Original Article

Effects of Patient-Centered Communication on Anxiety, Negative Affect, and Trust in the Physician in Delivering a Cancer Diagnosis: A Randomized, Experimental Study

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BACKGROUND: When bad news about a cancer diagnosis is being delivered, patient-centered communication (PCC) has been considered important for patients' adjustment and well-being. However, few studies have explored how interpersonal skills might help cancer patients cope with anxiety and distress during bad-news encounters. **METHODS:** A prospective, experimental design was used to investigate the impact of the physician communication style during a bad-news encounter. Ninety-eight cancer patients and 92 unaffected subjects of both sexes were randomly assigned to view a video of a clinician delivering a first cancer diagnosis with either an enhanced patient-centered communication (E-PCC) style or a low patient-centered communication (L-PCC) style. Participants rated state anxiety and negative affect before and immediately after the video exposure, whereas trust in the physician was rated after the video exposure only. Main and interaction effects were analyzed with generalized linear models. **RESULTS:** Viewing the disclosure of a cancer diagnosis resulted in a substantial increase in state anxiety and negative affect among all participants. This emotional response was moderated by the physician's communication style: Participants viewing an oncologist displaying an E-PCC style were significantly less anxious than those watching an oncologist displaying an L-PCC style. They also reported significantly higher trust in the physician. **CONCLUSIONS:** Under a threatening, anxiety-provoking disclosure of bad news, a short sequence of empathic PCC influences subjects' psychological state, insofar that they report feeling less anxious and more trustful of the oncologist. Video exposure appears to be a valuable method for investigating the impact of a physician's communication style during critical encounters. ***Cancer*** **2017;123:3167-75**. © *2017 American Cancer Society.*

KEYWORDS: anxiety, cancer diagnosis, empathy, patient-centered communication, randomized controlled trial (RCT).

INTRODUCTION

Cancer patients experience significant anxiety and other distressing emotions, especially when they receive bad news about the diagnosis, recurrence, or progressive disease.[1,2] It has been suggested that addressing patient anxiety and distress during bad-news consultations may lead to enhanced well-being, adjustment, and trust in the physician.[3-7] However, in giving bad news, many oncologists struggle to appropriately respond to negative emotions.[8-11] Many communication skills training programs thus focus on improving this skill by teaching the use of empathy and supportive statements.[11-18] Despite this effort, there are few studies that have explored the actual impact of empathic communication in helping individuals cope with anxiety and distress during crucial medical encounters.[19-23] Fogarty et al[24] (1999) were able to demonstrate that women who viewed a video showing an empathic approach to discussing chemotherapy regimens for advanced breast cancer were significantly less anxious after watching the video than women in a standard-compassion group.

The principal aim of this study was to further investigate the immediate emotional response to hearing bad news. We also sought to determine the impact of several components of patient-centered communication (PCC), namely, empathic, supportive communication by a physician, on this emotional response and on patients' perception of trust in

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Additional supporting information may be found in the online version of this article.

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TABLE 1. Physicians' Communication in the 2 Sequences of the L-PCC and E-PCC Versions

Patient (Crying): "But That Can't Be True!"	
L-PCC Version	E-PCC Version
Oncologist: "But it is! The biopsy absolutely proves it beyond any shadow of a doubt. The tissue testing is positive and shows malignant tumor cells. The disease in the lymph nodes shows that it has spread rapidly to the lymphatic system after beginning in the throat. The fact that you've had such few symptoms is typical for this kind of disease."	Oncologist (waits) Patient (crying): "But that can't be true! I can't have cancer just like that. Where could it come from?" Oncologist: "I can see that you are really surprised. That's completely understandable. (waits) I'm sorry that I don't have better news today. (3-s pause) Would it be okay if I went on to discuss how we will proceed, how things will go in the future?" Patient: "Yes."
Patient: "Oh . . . My Head Is Spinning!"	
L-PCC Version	E-PCC Version
Oncologist: "Yes, it's a common reaction to hearing a diagnosis like yours. What is most important right now is to proceed quickly with the workup procedure. Everything will be just fine! Try to be optimistic!"	Oncologist: "I understand that. I'll take some time to explain to you how we'll proceed step by step in your case so you understand, and if you have further questions or if something remains unclear, you can ask me at any time. Are there any concerns that you want to discuss with me right now?"

Abbreviations: E-PCC, enhanced patient-centered communication; L-PCC, low patient-centered communication.

the physician. We hypothesized that 1) participants' anxiety and negative affect would increase after viewing a video showing the disclosure of a cancer diagnosis; 2) anxiety and negative affect would be lower when the physician displayed an empathic, enhanced patient-centered communication (E-PCC) style versus a nonempathic, low patient-centered communication (L-PCC) style; and 3) participants' trust in the physician would be higher with the physician displaying an E-PCC style versus an L-PCC style. We further aimed to determine whether participants' emotional response varied according to previous experience with the disclosure of a cancer diagnosis (vs no such experience) and according to sex and age.

MATERIALS AND METHODS

Design

To overcome some of the ethical and methodological limitations inherent in investigating a critical, real-life patient-physician encounter, we adapted an experimental design similar to that first described by Fogarty et al[24] and used standardized videos displaying a bad-news encounter. A randomized, experimental study with a pre-post control group design was conducted with 2 standardized video versions. The study was based on a 2 (time: time 1 [T1] vs time 2 [T2]) × 2 (video: 1 [L-PCC] vs 2 [E-PCC]) × 2 (sample: cancer patients vs subjects without cancer) factorial design.

Experimental Variation of the Physician Interaction Style

We produced videos with 2 different versions of a bad-news consultation. They showed an encounter between an experienced senior oncologist and a standardized patient receiving a diagnosis of high-grade large B-cell lymphoma. The response of the oncologist to the emotional cues or concerns of the patient differed in 2 short sequences in each video version. The L-PCC version (6:00 minutes) consisted of 2 sequences (46 seconds in all) in which the physician displayed inhibiting behavior toward a patient's expression of concern or emotion (Verona coding definitions of emotional sequences [VR-CoDES]).[25] In contrast, the E-PCC version (6:31 minutes) was composed of 2 sequences (83 seconds in all) of facilitating behavior (VR-CoDES)[25] expressing empathic and supportive PCC (Table 1 and online supporting information).

Two independent raters coded them with the well-validated Roter Interaction Analysis System[26] (interrater agreement $K = 0.70$) and VR-CoDES,[25] which specifically captures affective interactions, to ensure that the 2 videos (L-PCC and E-PCC) differed in their patient-centered clinician responses.

Study Samples

To determine whether participants' emotional responses varied according to previous experience with the delivery of a cancer diagnosis (vs no such experience), we recruited

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both cancer patients and noncancer subjects. All participants were men and women aged ≥20 years with sufficient command of German. Cancer patients with any stage of disease and with any cancer site (except for nonmelanoma skin cancer) with a minimal interval of 6 months since their diagnosis were recruited from February 2012 through February 2013 at Heidelberg University Hospital's outpatient hematology and oncology clinics, from local cancer support groups, and at a rehabilitation clinic for young adults. For noncancer subjects, the study was advertised through flyers and newspapers. Participants were randomized to the L-PCC or E-PCC intervention group.

A web-based randomization program was performed through block randomization with stratification as follows: 1) cancer patients versus subjects without cancer; 2) males versus females; and 3) age of 20 to 34 years, age of 35 to 60 years, or age ≥ 61 years (see online supporting information).

Procedure

The study was approved by Heidelberg University's institutional review board (S-223/2010). Potential participants were informed both verbally and with printed material of the purpose of the study: "to learn about the perspectives of patients and unaffected subjects regarding a challenging physician-patient interaction such as disclosure of a cancer diagnosis." To ensure that study participation did not cause psychological harm, a brief telephone interview was conducted before the study to exclude those who reported significant psychological distress.

After written informed consent and completion of the baseline questionnaires (T1), participants were asked to take the perspective of the patient in the video as if they might be the patient. They then individually (one by one) watched the particular video version to which they were randomized. Participants were blinded regarding the study conditions: they did not know that there were different versions of the video. Afterward, they completed the postquestionnaire (T2).

Primary Outcome

The primary outcome was the change in state anxiety from T1 to T2, which was measured with the State-Trait Anxiety Inventory -State scale,[27] a well-validated measure that captures transient and immediate anxiety. Each of the 20 items was answered on a 4-point Likert scale (ranging from 1 ["not at all"] to 4 ["very much"]). Total scores ranged from 20 to 80, with lower numbers reflecting lower anxiety. Cronbach's α before and after video exposure was .91 and .93, respectively.

Secondary Outcomes

The secondary outcomes were the change in negative affect from T1 to T2 and the trust in the physician at T2. Negative affect was measured with the 28-item Befindlichkeits-Skala (Bf-S) adjective checklist, which provides a summary score of negative mood or affect.[28] Two parallel versions (Bf-S and Bf-S′) with proven sensitivity to change allowed a reliable measurement of changes in affect 20 minutes after exposure to aversive stimuli. Total scores ranged from 0 to 56, with higher numbers reflecting more negative affect. Cronbach's α before and after video exposure was .92 and .96, respectively.

After viewing the video (T2), participants completed the 7-item trust-in-physician subscale from the German-language Kölner Patientenfragebogen,[29] for which reliability and validity have been established. Participants were asked to rate each item (eg, "the doctor was frank and honest") on a scale of 1 ("fully disagree") to 4 ("fully agree"). Total scores ranged from 7 to 28, with higher numbers reflecting higher trust. Cronbach's α in this sample was .89.

Additional Measures

Demographic and medical variables assessed at the baseline included age, level of education, marital status, type of cancer, and time since diagnosis (patients only).

Cancer patients alone rated the single-item Perceived Adjustment to Chronic Illness Scale (PACIS), a global indicator of cancer patients' coping effort used in large quality-of-life studies.[30,31] Patients rated "how much effort does it cost you to cope with your illness?" on a 100-mm line, with "no effort at all" on one end and "very high effort" on the other.

After video exposure, participants reported the degree to which they were able to personally identify (perspective taking) with the patient in the video on a scale ranging from 1 ("not at all") to 4 ("very much").

Statistical Analyses

To detect differences with a moderate effect size of 0.40 (Cohen's *d*) at $\alpha = .05$ and with a power of 80%, 200 subjects were needed. Patient characteristics and baseline scores of the primary outcome (State-Trait Anxiety Inventory- State scale) and the secondary outcome (Bf-S) were compared according to 1) the samples and 2) the video version with chi-square tests, independent-sample *t* tests, and univariate analyses of variance.

The hypotheses were tested with generalized linear models for anxiety as the primary outcome and for negative affect as the secondary outcome. Multivariate analyses

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TABLE 2. Medical Characteristics of Cancer Patients (n = 97)

	Video 1: L-PCC (n = 47)	Video 2: E-PCC (n = 50)	*P* for Video 1 vs Video 2
Time since cancer diagnosis			
Mean (SD), mo	60.0 (45.0)	49.7 (58.2)	.32[a]
Range, mo	7-241	5-262	
No. (%)			
≤24 mo	9 (19.2)	23 (46.0)	
25-59 mo	19 (40.4)	13 (26.0)	
≥60 mo	18 (38.3)	13 (26.0)	
Cancer site, No. (%)			
Breast	22 (46.8)	22 (44)	.43[b]
Ovary/uterus	1 (2.1)	2 (4)	
Prostate/testicle	8 (17.0)	6 (12)	
Gastrointestinal	3 (6.4)	3 (6)	
Multiple myeloma	5 (10.6)	5 (10)	
Hodgkin/non-Hodgkin lymphoma	3 (6.4)	7 (14)	
Other	5 (10.6)	5 (10)	
PACIS, mean (SD)	45.7 (29.8)	52.7 (28.9)	.26[c]

Abbreviations: E-PCC, enhanced patient-centered communication; L-PCC, low patient-centered communication; mo, months; PACIS, Perceived Adjustment to Chronic Illness Scale; SD, standard deviation.
[a] $t = 0.99$.
[b] $\chi^2 = 37.74$; $df = 37$.
[c] $t = -1.12$.

of variance (MANOVAs) were performed to determine main and first-order interaction effects for the factors time, time × video, time × sample, time × sex, and time × age (as stratified) and second-order interactions for the factors time × video × sample, time × video × age, and time × video × sex. An effect of L-PCC and E-PCC physician behavior on trust in the physician, assessed after the video (T2) only, was determined with single-measure generalized linear models with factors identical to those described previously except for time.

RESULTS

Sample Characteristics

The sample consisted of 190 participants. One cancer patient was excluded from the analysis because he was emotionally overwhelmed by the video, and this resulted in a sample size of 189: 97 cancer patients and 92 subjects without cancer. After randomization, the age, sex, marital status, education, and site of cancer did not differ between the subjects assigned to the L-PCC video version and the subjects assigned to the E-PCC video version, nor did the mean time since the cancer diagnosis or the patient-reported adjustment to cancer (PACIS; see online supporting information). Noncancer subjects were comparable to cancer patients with respect to age, sex, and marital status, whereas their education level significantly exceeded that of cancer patients (see online supporting information). At the baseline, state anxiety and negative affect did not differ between L-PCC and E-PCC subjects among cancer patients or subjects without cancer (Table 2). As for perspective taking, cancer patients (mean/standard deviation, 3.14/0.71) and healthy subjects (2.80/0.71) reported a strong ability to identify with the patient in the video.

Impact of Video Exposure to the Delivery of a Cancer Diagnosis on State Anxiety

Viewing the delivery of a cancer diagnosis resulted in a substantial increase in state anxiety of 32% (mean/standard error, 34.4/.62 for premeasure T1 and 45.2/.85 for postmeasure T2; Table 3). MANOVAs revealed a significant main effect for time regarding state anxiety ($P = .000$ and Cohen's $d = 1.06$; Tables 3 and 4). Unaffected subjects' immediate response exceeded that of cancer patients, with MANOVAs revealing a significant main effect for sample ($P = .050$ and Cohen's $d = 0.29$; Tables 3 and 4). Neither sex nor age was related to participants' anxiety response (Table 4).

Effect of the Physician's Communication Style on State Anxiety

Participants exposed to the E-PCC video responded with a smaller increase in state anxiety in comparison with subjects exposed to the L-PCC video. This difference was confirmed by a MANOVA, which demonstrated a significant main effect (MANOVA for time × video: $P = .031$ and Cohen's $d = 0.32$; Fig. 1 and Tables 3 and 4).

The magnitude of the participants' anxiety response to the physician's communication style did not differ according to the participants' own experience with cancer (MANOVA for time × video × sample) or according to sex (MANOVA for time × video × sex) or age (time × video × age; Tables 3 and 4).

Cancer patients' responses to the physician's communication style did not vary according to their psychological adjustment to cancer as assessed by PACIS's coping effort (data not shown).

Effect of Video Exposure and the Physician's Communication Style on Negative Affect

Upon video viewing of the disclosure of a cancer diagnosis, participants experienced a substantial increase in negative affect (Bf-S mean/standard error, 10.3/.75 for premeasure T1 and 20.2/1.1 for postmeasure T2; Table 3), regardless of the video version they were assigned; this was confirmed by a significant main effect for time (MANOVA: $P = .000$ and Cohen's $d = 0.77$; Tables 3 and 4). Unaffected subjects' immediate increase in negative affect exceeded that of cancer patients, and this was

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TABLE 3. Premeasures and Postmeasures of Primary and Secondary Outcomes According to the Communication Style

	Both Videos					Video 1: L-PCC					Video 2: E-PCC				
	T1		T2		*P* for	T1		T2		*P* for	T1		T2		*P* for
	Mean	SE	Mean	SE	T1 vs T2[a]	Mean	SE	Mean	SE	T1 vs T2[a]	Mean	SE	Mean	SE	T1 vs T2[a]
State anxiety															
All (n = 189)	34.38	0.62	45.17	0.85	.000	33.97	0.88	46.58	1.36	.000	34.77	0.87	43.85	1.02	.000
Cancer patients (n = 97)	35.42	0.92	44.65	1.13	.000	35.21	1.25	46.28	1.81	.000	35.62	1.34	43.12	1.36	.000
Noncancer subjects (n = 92)	33.28	0.81	45.73	1.27	.000	32.67	1.20	46.89	2.06	.000	33.87	1.10	44.62	1.53	.000
P for cancer patients vs noncancer subjects[b]	.083		.525			.147		.823			.320		.464		
Negative affect															
All (n = 189)	10.31	0.75	20.20	1.10	.000	9.98	0.96	21.50	1.65	.000	10.62	1.15	18.97	1.45	.000
Cancer patients (n = 97)	10.40	1.04	18.16	1.49	.000	9.85	1.44	18.83	2.30	.000	10.92	1.51	17.5	1.94	.000
Noncancer subjects (n = 92)	10.21	1.09	22.35	1.59	.000	10.11	1.27	24.29	2.31	.000	10.3	1.76	20.49	2.18	.000
P for cancer patients vs noncancer subjects[b]	.897		.056			.893		.097			.788		.313		
Trust in physician															
All (n = 189)			18.15	0.35				16.48	0.47				19.74	0.47	
Cancer patients (n = 97)			18.29	0.54				16.55	0.77				19.92	0.68	
Noncancer subjects (n = 92)			18.01	0.46				16.40	0.55				19.55	0.67	
P for cancer patients vs noncancer subjects[b]			.696					.872					.701		

Abbreviations: Bf-S, Befindlichkeits-Skala; E-PCC, enhanced patient-centered communication; L-PCC, low patient-centered communication; SE, standard error; T1, time 1; T2, time 2.
For state anxiety, State-Trait Anxiety Inventory - State scale was used; for negative affect, Bf-S/Bf-S′ was used; and for trust in physician, Kölner Patientenfragebogen was used.
[a] Dependent sample *t* test: T1 versus T2.
[b] Independent *t* test: cancer patients versus noncancer subjects.

TABLE 4. Main and Interaction Effects on Primary and Secondary Outcomes

Outcome Measure[a]	Primary Outcome: State Anxiety Change (T1-T2)[b]		Secondary Outcome: Negative Affect Change (T1-T2)[c]		Outcome Measure[a]	Secondary Outcome: Trust in Physician (T2 Only)[d]	
	$F_{(df)}$[e]	*P*	$F_{(df)}$[e]	*P*		$F_{(df)}$[f]	*P*
Main effects					Main effects		
Time	$176.74_{(1,187)}$	.000	$109.07_{[1,188]}$	.000	Time	NA	NA
Time × sample	$3.90_{(1,187)}$	.050	$5.28_{[1,187]}$	.023	Sample	$0.15_{[1,188]}$	.696
Time × sex	$1.14_{(1,187)}$	.287	$0.29_{[1,187]}$	.594	Sex	$0.34_{[1,188]}$	.558
Time × age strata	$2.67_{(2,186)}$	.072	$0.11_{[2,186]}$	.892	Age strata	$1.33_{[2,186]}$	.268
Time × video	$4.73_{(1,187)}$	.031	$2.73_{[1,187]}$	.100	Video	$23.73_{[1,188]}$	.000
Interaction effects					Interaction effects		
Time × video × sample	$0.00_{(1,185)}$	.979	$0.18_{[1,185]}$	.669	Video × sample	$0.03_{[3,185]}$	.874
Time × video × sex	$0.28_{(1,185)}$	.598	$0.62_{[1,185]}$	.443	Video × sex	$2.05_{[3,185]}$	.153
Time × video × age	$0.16_{(2,183)}$	.854	$0.69_{[2,183]}$	.503	Video × age	$3.25_{[5,183]}$	.041

Abbreviations: Bf-S, Befindlichkeits-Skala; NA, not applicable; T1, time 1; T2, time 2.
[a] Time, T2 versus T1; sample, patients previously diagnosed with cancer versus subjects without cancer; sex, female versus male; age, 20 to 34, 35 to 60, or ≥61 years; and video, video 1 (low patient-centered communication style) versus video 2 (enhanced patient-centered communication style).
[b] State-Trait Anxiety Inventory - State scale.
[c] Bf-S/Bf-S′.
[d] Kölner Patientenfragebogen.
[e] Repeated measures multivariate analyses of variance.
[f] Univariate analysis of variance.

confirmed by a significant main effect for the sample (MANOVA: $P = .023$ and Cohen's $d = 0.34$; Tables 3 and 4).

The physician's communication style did not significantly affect participants' responses on negative affect (MANOVA for time × video: $P = .10$ and Cohen's $d =$

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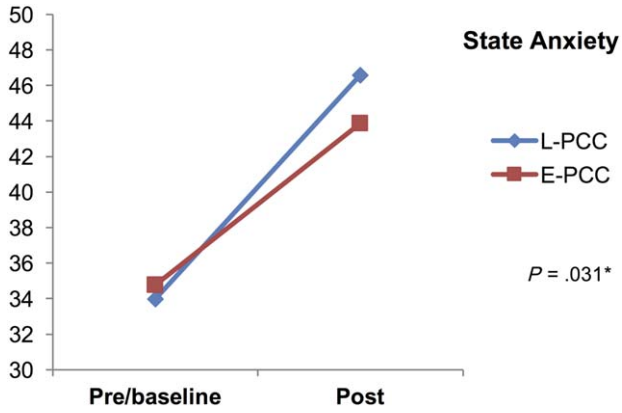

Figure 1. Pre-post comparisons of L-PCC and E-PCC for state anxiety. $^{*}F_{(1,187)} = 4.73$ (multivariate analysis of variance). E-PCC indicates enhanced patient-centered communication; L-PCC, low patient-centered communication.

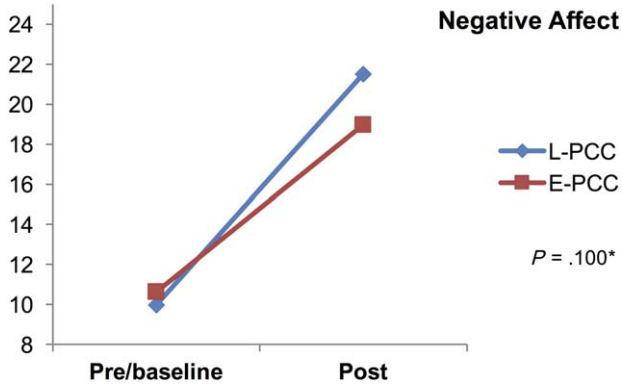

Figure 2. Pre-post comparisons of L-PCC and E-PCC for negative affect. $^{*}F_{(1,187)} = 2.73$ (multivariate analysis of variance). E-PCC indicates enhanced patient-centered communication; L-PCC, low patient-centered communication.

0.24; Fig. 2 and Tables 3 and 4). No interaction effect was found for sample, sex, or age (Tables 3 and 4).

Impact of the Physician's Communication Style on Trust in the Physician

Participants reported considerably higher trust in the physician in the E-PCC video than the physician in the L-PCC condition, regardless of their sex, age, and whether or not they had been previously diagnosed with cancer. A significant main effect for the factor video was confirmed (analysis of variance: $P = .000$ and Cohen's $d = 0.68$; Fig. 3 and Tables 3 and 4). No significant interaction was found for sample or sex (Table 4). A significant interaction for age ($P = .041$) was suggestive of stronger trust in the physician among older participants (>61 years),

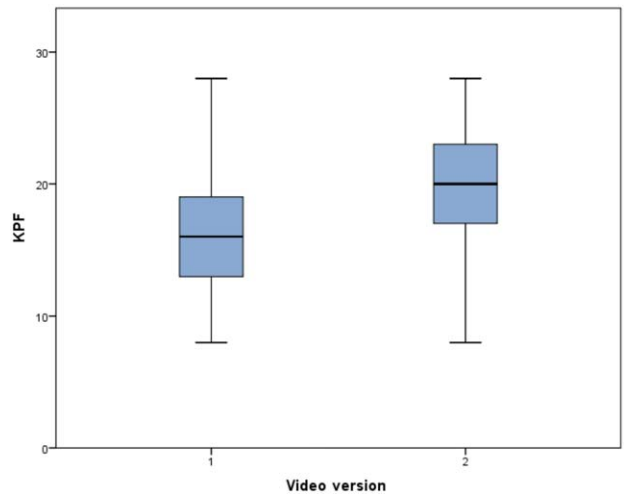

Figure 3. Comparisons of L-PCC (video 1) and E-PCC (video 2) for trust in the physician (Kölner Patientenfragebogen). $F_{(1,188)} = 23.73$ (analysis of variance); $P = .000$.

regardless of the communication style displayed by the oncologist.

DISCUSSION

In this study, we applied a video scenario to induce an emotional reaction as a proxy for a threatening, real-life experience. Thus, we gained insight into the subjects' perspective during a critical physician-patient encounter that otherwise would not be amenable to direct investigation for ethical and methodological reasons. After video exposure to a bad-news disclosure, we found a substantial increase in both anxiety and negative affect that was, in the case of anxiety, significantly moderated by the oncologist's communication style. Specifically, participants reported significantly lower anxiety and higher trust in the physician in response to an empathic PCC style (E-PCC), where the physician empathically acknowledged the patient's experience, offered realistic encouragement, and assured continued care, in comparison with those watching an oncologist displaying nonempathic behavior (L-PCC). There was a nonsignificant trend in the same direction for negative affect. These results confirmed our first hypothesis and parts of the second and third hypotheses.

We relied on studies showing that re-experiencing, through video exposure, an anxiety-provoking medical interaction can evoke a realistic pattern of emotional arousal that very much resembles a real experience. This allowed us to ascertain the immediate effect of a short, defined sequence of physician communication behavior on a patient's emotional arousal and psychological state.

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Our results support and extend those of Fogarty et al.[24] Because our study included subjects of both sexes with a variety of cancer sites and with various ages, its results are more likely to be generalizable to cancer patients exposed to anxiety-provoking news.

A physiological basis for this is suggested by skin conductance studies[32] and more recently functional magnetic resonance imaging data,[33] which link empathy to a decrease in physiological arousal in subjects exposed to adverse events. Participants in our study were blinded to the experimental variation of the oncologist's communication style, and this precluded a biased response caused by participants' expectations. Thus, the study finding of an immediate influence of empathy on patients' emotional response during a critical encounter supports and extends the findings of studies using the evaluation of analogue patients who were not blinded in their evaluation of empathic physician communication.[32,34,35]

Receiving empathic communication is important for patients confronted with a potentially life-limiting diagnosis.[36] Previous research on patients' experience of bad-news disclosure has largely relied on their retrospective reporting and studies that have been based on correlational data.[7,37,38] In contrast, this study's findings provide empirical support for cancer patients' accounts of their personal experience of receiving bad news and of which aspects of physician behavior that they find helpful or unhelpful,[5,39-41] and they thus help to strengthen the empirical link between empathic clinician communication and patient outcomes.

Research using video to probe the impact of communication styles is becoming an important tool, as supported by recent studies using analogue patients,[42] and may serve to guide our teaching and research efforts with respect to the type and optimal timing of supportive interventions in emotional encounters such as giving bad news.[36,43]

This study has a number of limitations. First, because of the challenges of recruitment, the study was underpowered. Although a priori calculations indicated that 200 subjects were needed for the analyses, only 190 were recruited. However, there was sufficient power to detect a significant difference in the primary outcome between the empathic and nonempathic communication styles. Second, the 2 video versions varied in their length. This difference could be a confounding factor affecting the differential outcomes between the 2 video conditions.

Lastly, only an immediate, short-term effect on patients' emotional response regarding state anxiety and on trust in the physician during a single encounter was demonstrated, and this leaves open whether this effect is enduring and clinically relevant.

This study was aimed solely at investigating the impact of an empathic and supportive communication style in response to patients' cues during a bad-news encounter, and it leaves unconsidered the impact of physicians' instrumental, cognitive communication (eg, sharing information according to the patient's needs and preferences).[4,44,45] Moreover, one size necessarily does not fit all, and not every patient probably will benefit from the E-PCC style. Highly anxious patients may need different communication styles when they are receiving bad news,[31] as may patients and relatives from a diverse cultural background.

To our knowledge, this is the first study directly investigating an effect of a defined physician PCC style on cancer patients' and unaffected subjects' emotional response to the delivery of a cancer diagnosis. It also sheds light on the importance of oncologists' being aware that they can effectively support the patient during bad-news disclosure within less than a minute and on the timing of "the right words in the right place" for benefiting patients who are experiencing an existential crisis.[1] Our findings add to the accumulating research suggesting a salient role for physician empathy in health and patient well-being.[33,36,46]

Where do we go from here? What is easily said is not as easily done for a variety of reasons.[10] Teaching merely empathic responses with the SPIKES (setting-perception-invitation-knowledge-emotions-strategy/summary) and NURSE (name-understand-respect-support-explore) models, as suggested by van Vliet and Epstein,[36] may not be sufficient. Experiential teaching, preferably based on their own case vignettes, allows clinicians to be aware of their own emotional involvement, wherein trying to "step into the patient's shoes" is an effective opportunity for a personal experience from the patient's perspective of what an empathic response feels like.[43] Continued refinement of our teaching methods is needed so that oncologists acquire the skills and attitudes required to be empathic toward their patients.

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CONFLICT OF INTEREST DISCLOSURES

The authors made no disclosures.

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AUTHOR CONTRIBUTIONS

Jelena Zwingmann: Conceptualization, methodology, validation, formal analysis, investigation, resources, data curation, writing–original draft, writing–review and editing, visualization, project administration, funding acquisition, full access to all of the data in the study, and responsibility for the integrity of the data and the accuracy of the data analysis. **Walter F. Baile:** Writing–original draft and writing–review and editing. **Johann W. Schmier:** Investigation and resources. **Jürg Bernhard:** Writing–original draft and writing–review and editing. **Monika Keller:** Conceptualization, methodology, validation, formal analysis, investigation, resources, data curation, writing–original draft, writing–review and editing, visualization, project administration, funding acquisition, full access to all of the data in the study, and responsibility for the integrity of the data and the accuracy of the data analysis.

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