questions, expressions of empathy, and responses to patients' cues (24). Follow-up findings indicated that most of these improvements were maintained 12–15 months after training, although expressions of empathy declined over time (24). Similarly, a randomized evaluation of a 40-hour communication-skills program for residents demonstrated significant improvements in objective BBN competencies, including the use of open questions and empathic responses, while highlighting the importance of continued reinforcement (38). These findings suggest that intensive skills-based training can improve observable performance, but that longitudinal curricular integration and periodic reinforcement may be necessary to maintain competence.

The meta-analysis by Barth and Lannen reported a moderate effect of communication-skills training on the communication behaviors of oncology professionals (18). However, variation in intervention designs and outcome measures limits the interpretation and generalizability of this finding. The Cochrane review by Moore and colleagues likewise found that communication-skills training may improve selected behaviors, particularly the use of open questions and expressions of empathy, but reported insufficient or inconsistent evidence regarding patient satisfaction, patient health outcomes, long-term skill retention, and occupational burnout (25). It is therefore important to distinguish improvements in learners' observable communication behaviors from improvements in patient-level or occupational outcomes (25, 39, 40).

4-4. Simulation and Standardized Patients

Standardized-patient simulation was identified in Table 2 as an important method for teaching BBN. It enables learners to practice communicating a diagnosis, discussing prognosis, delivering news about recurrence, or explaining changes in treatment goals within a controlled environment (7, 19, 32). Its primary educational advantage is that learners can make mistakes, receive feedback, and modify their performance without exposing actual patients to avoidable communication errors.

Evidence from systematic reviews suggests that standardized-patient-based communication training can improve selected learner outcomes and communication skills; however, the evidence regarding direct patient outcomes and long-term transfer remains limited (19). Standardized patients should therefore not be described unconditionally as the "gold standard" for BBN education. Although they facilitate practice and performance assessment, simulated encounters cannot fully reproduce the complexity of real clinical interactions, including time pressure, unpredictable emotional reactions, family dynamics, and organizational constraints (19, 32). The costs of recruiting and training standardized patients, developing scenarios, preparing assessors, and providing suitable facilities may also limit large-scale implementation.

In Iran, standardized-patient scenarios should incorporate culturally relevant situations, such as family requests to conceal a diagnosis, patients requesting complete information, disagreement between patients and relatives, indirect communication, and discussions about

palliative care (8–10, 23, 27). In this way, simulation can assess not only information delivery but also family negotiation and patient-centered decision-making.

4-5. Role-Play, Video Feedback, and Debriefing

Peer role-play is a relatively low-cost and flexible method in which learners rotate through the roles of clinician, patient, family member, and observer (Table 2). It can help learners understand the patient's perspective and practice responding to emotional reactions (20). Role-play may also be particularly useful for rehearsing culturally challenging situations, such as family requests for nondisclosure (8–10, 23).

However, the educational value of role-play depends on the quality of the scenarios, learner engagement, the learning environment, and facilitator expertise (20). Without structured feedback, role-play may become superficial or overly artificial. The use of behavioral checklists, faculty observation, and debriefing can enhance its educational value.

Video feedback allows learners to observe behaviors that may not be apparent during the interaction itself, including interruptions, eye contact, pauses, posture, tone of voice, and responses to emotional cues (21, 22). Nevertheless, recording alone does not constitute effective training. Its educational value is enhanced when it is combined with self-assessment, facilitator feedback, and confidential, non-punitive debriefing (21, 22).

4-6. OncoTalk and Faculty Development

Unlike SPIKES and SHARE, OncoTalk is primarily an educational approach for developing communication skills (Table 1). It emphasizes practice, observation, and feedback in situations involving BBN, prognostic communication, goals-of-care discussions, and transitions to palliative care (6, 35, 41).

The original evaluation of OncoTalk reported improvements in observable behaviors related to BBN and discussions concerning transitions to palliative care (6). These findings demonstrate that communication skills can be translated into specific, observable behaviors and assessed in simulated encounters. However, they do not establish long-term effectiveness or demonstrate that the program can be transferred unchanged to other educational systems.

An important implication of OncoTalk is the need for dedicated faculty development and train-the-trainer initiatives (17, 35, 41). Clinical faculty members and senior mentors must be prepared to design credible scenarios, observe learner performance, provide specific feedback, facilitate reflection, and manage emotional responses during training (35, 40). Without structured faculty preparation, BBN education remains dependent on informal learning and inconsistent role modeling (11, 29).

This issue is particularly important in Iran, where the available evidence highlights inadequate formal educator training and limited baseline awareness of structured communication models among clinical preceptors (27, 29). Dedicated faculty-development workshops should therefore precede the large-scale implementation of structured BBN education in Iranian medical universities.

4-7. Cultural Adaptation in the Iranian Context

As shown in Table 3, cultural adaptation of BBN education in Iran should begin with a careful understanding of patients' disclosure preferences and the role of family members. Iranian studies indicate that some families request nondisclosure or gradual disclosure for protective reasons, whereas many patients prefer to be informed about their illness and treatment (8–10, 23).

These findings suggest that cultural adaptation should not be based on a fixed assumption about "Iranian culture." Although cultural context influences communication, individual patients may hold preferences that differ from prevailing social expectations. Learners should therefore be trained to ask about patients' preferences, listen to both patients and families, and adapt communication to each clinical situation (30, 33, 42).

A culturally adapted program should enable learners to:

- Assess how much information the patient wishes to receive (10, 30, 42).
- Ask the patient about the desired presence and role of family members (8, 23).
- Explore family requests for nondisclosure without accepting them automatically (9, 23, 34).
- Balance family support with the patient's right to information (24, 34, 43).
- Use clear language appropriate to the patient's health literacy and preferred language or dialect (10, 30).
- Respect spiritual and social beliefs without imposing personal beliefs (26, 34).
- Avoid unrealistic reassurance (2, 16).

Relational autonomy provides a relevant conceptual framework in this context, provided that family participation reflects the patient's preferences and does not replace the patient's voice (8–10, 23, 34, 43). Cultural adaptation should therefore modify scenarios, language, teaching methods, and assessment strategies to fit the Iranian context while preserving patient-centeredness, confidentiality, informed participation, and respect for autonomy.

4-8. Organizational and Environmental Barriers

Limited time, heavy workload, and inadequate privacy were identified as important barriers to effective communication in the clinical environment (Table 3) (10, 27, 28). Teaching clinicians to assess patients' perceptions, provide information gradually, and respond to emotions may have limited practical value if the clinical setting does not provide sufficient time or privacy.

For example, a clinician may understand the principles of SPIKES but be unable to implement them fully in an overcrowded clinic or a setting without private consultation space (27, 28). Educational interventions should therefore be designed with workplace realities in mind. Training may need to incorporate brief, realistic scenarios and team-based strategies that reflect actual time and resource constraints.

At the same time, a distinction should be made between identifying a barrier and demonstrating a causal relationship with a particular outcome. Lack of privacy may reasonably be described as a barrier to confidentiality and communication quality; however, directly attributing family aggression or burnout to the absence of private rooms would require specific supporting evidence (28).

4-9. Burnout and Support for Healthcare Professionals

Repeated exposure to death, poor prognoses, and intense reactions from patients and families places considerable emotional pressure on oncologists and residents (39, 44). Chronic distress and burnout may impair clinicians' empathy and their ability to provide compassionate patient care (38, 39).

However, the available evidence does not support the conclusion that BBN training alone reduces burnout. The Cochrane review found insufficient evidence for a beneficial effect of communication-skills training on clinician burnout (25). BBN

education should therefore be considered one component of a broader, systemic approach to supporting healthcare professionals. Such an approach should also incorporate self-care education, institutional peer support, and structured opportunities for emotional debriefing and professional connection (41–43).

4-10. Curriculum Integration and Assessment

The findings of this review support moving BBN education from fragmented and informal learning toward a structured, longitudinal, and assessable curriculum (Tables 2 and 3). Training may begin with the principles of patient-centered communication and progress toward more complex scenarios involving prognosis, recurrence, treatment failure, family conflict, and end-of-life care (5, 6, 18, 35, 38).

Assessment should reflect the performance-based nature of this competency. Written examinations can assess knowledge of communication frameworks, but they cannot adequately determine whether a learner can respond to crying, anger, silence, denial, uncertainty, or family pressure (32, 33). Standardized-patient assessments, direct observation, behavioral checklists, and workplace-based assessment can provide complementary information about communication competence (19, 30, 31).

However, the introduction of BBN stations into objective structured clinical examinations (OSCEs) should be preceded by validation of the assessment tools, assessor training, and a clear definition of the expected competencies. Successful performance in a single simulated scenario does not necessarily demonstrate the ability to manage all real-world conversations. Assessment should therefore combine structured criteria with global judgments of empathy, clarity, responsiveness, and patient-centeredness.

4-11. Strengths and Limitations of the Evidence

The diversity of the available evidence is a major strength. The literature includes communication frameworks, educational trials, simulation studies, systematic reviews, meta-analyses, and Iranian studies addressing patient preferences and communication barriers (1,6–10, 15–23, 32–37). This diversity enabled consideration of the clinical, educational, cultural, and organizational dimensions of BBN education.

However, considerable heterogeneity was observed across studies. Differences in learner populations, educational settings, intervention duration, scenario content, assessment instruments, and follow-up periods limit direct comparison (18, 25, 39, 40). In addition, many studies focused on outcomes such as learner confidence or simulated performance while providing limited evidence concerning transfer to routine clinical practice, patient experience, or organizational outcomes (19, 25, 39).

In Iran, a substantial proportion of the available literature addresses patient preferences, communication experiences, and clinical barriers rather than directly evaluating culturally adapted educational programs (8–10, 23, 27, 28, 33). Consequently, the current evidence is insufficient to conclude that a specific culturally adapted Iranian BBN curriculum has been proven effective. This gap highlights the need for intervention studies, validation of assessment instruments, and longer-term follow-up.

4-12. Implications for Future Research

Based on the findings of this review, future research in Iran should:

- Examine the disclosure preferences of patients, family members, physicians, nurses, and learners.

- Directly investigate disagreements between patients' preferences and family requests.
- Adapt and validate SPIKES- and SHARE-informed scenarios with the participation of Iranian patients and clinicians.
- Evaluate multimodal programs that combine simulation, role-play, feedback, and debriefing.
- Assess observed communication behaviors alongside learner confidence.
- Examine the transfer of skills from simulated encounters to real clinical practice.
- Evaluate skill retention through medium- and long-term follow-up.
- Measure patient-reported outcomes, including clarity of information, perceived support, participation, and satisfaction with communication.
- Investigate the role of faculty development and institutional readiness.
- Compare the feasibility and cost of standardized-patient simulation, peer role-play, and digital or virtual approaches.

5- CONCLUSION

This scoping review showed that education for breaking bad news (BBN) in oncology is a multidimensional process shaped by the interaction of communication frameworks, educational methods, and the cultural and organizational context of clinical practice. SPIKES provides a structured approach for organizing difficult conversations, SHARE emphasizes patient preferences and supportive communication, and OncoTalk highlights the value of skills-based practice, observation, and feedback in developing observable communication behaviors.

The available evidence generally supports interactive and experiential educational approaches, including standardized-patient simulation, peer role-play, structured feedback, video review, and debriefing, for improving selected communication behaviors. However, evidence regarding long-term skill retention, transfer to routine clinical practice, patient-reported outcomes, patient satisfaction, and reductions in burnout remains limited or heterogeneous.

In Iran, the cultural adaptation of BBN education should address individual patient preferences, family involvement, emotional and spiritual concerns, organizational constraints, faculty preparedness, and curricular gaps. Such adaptation should not be based on fixed assumptions about Iranian patients or allow family preferences to replace the patient's right to information and participation. Instead, it should involve adapting communication scenarios, language, teaching methods, and assessment strategies to the Iranian context while preserving patient-centeredness, confidentiality, informed participation, and respect for autonomy.

Overall, this review provides an evidence-informed basis for developing and evaluating culturally adapted BBN education in the Iranian medical education system. Further well-designed intervention studies are needed to determine the feasibility, effectiveness, cost-effectiveness, skill retention, transfer to clinical practice, and patient-centered outcomes of these educational programs.

6- AUTHORS' CONTRIBUTIONS

Study conception or design: ZR, and AH; Data analyzing and draft manuscript preparation: ZR, and AH; Critical revision of the paper: AH; Supervision of the research: ZR; Final approval of the version to be published: ZR, and AH.

7- CONFLICT OF INTEREST: None.

8- REFERENCES

1. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES-A six-step protocol for delivering bad news: application to the patient with cancer. Oncologist. 2000;5(4):302-11. doi: 10.1634/theoncologist.5-4-302. PMID: 10964998.

2. Fujimori M, Uchitomi Y. Preferences of cancer patients regarding communication of bad news: a systematic literature review. Jpn J Clin Oncol. 2009 Apr;39(4):201-16. doi: 10.1093/jjco/hyn159. Epub 2009 Feb 3. PMID: 19190099.

3. Fallowfield L, Jenkins V. Communicating sad, bad, and difficult news in medicine. Lancet. 2004 Jan 24;363(9405):312-9. doi: 10.1016/S0140-6736(03)15392-5. PMID: 14751707.

4. Lelorain S, Brédart A, Dolbeault S, Sultan S. A systematic review of the associations between empathy measures and patient outcomes in cancer care. Psychooncology. 2012 Dec;21(12):1255-64. doi: 10.1002/pon.2115. Epub 2012 Jan 11. PMID: 22238060.

5. Stiefel F, Barth J, Bensing J, Fallowfield L, Jost L, Razavi D, Kiss A; participants. Communication skills training in oncology: a position paper based on a consensus meeting among European experts in 2009. Ann Oncol. 2010 Feb;21(2):204-207. doi: 10.1093/annonc/mdp564. Epub 2009 Dec 21. PMID: 20026475.

6. Back AL, Arnold RM, Baile WF, Fryer-Edwards KA, Alexander SC, Barley GE, Gooley TA, Tulsky JA. Efficacy of communication skills training for giving bad news and discussing transitions to palliative care. Arch Intern Med. 2007 Mar 12;167(5):453-60. doi: 10.1001/archinte.167.5.453. PMID: 17353492.

7. Kiluk JV, Dessureault S, Quinn G. Teaching medical students how to break bad news with standardized patients. J Cancer Educ. 2012 Jun;27(2):277-80. doi: 10.1007/s13187-012-0312-9. PMID: 22314793; PMCID: PMC4504018.

8. Amini K, Meshkini S, Ramezanibadr F. Patients' preferences on breaking bad news: a cross-sectional study from Iran. Indian J Med Ethics. 2023 Oct-Dec;VIII(4):284-292. doi: 10.20529/IJME.2023.039. PMID: 38374681.

9. Valizadeh L, Zamanzadeh V, Rahmani A, Howard F, Nikanfar AR, Ferguson C. Cancer disclosure: experiences of Iranian cancer patients. Nurs Health Sci. 2012 Jun;14(2):250-6. doi: 10.1111/j.1442-2018.2012.00686.x. Epub 2012 Mar 28. PMID: 22462718.

10. Samimi Ardestani SM, Faridhosseini F, Shirkhani F, Karamad A, Farid L, Fayyazi Bordbar MR, Motlagh A. Do Cancer Patients Prefer to Know the Diagnosis? A Descriptive Study Among Iranian Patients. Iran J Psychiatry Behav Sci. 2015 Dec;9(4):e1792. doi: 10.17795/ijpbs-1792. Epub 2015 Dec 23. PMID: 26834800; PMCID: PMC4733304.

11. Yazdi NA, Tavafian SS, Emadzadeh A, Kazemnejad A, Ghofranipour F. Communication training and patient satisfaction: A randomized trial study from Mashhad, Iran. Patient Prefer Adherence. 2008 Feb 2;2:137-42. PMID: 19920954; PMCID: PMC2770400.

12. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018 Oct 2;169(7):467-473. doi: 10.7326/M18-0850. Epub 2018 Sep 4. PMID: 30178033.

13. Peters MDJ, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, McInerney P, Godfrey CM, Khalil H. Updated methodological guidance for the conduct of scoping reviews. JBI Evid Synth. 2020 Oct;18(10):2119-2126. doi: 10.11124/JBIES-20-00167. PMID: 33038124.

14. Pollock D, Peters MDJ, Khalil H, McInerney P, Alexander L, Tricco AC, Evans C, de Moraes ÉB, Godfrey CM, Pieper D, Saran A, Stern C, Munn Z. Recommendations for the extraction, analysis, and presentation of results in scoping reviews. JBI Evid Synth. 2023 Mar 1;21(3):520-532. doi: 10.11124/JBIES-22-00123. PMID: 36081365.

15. Fujimori M, Akechi T, Akizuki N, Okamura M, Oba A, Sakano Y, Uchitomi Y.

Good communication with patients receiving bad news about cancer in Japan. Psychooncology. 2005 Dec;14(12):1043-51. doi: 10.1002/pon.917. PMID: 15818592.

16. Fujimori M, Shirai Y, Asai M, Akizuki N, Katsumata N, Kubota K, Uchitomi Y. Development and preliminary evaluation of communication skills training program for oncologists based on patient preferences for communicating bad news. Palliat Support Care. 2014 Oct;12(5):379-86. doi: 10.1017/S147895151300031X. Epub 2013 Nov 4. PMID: 24182602.

17. Tulsky JA, Arnold RM, Alexander SC, Olsen MK, Jeffreys AS, Rodriguez KL, Skinner CS, Farrell D, Abernethy AP, Pollak KI. Enhancing communication between oncologists and patients with a computer-based training program: a randomized trial. Ann Intern Med. 2011 Nov 1;155(9):593-601. doi: 10.7326/0003-4819-155-9-201111010-00007. PMID: 22041948; PMCID: PMC3368370.

18. Barth J, Lannen P. Efficacy of communication skills training courses in oncology: a systematic review and meta-analysis. Ann Oncol. 2011 May;22(5):1030-1040. doi: 10.1093/annonc/mdq441. Epub 2010 Oct 25. PMID: 20974653.

19. Kaplonyi J, Bowles KA, Nestel D, Kiegaldie D, Maloney S, Haines T, Williams C. Understanding the impact of simulated patients on health care learners' communication skills: a systematic review. Med Educ. 2017 Dec;51(12):1209-1219. doi: 10.1111/medu.13387. Epub 2017 Aug 18. PMID: 28833360.

20. Bosse HM, Schultz JH, Nickel M, Lutz T, Möltner A, Jünger J, Huwendiek S, Nikendei C. The effect of using standardized patients or peer role play on ratings of undergraduate communication training: a randomized controlled trial. Patient Educ Couns. 2012 Jun;87(3):300-6. doi: 10.1016/j.pec.2011.10.007. Epub 2011 Dec 1. PMID: 22137189.

21. Zhang H, Liao AWX, Goh SHL, Yoong SQ, Lim AXM, Wang W. Effectiveness and quality of peer video feedback in health professions education: A systematic review. Nurse Educ Today. 2022 Feb;109:105203. doi: 10.1016/j.nedt.2021.105203. Epub 2021 Nov 4. PMID: 35033394.

22. Schertzer K, Waseem M. Use of Video During Debriefing In Medical Simulation. [Updated 2023 May 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554619/

23. Zahedi F. The challenge of truth telling across cultures: a case study. J Med Ethics Hist Med. 2011 Dec 27;4:11. PMID: 23908753; PMCID: PMC3713926.

24. Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A, Eves R. Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. Lancet. 2002 Feb 23;359(9307):650-6. doi: 10.1016/S0140-6736(02)07810-8. PMID: 11879860.

25. Moore PM, Rivera Mercado S, Grez Artigues M, Lawrie TA. Communication skills training for healthcare professionals working with people who have cancer. Cochrane Database Syst Rev. 2013 Mar 28;2013(3):CD003751. doi: 10.1002/14651858.CD003751.pub3. Update in: Cochrane Database Syst Rev. 2018 Jul 24;7:CD003751. doi: 10.1002/14651858.CD003751.pub4. PMID: 23543521; PMCID: PMC6457800.

26. Taleghani F, Parsa-yekta Z, Nikbakht Nasrabadi A. Coping with Breast Cancer in Newly Diagnosed Women:A Qualitative Study. IJPCP 2006; 12 (3) :282-288.

27. Biazar G, Delpasand K, Farzi F, Sedighinejad A, Mirmansouri A, Atrkarroushan Z. Breaking Bad News: A Valid Concern among Clinicians. Iran J Psychiatry. 2019 Jul;14(3):198-202. PMID: 31598122; PMCID: PMC6778609.

28. Gholami M, Valiee S, Kamyari N, Vatandost S. Comparing the Performance of Emergency Department Personnel and Patients' Preferences in Breaking Bad News. Bull Emerg Trauma. 2023;11(3):146-153. doi: 10.30476/BEAT.2023.98439.1428. PMID: 37525650; PMCID: PMC10387337.

29. Tavakol M, Murphy R, Torabi S. A needs assessment for a communication skills

curriculum in Iran. Teach Learn Med. 2005 Winter;17(1):36-41. doi: 10.1207/s15328015tlm1701_7. PMID: 15691812.

Nov;29(9):855-71. doi: 10.1080/01421590701775453. PMID: 18158655.

31. Laidlaw A, Hart J. Communication skills: an essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. Med Teach. 2011;33(1):6-8. doi: 10.3109/0142159X.2011.531170. PMID: 21182378.

32. Skills for Communicating with Patients Silverman Jonathan , Kurtz Suzanne and Draper Juliet Skills for Communicating with Patients 312pp £34.99 Radcliffe Publishing 9781846193651 1846193656 [Formula: see text]. Emerg Nurse. 2014 Dec;22(8):11. doi: 10.7748/en.22.8.11.s14. PMID: 25466746.

33. Bumb M, Keefe J, Miller L, Overcash J. Breaking Bad News: An Evidence-Based Review of Communication Models for Oncology Nurses. Clin J Oncol Nurs. 2017 Oct 1;21(5):573-580. doi: 10.1188/17.CJON.573-580. PMID: 28945712.

34. Surbone A. Cultural aspects of communication in cancer care. Support Care Cancer. 2008 Mar;16(3):235-40. doi: 10.1007/s00520-007-0366-0. Epub 2008 Jan 15. PMID: 18196291.

35. Back AL, Arnold RM, Baile WF, Tulsky JA, Barley GE, Pea RD, Fryer-Edwards KA. Faculty development to change the paradigm of communication skills teaching in oncology. J Clin Oncol. 2009 Mar 1;27(7):1137-41. doi: 10.1200/JCO.2008.20.2408. Epub 2009 Jan 26. PMID: 19171703; PMCID: PMC4804341.

36. Surbone A. Telling the truth to patients with cancer: what is the truth? Lancet Oncol. 2006 Nov;7(11):944-50. doi: 10.1016/S1470-2045(06)70941-X. PMID: 17081920.

37. Levinson W, Lesser CS, Epstein RM. Developing physician communication skills for patient-centered care. Health Aff

30. Norcini J, Burch V. Workplace-based assessment as an educational tool: AMEE Guide No. 31. Med Teach. 2007

(Millwood). 2010 Jul;29(7):1310-8. doi: 10.1377/hlthaff.2009.0450. PMID: 20606179.

38. Liénard A, Merckaert I, Libert Y, Bragard I, Delvaux N, Etienne AM, Marchal S, Meunier J, Reynaert C, Slachmuylder JL, Razavi D. Is it possible to improve residents breaking bad news skills? A randomised study assessing the efficacy of a communication skills training program. Br J Cancer. 2010 Jul 13;103(2):171-7. doi: 10.1038/sj.bjc.6605749. PMID: 20628395; PMCID: PMC2906741.

39. Kearney MK, Weininger RB, Vachon ML, Harrison RL, Mount BM. Self-care of physicians caring for patients at the end of life: "Being connected... a key to my survival". JAMA. 2009 Mar 18;301(11):1155-64, E1. doi: 10.1001/jama.2009.352. PMID: 19293416.

40. Shanafelt TD, Bradley KA, Wipf JE, Back AL. Burnout and self-reported patient care in an internal medicine residency program. Ann Intern Med. 2002 Mar 5;136(5):358-67. doi: 10.7326/0003-4819-136-5-200203050-00008. PMID: 11874308.

41. Fallowfield L, Saul J, Gilligan B. Teaching senior nurses how to teach communication skills in oncology. Cancer Nurs. 2001 Jun;24(3):185-91. PMID: 11409062.

42. Parker PA, Baile WF, de Moor C, Lenzi R, Kudelka AP, Cohen L. Breaking bad news about cancer: patients' preferences for communication. J Clin Oncol. 2001 Apr 1;19(7):2049-56. doi: 10.1200/JCO.2001.19.7.2049. PMID: 11283138.

43. Back AL, Arnold RM. Discussing prognosis: "how much do you want to know?" talking to patients who are prepared for explicit information. J Clin Oncol. 2006 Sep 1;24(25):4209-13. doi: 10.1200/JCO.2006.06.007. PMID: 16943539.