Published in final edited form as:

Support Care Cancer. 2010 November ; 18(11): 1405–1411. doi:10.1007/s00520-009-0762-8.

Do patient attributes predict oncologist empathic responses and patient perceptions of empathy?

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Abstract

Purpose—Most patients with advanced cancer experience negative emotion. When patients express emotions, oncologists rarely respond empathically. Oncologists may respond more empathically to some patients, and patients may perceive different levels of empathy and trust given past documentation of disparities in cancer care.

Methods—We audio-recorded 264 outpatient encounters between oncologists and patients with advanced cancer at three sites. We examined whether patient gender, age, race, marital status, education, economic security, and length of relationship with oncologist were related to oncologist empathic responses to patient's negative emotion and patient's perceptions of oncologist empathy and trust.

Results—Half (51%) of the patients expressed a negative emotion. Oncologists sometimes responded with empathy (29%). Oncologists were equally empathic with all patients, except they were more empathic with patients with low economic security compared with those reporting high economic security ($p=.002$). Patients with low economic security viewed oncologists as more empathic ($p=.06$) compared with those with moderate security. Married patients also viewed oncologists as more empathic ($p=.04$). Patients who knew their oncologist for more than a year had more trust than patients who knew their oncologists for less time ($p=.02$).

Conclusions—Oncologists, in general, did not respond empathically to patient's negative emotion, and did this equally for most patients. Oncologists responded more empathically to patients who were less economically advantaged. In turn, patients with lower economic security perceived more empathy. Although oncologists need more education in responding empathically, they may not need to correct many biases in care.

Keywords

Empathy; Oncologist; Advanced cancer; Socioeconomic status; Negative emotion

Cancer patients with advanced disease often experience negative emotion, such as anxiety and depression [13, 25, 29]. Left unresolved, these negative emotions can lower quality of life [3, 4, 25]. Fortunately, oncologists can help patients resolve patient's negative emotion by responding empathically. When oncologists are empathic, patients report higher satisfaction with the visit and a better relationship with the oncologist [11, 16].

Although oncologists are encouraged to respond empathically to patients, existing research shows that they do so infrequently [5, 9, 20]. Low empathy may be due to physician-related factors, such as time constraints [18], lack of oncologist education in communication [9, 28], and oncologist discomfort discussing emotion [18].

Less attention focuses on patient factors that might influence oncologists to be more or less empathic. For example, patient demographic characteristics, such as race, gender, or age, might affect how oncologists respond to patient negative emotion. Oncologists may feel less similar to some patients, and thus, have difficulty expressing empathy when patients discuss their emotional struggles. Although disparities in cancer communication have been reported [22], none has examined disparities in oncologist responses to patient negative emotion. Disparities in oncologist communication may translate into disparities in patient perceptions of empathy and trust in oncologists, which could affect patient adherence, satisfaction with care and quality of life.

The aim of this paper is to examine patient demographic predictors of oncologist empathic responses to patient negative emotion and to examine corresponding predictors of patient perceptions of oncologist empathy and trust.

Methods

Participants

This report presents post-intervention data from the Studying Communication in Oncologist-Patient Encounters Trial (SCOPE), a three-site study from Duke University, the Durham Veterans Affairs Medical Center, and the University of Pittsburgh. This report included 264 audio-recorded conversations between 48 oncologists and 264 patients with advanced cancer. Details of the study are reported elsewhere [15, 23]. Briefly, the aim of the study was to test a communications intervention to teach oncologists how to respond empathically to patient negative emotion. In the baseline phase, we aimed to audio-record six to eight individual patient encounters per oncologist. Half of the oncologists in the study received a communications intervention to improve their responses to patient negative emotion. The communication intervention was tailored on oncologists' own audio-recorded encounters. Then we aimed to audio record between four and six patient encounters (mean, 5.5 with SD=1.2) to determine if oncologists in the intervention arm communicated more empathically in response to patient negative emotion than oncologists in the control arm. This intervention is described in detail elsewhere [23]. We controlled for intervention arm because we analyzed post-intervention encounters. This intervention was not focused on addressing health disparities in communication.

Oncologists

We approached 110 medical, gynecological and radiation oncologists to participate in the study. Of the 110, 74 (67%) consented. Twenty-one (19%) were ineligible because they did not see enough patients and 15 (14%) refused. Of the 74 who consented, 48 had enough audio recordings (at least four) to be randomized to the intervention or control arms. Participating oncologists were offered \$25 gift certificates upon completion of audio recording their visits.

Patients

Our goal for the study was to identify patients with sufficiently advanced disease to increase the probability that conversations would contain expressions of negative emotions. We asked oncologists or their mid-level provider staff to identify patients whom they "would not be surprised if they died or were admitted to the ICU within 1 year." We assured oncologists and providers that this information would not be conveyed to patients. Other eligibility criteria were that patients: (1) spoke English, (2) received primary oncology care at one of our study sites, and (3) had access to a telephone. We sent patients letters and met them at their appointment to conduct a baseline survey prior to their visit. We obtained written consent and audio-recorded their visits. This protocol was approved by each institution's institutional review board.

Measures

Patient characteristics—Before the visit, patients were asked to self-report their gender, age, race, marital status, education, and economic security. Patients were grouped into those having a high school education or less and those with education beyond high school. To assess economic security, patients were asked, "Without giving exact dollars, how would you describe your household's financial situation right now?" Patients were given four different response options: *"After paying the bills, you still have enough money for special things that you want," "You have enough money to pay the bills, but little spare money to buy extra or special things," "You have money to pay the bills, but only because you have cut back on things,"* or *"You are having difficulty paying the bills, no matter what you do"* [21]. Based on these categories, patients were classified as having high, moderate,

moderately low, or low economic security, respectively. This item has been found to be correlated with other indicators of socioeconomic status (e.g., education) [19].

Audio recordings—We used Suchman’s definitions of empathic opportunities and oncologists’ responses to them [26]. These definitions are based solely on patients’ verbal expressions of negative emotions, not positive emotions or “praise opportunities.” Two independent coders were trained extensively; 15% of audio recordings were coded by both raters. Inter-rater reliability was high for the presence of an empathic opportunity (Kappa=0.77). We coded oncologist responses as empathic “continuers” or “terminators” (Kappa=0.74). Continuers consisted of five behaviors that have been organized by educators under the mnemonic, “NURSE”: Name, Understand, Respect, Support, and Explore [10, 24, 27].

Patient perceptions

Perceived empathy: After the visit, patients were asked 10 items to assess perceived oncologist empathy ($\alpha=.95$) [17]. The items were analyzed as a average of the 10-items (range, 2.0–5.0). A sample item reads, “How was your oncologist at fully understanding your concerns?” (1 = Not at all good and 5 = Extremely good).

Trust: After the visit, patients were asked 11 items to assess their trust in their oncologist ($\alpha=.80$), which were analyzed as an average of the 11 items (range 3.1–5.0) [1]. A sample item reads, “I trust my oncologist’s judgment about my medical care?” (1 = Disagree and 5 = Agree).

Analyses—The primary audio-recorded outcome variable was whether or not oncologists’ responded to an empathic opportunity with a continuer. Regression models with standard errors adjusted for clustering within oncologist using the Generalized Estimating Equation (GEE) methods [8] were used to examine the bivariable relationship between patient characteristics and continuer/terminator response. Analyses did not control for the number of negative emotions expressed because there was little variability in the number expressed. Variables indicating a significant relationship ($p<0.10$) were entered into a multivariable logistic regression model with standard errors adjusted for clustering within oncologist using GEE. Oncologist treatment group and site were also included in the multivariable model.

General linear model and correlation analyses were used to examine the bivariable relationship between patient characteristics and patients’ perceptions of empathy and trust. Variables significant at $p<0.10$ were included in a multivariable general linear model with treatment group and site, and a general covariance structure accounting for the intracluster correlation of patients being seen by the same oncologist. All analyses were conducted with SAS v 9.1 (Cary, NC).

Results

Sample characteristics

Patient’s mean age was 61.0; 58% were female and 89% were white. Physician’s mean age was 45.5; 81% were male and 79% were white (Table 1). Forty-six percent of patients had known their physician for 1 year or less. Fifty-one percent of patients raised a negative emotion. Among those, 55% of patients only expressed one negative emotion in the encounter and 73% expressed two or less. A separate paper from this study describes the negative emotions patients expressed [14]. Briefly, the most common negative emotion expressed was fear (67%) followed by sadness (17%) and anger (16%). When a patient raised a negative emotion, oncologists responded empathically 29% of the time.

Predictors of oncologist empathic responses

We examined all patient predictors of whether oncologists responded with an empathic continuer when patients expressed negative emotions (Table 2). Of all of the predictors, gender, age, race, marital status, education, economic security, and length of relationship with oncologist, only economic security was related to oncologist empathic responses. Contingency table analyses revealed a decreasing linear relationship between economic security and empathic responses. When patients with lowest economic security expressed a negative emotion, oncologists responded empathically 46% of the time whereas they responded empathically only 26% of the time with patients with highest economic security. In adjusted analyses including treatment group and site, oncologists were more empathic with patients who reported having financial struggles than with patients with highest economic security (OR=2.3; 95% CI, 1.5–3.7; $p=0.0003$). We listened to each empathic opportunity and examined qualitatively the type and severity of emotion expressed and found no differences between patients with low economic security and those with high. It was not that patients with lower economic security were discussing finances or expressed more severe emotions. Patients with lowest economic security expressed more negative emotions than any other patients. Patients with lowest economic security presented oncologists with an empathic opportunity 75% of the time as compared to 48% for patients with moderately low security ($p=0.03$), 51% with moderate security ($p=0.05$), and 48% ($p=0.01$) with high security.

Patient perceptions of oncologist empathy and trust

We examined of patient perceptions of oncologist empathy and trust (Table 3). We found that patients with less economic security were more likely to rate their physicians as empathic than patients with more economic security ($M_{\text{low/moderate low security}}=4.52$, $SD=0.48$; $M_{\text{moderate security}}=4.23$, $SD=0.78$; $t(191)=1.88$, $p=.06$). Also, patients who were married viewed oncologists as more empathic than those not married ($M_{\text{married}}=4.42$, $SD=0.64$; $M_{\text{not married}}=4.20$, $SD=0.76$; $t(198)=2.04$, $p=.04$). In adjusted analyses, mean estimated perceived empathy scores were 0.27 points higher (95% CI, (0.01; 0.53); $p=0.04$) for patients with low economic security as compared with those with moderate economic security. Further, patients who had known their oncologist longer than a year gave higher trust ratings than patients who knew their oncologist for less than a year ($M_{\geq 1 \text{ year}}=4.76$, $SD=0.37$; $M_{< 1 \text{ year}}=4.62$, $SD=0.5$; $t(200)=2.27$, $p=0.02$).

Discussion

Several important findings emerge from these data. First, although empathic responses were uncommon, oncologists were more likely to express empathy to patients who were less advantaged. Second, when oncologists expressed more empathy with patients of lower economic security, those patients perceived more empathy from their doctors. Third, trust in oncologists was only be affected by length of relationship and not other patient factors.

Our previous work examined physician characteristics that were associated with empathic responses [20] and also whether oncologists' responses differed on type and severity of emotion [14]. The outcomes from the study indicate that the intervention increased oncologists' empathic responses [28]. Oncologists in the control arm did not change over time, while oncologists in the intervention arm doubled the rate at which they responded empathically when patients expressed a negative emotion. The significant intervention effect is why we controlled for arm in these post-intervention audio recordings. The current paper examined patient predictors of oncologist empathic responses.

Consistent with previous reports, oncologists missed many opportunities to respond with empathy when patients expressed negative emotions [5, 9]. What is encouraging from these findings is that oncologists appear relatively unbiased in their responses. Inconsistent with previous findings [22], no differences were found based on patient race, gender, or education. What differences did exist, occurred in an unexpected direction. Oncologists were more likely to express empathy when patients with lower economic security raised negative emotions than when patients from higher economic security did so. The reasons for this are unclear. Patients with lower security did not express more severe emotions or emotions about financial matters when compared to other patients. Most of their emotional expressions were about fear just as those with higher economic security. However, patients from lower security did express more negative emotions overall. Thus, oncologists had more opportunities to show empathy. It may be that multiple expressions of empathy were stronger cues for oncologists.

These results, taken together with other previous findings from this study, are encouraging. Even though most oncologists could increase their rate of empathic responses to negative emotion, particularly oncologists who rate themselves as more technical than socioemotional and oncologists who are older, there do not seem to be biases from the patient side of the equation. Our outcome results also are encouraging as they suggest that oncologists can improve their empathic responses.

Not only did results from this analysis indicate that oncologists express empathy with patients who were struggling financially, but these patients in turn also viewed their oncologists as more empathic. This result is encouraging for oncologists as this data seems to indicate that empathy expressed translates into empathy felt. Such expressions of empathy need not be long or complex. For example, oncologists may acknowledge an emotion by saying, “I know this news is scary to hear” or show they understand what the patient is experiencing by making a statement such as, “I cannot imagine how hard it must be for you and your family.” One study showed that just 40 s of compassionate talk reduced patient anxiety [11]. This study suggests that when oncologists make efforts to acknowledge patient negative emotion with expressions of empathy, patients feel heard.

Finally, results indicate that trust in oncologists was unrelated to all patient factors except length of relationship. This finding is inconsistent with previous studies that have shown race differences in trust in physicians [2, 6, 7, 12]. Lack of race differences in this sample might have been due to the low representation of African American patients. It was not surprising that few variables were related to trust given the high ceiling effects and lack of variability on the trust scale. Trust in physicians typically is high, but in oncology, it may be especially high. With so much at stake, patient trust is essential.

Limitations

Several limitations exist. This study may generalize only to oncologists in academic medical centers. Further, the patient sample was not very diverse and may lack generalizability to other populations. Also, the measure of economic security was not linked to actual income; thus, it assessed only financial ability to pay bills, not wealth. Finally, half of the oncologists in this sample were exposed to a communication intervention; therefore, they had higher responses to empathic opportunities than oncologists who have not received an intervention. However, the effect of more empathic responses for less advantaged was found in both arms.

Conclusions

These results are encouraging as they indicate that oncologists are not biased in their empathic responses to patient negative emotion. If anything, they may be expressing empathy to patients who are in the greatest need as these patients with lower economic security are expressing more negative emotions. Physicians and patients both could benefit from education about how to communicate about negative emotion.

Acknowledgments

This work was supported by R01CA100387.

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Table 1

Sample characteristics

	Patient (n=264) %/M (SD)	Oncologist (n=48) %/M (SD)
Age, in years (M, SD)	61.0 (13.6)	45.5 (7.9)
Gender		
Female	58%	19%
Race		
White	89%	79%
African American	9%	—
Asian/Pacific Islander	0.4%	15%
Other	1.6%	6%
Physician Specialty		
Medical Oncology (solid tumors)		42%
Hematology Oncology (liquid tumors)		25%
Medical Oncology (solid and liquid tumors)		23%
Gynecological Oncology		8%
Radiation Oncology		2%
Years since fellowship (M, SD)		15.6 (8.0)
Number of patient care h/week (M, SD)		29.3 (22.9)
Patient education HS or less	33%	
Married	71%	
Economic security		
High	57%	
Moderate	23%	
Low moderate/low	20%	
Length of relationship with physician 12 months	46%	

Table 2

Patient predictors of oncologist empathic continuers

Patient predictor	Continuers (%)	<i>p</i> value ^b
Sex		0.39
Male	25	
Female	31	
Race		0.55
White	30	
African American	21	
Marital status		0.66
Married	30	
Single	29	
Education		0.49
High school	33	
>High school	28	
Length of relationship		0.11
12 months	26	
>12 months	35	
Economic security		0.002
High ^a	26	
Moderate	29	
Low moderate/low ^a	42	
Age		0.60
60	30	
>60	28	

^a *p* value compares high to low economic security^b *p* values from single-variable regression models adjusting for clustering within oncologist using GEE methods

Table 3

Patient predictors of patient perceived empathy and trust

Patient predictor	Perceived empathy (M, SD)	<i>p</i> value	Trust (M, SD)	<i>p</i> value
Sex		0.59		0.74
Male	4.39 (0.65)		4.67 (0.49)	
Female	4.33 (0.69)		4.70 (0.42)	
Race		0.80		0.47
White	4.30 (0.98)		4.70 (0.42)	
Non-White	4.36 (0.64)		4.59 (0.63)	
Marital status		0.04		0.24
Married	4.42 (0.64)		4.72 (0.41)	
Single	4.20 (0.76)		4.62 (0.53)	
Education		0.72		0.60
High school	4.33 (0.73)		4.67 (0.51)	
>High school	4.37 (0.66)		4.70 (0.41)	
Length of relationship		0.19		0.02
12 months	4.28 (0.71)		4.62 (0.51)	
>12 months	4.41 (0.65)		4.76 (0.37)	
Economic security		0.06		0.92
High	4.36 (0.68)		4.71 (0.42)	
Moderate ^a	4.23 (0.78)		4.66 (0.55)	
Low moderate/low ^a	4.52 (0.48)		4.67 (0.41)	
Age		0.70		0.12
60	4.33 (0.68)		4.64 (0.46)	
>60	4.37 (0.67)		4.73 (0.43)	

^a*p* values compare moderate to low economic security