

Original Article

Preference for Palliative Care in Cancer Patients: Are Men and Women Alike?



Fahad Saeed, MD, Michael Hoerger, PhD, MSCR, Sally A. Norton, PhD, Elizabeth Guancial, MD, Ronald M. Epstein, MD, and Paul R. Duberstein, PhD

Division of Nephrology (F.S.), Department of Medicine, University of Rochester School of Medicine and Dentistry, Rochester, New York; Division of Palliative Care (F.S., S.A.N., R.M.E., P.R.D.), University of Rochester School of Medicine and Dentistry, Rochester, New York; Division of Hematology Oncology (E.G.), University of Rochester School of Medicine and Dentistry, Rochester, New York; Department of Psychology (M.H.), Tulane University, New Orleans, Louisiana; School of Nursing (S.A.N.), University of Rochester School of Medicine and Dentistry, Rochester, New York; Department of Psychiatry (R.M.E., P.R.D.), University of Rochester School of Medicine and Dentistry, Rochester, New York; and Department of Family Medicine and Center for Communication and Disparities Research (R.M.E., P.R.D.), University of Rochester School of Medicine and Dentistry, Rochester, New York

Abstract

Context. Men and those with low educational attainment are less likely to receive palliative care. Understanding these disparities is a high priority issue.

Objectives. In this study of advanced cancer patients, we hypothesized that men and those with lower levels of educational attainment would have less favorable attitudes toward palliative care.

Methods. We performed a cross-sectional analysis of data collected from 383 patients at study entry in the Values and Options in Cancer Care (VOICE) clinical trial. Patients were asked about their preferences for palliative care if their oncologist informed them that further treatment would not be helpful. Palliative care was defined as “comfort care” that focuses on “quality of life, but not a cure.” Response options were definitely no, possibly no, unsure, possibly yes, and definitely yes. Those preferring palliative care (definitely or possibly yes) were compared to all others. Predictors were patient gender and education level. Covariates included age, race, disease aggressiveness, and financial strain.

Results. Women were more likely [odds ratio (95% CI)] than men to prefer palliative care [3.07 (1.80–5.23)]. The effect of education on preferences for palliative care was not statistically significant [0.85 (0.48–1.48)].

Conclusion. Significant gender differences in patients’ preferences for palliative care could partially account for gender disparities in end-of-life care. Interventions to promote palliative care among men could reduce these disparities. *J Pain Symptom Manage* 2018;56:1–6. © 2018 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

Palliative care, treatment preference, attitudes, gender differences, age, education, cancer, oncology

Introduction

The Institute of Medicine (IoM) report “Dying in America” called for interventions to improve end-of-life care (EOLC) in patients with advanced cancer.¹ Men and patients of lower socioeconomic status, including those with low educational attainment, are more likely to receive “curative” chemotherapy weeks

before death and less likely to receive palliative care (PC) or hospice.^{2–4} Although research has been conducted to understand why there are ethnic and racial disparities in EOLC,⁵ few studies have focused on gender and education disparities.^{4,6} Our premise is that disparities in EOLC are related, in part, to patients’ attitudes toward health care.⁷ PC involvement

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Address correspondence to: Fahad Saeed, MD, Divisions of Nephrology and Palliative Care, University of Rochester

Medical Center, Rochester, NY, USA. E-mail: fahad_saeed@urmc.rochester.edu

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in the care of seriously ill patients may be associated with less frequent use of ineffective treatments near the end of life (EOL).^{8,9} To reduce gender and educational disparities in EOLC, it is critical to examine demographic correlates of attitudes toward PC.

Patients' attitudes or beliefs about particular treatments are often predictive of their future health behaviors.⁷ Previous research in cancer patients has established gender differences in attitudes and health behaviors that could have implications for EOLC.² For example, men are more likely to prefer life-sustaining therapies such as cardiopulmonary resuscitation in the face of serious illnesses, including cancer.¹⁰ Women with cancer are more likely to have do-not-resuscitate orders⁴ and more likely to prefer PC.¹¹ Similarly, educational attainment is another important determinant of EOL attitudes and health behaviors.¹² Patients with fewer years of education are more likely to believe that their incurable cancer can be cured¹³ and are more likely to receive ineffective, burdensome treatments at the EOL.^{3,14–16} College-educated patients request euthanasia more commonly than patients with lower levels of educational attainment and have more favorable attitude toward euthanasia.^{17,18}

Based on these findings,^{7–15} we hypothesized that men and less educated patients would be less favorably disposed toward palliative care. We tested these hypotheses using data gathered in the Values and Options in Cancer Care (VOICE) study,¹⁹ which is particularly well suited to test our hypotheses. Many studies on attitudes toward treatment and EOLC have been conducted on community-dwelling (nonpatient) samples; these studies typically ask participants to respond to hypothetical scenarios of questionable personal relevance. In the VOICE study, questions about preferences for palliative care are less hypothetical; all patients had advanced cancer.

Methods

Overview of VOICE

The Values and Options in Cancer Care (VOICE) study¹⁹ was a randomized controlled trial of a combined intervention involving oncologists, patients with advanced cancer, and caregivers designed to facilitate and support patient-centered communication. This study was conducted in the Rochester/Buffalo, NY and Sacramento, CA regions. The intervention improved communication but had no discernible effects on patients' quality of life and treatments received at the EOL.¹⁶ This study reports cross-sectional analyses of data collected at study entry. Institutional review board (IRB) approval was obtained from all the participating institutions. All participants completed written informed consent documents. Survey questions were orally administered.

Sample. Patients were 21 years or older and had Stage-IV nonhematologic cancer or Stage III cancer; the latter were eligible if their oncologists reported they "would not be surprised" if the patient were to die within 12 months.²⁰

Assessments

Preference for palliative care is the main outcome variable. At study entry, patients were asked about their preferences for palliative care if their oncologist informed them that "there is no further anticancer treatment available that would be helpful." Palliative care was defined as "comfort care focusing on quality of life, but not a cure." Response options were definitely no, possibly no, unsure, possibly yes, and definitely yes. For the primary analysis, those who responded definitely or possibly yes were compared to all others (unsure or definitely/possibly no) because our interest is the identification of correlates of positive attitudes toward palliative care.

Independent variables were gender and education level (\leq high school vs. \geq some college). Primary covariates were age (≥ 65 vs. < 65); race (white vs. nonwhite); aggressiveness of cancer (aggressive vs. less aggressive); and two proxies for economic burden, insurance status (Medicaid or no insurance vs. Medicare or private party), and perceived financial strain (present or absent). The aggressiveness of cancer was determined prospectively in consultation with two oncologists and included lung, GI cancers (except colon), and GU cancers (except prostate); by contrast, less aggressive cancers included breast, prostate, and colon. Perceived financial strain was assessed by an affirmative response to one of four items concerning the inadequacy of income for food and housing costs; clothing, medicine, home repairs, transportation; dining out or entertainment; a weeklong vacation.²¹

Covariates were added in sensitivity analyses to explore whether observed associations between predictors and the outcome remained after adjusting for marital status (coded as married or in a long-term relationship vs. all other categories), living situation (coded as living alone vs. living with someone or missing), and five clinical variables that may be related to preferences for palliative care: 1) the McGill Quality of Life (MQOL)²² distress score (four items assessing depression, anxiety, sadness, and fear), 2) the MQOL "have you felt your days were a burden" item, 3) the PEACE scale,²³ 4) the FACT-G Physical Well-Being Scale, and 5) the FACT-G Social Well-Being item "my family has accepted my illness."²⁴ Two study-design variables, presence or absence of a caregiver enrolled in VOICE and study site (Sacramento, CA vs. Rochester/Buffalo, NY regions), were also covaried in sensitivity analyses.²⁵

Statistical Analyses

Analyses were conducted using SPSS version 22.0 (IBM Corp., Armonk, NY). We examined descriptive statistics for all study variables. Logistic regression was used to examine the association between gender (female coded as “1” and male as “0”) and education level (high school or less vs. more education) with preferences for palliative care (definitely/possibly yes vs. unsure/definitely/possibly no; dependent variable). We chose logistic regression as a primary analysis as our outcome variable is binary. Logistic regression analysis provides easily interpretable data with more clinical relevance consistent with the style of clinical decision making. For descriptive purposes, we first examined the unadjusted association between independent variables and response to the item about palliative care preferences. Then, for our primary analysis, we examined this association while controlling for the covariates of age (≥ 65 vs. < 65), race, economic burden (insurance status, perceived financial strain), and cancer aggressiveness.

Sensitivity analyses accounted for additional demographic (marital status, living situation), clinical (e.g., MQOL), and study-design (enrolled caregiver, site) variables. A final set of sensitivity analyses used ordinal regression, treating responses to the palliative care preference item as a five-point ordinal variable (definitely yes, possibly yes, unsure, possibly no, definitely no). We chose ordinal regression as a secondary analysis to

examine whether the placement of “unsure” responses had a meaningful influence on the findings. For all inferential analyses, we checked model assumptions and reported 95% CIs and *P*-values based on two-tailed significance tests and an alpha level of 0.05.

Results

Participant characteristics are shown in [Tables 1](#) and [2](#). Participants ($N = 383$) ranged in age from 22 to 90 years; women (55.1%) and those who attended college (71.3%) constituted the majority of the sample. Most patients ($N = 303$, 79.1%) reported that they definitely ($N = 173$, 45.2%) or possibly ($N = 130$, 33.9%) would desire palliative care if informed that no further anticancer treatment would be helpful. Most of the remainder ($N = 57$, 14.9%) said they were unsure; relatively few said that they definitely ($N = 14$, 3.7%) or possibly ($N = 10$, 2.6%) would not want palliative care. Consistent with our hypothesis, women were more likely [odds ratio (95% CI)] than men to prefer palliative care in the primary multivariate analysis [3.07 (1.80–5.23)], in the sensitivity analysis accounting for additional covariates [2.69 (1.51–4.79)], and in the ordinal regression [2.47 (1.67–3.65)].

Our hypothesis about education was not supported. Preferences for palliative care were comparable among participants with a high school education or

Table 1
Participant Characteristics, *n* (%)

Variable	All Patients ($N = 383$)	Women ($n = 211$)	Men ($n = 172$)
Age			
≥ 65 yrs	191 (49.9%)	91 (43.1%)	100 (58.1%)
< 65 yrs	192 (50.1%)	120 (56.9%)	72 (41.9%)
Education			
High school or less	110 (28.7%)	58 (27.5%)	52 (30.2%)
Some college or more	273 (71.3%)	153 (72.5%)	120 (69.8%)
Race			
White	342 (89.3%)	191 (90.5%)	151 (87.8%)
Nonwhite	41 (10.7%)	20 (9.5%)	21 (12.2%)
Cancer aggressiveness			
Aggressive cancer	189 (49.3%)	95 (45.0%)	94 (54.7%)
Less aggressive cancer	194 (50.7%)	116 (55.0%)	78 (45.3%)
Insurance status			
Medicaid/uninsured	49 (12.8%)	26 (12.3%)	23 (13.4%)
Medicare/private insurance	334 (87.2%)	185 (87.7%)	149 (86.6%)
Financial strain			
Present	121 (31.6%)	74 (35.1%)	47 (27.3%)
Absent	262 (68.4%)	137 (64.9%)	125 (72.7%)
Caregiver enrolled			
Yes	306 (79.9%)	165 (78.2%)	141 (82.0%)
No	77 (20.1%)	46 (21.8%)	31 (18.0%)
Study site			
Sacramento, CA	136 (35.5%)	63 (29.9%)	73 (42.4%)
Western NY	247 (64.5%)	148 (70.1%)	99 (57.6%)

All variables in this column were included in the multivariate logistic regression analysis. In the survey, palliative care was described as comfort care that focuses on quality of life, but not a cure. The outcome variable in the logistic regression was favorable attitudes, defined as responding definitely yes or possibly yes to the question “If your cancer doctor advised you that there is no further anticancer treatment available that would be helpful, would you want palliative care?” Gender remained a significant predictor in sensitivity analyses that accounted for additional covariates [2.79 (1.60–4.86)] and analyses that treated the outcome variable as ordinal [2.47 (1.67–3.65)].

Table 2
Descriptive Statistics and Multivariate Analysis Predicting Preference for Palliative Care, *n* (%)

Variable	Attitude Toward Palliative Care		Adjusted OR (95% CI)	P-value
	Favorable (<i>N</i> = 303)	Unfavorable (<i>N</i> = 80)		
Gender				
Women	185 (87.7%)	26 (12.3%)	3.07 (1.80–5.23)	<0.0001
Men	118 (68.6%)	54 (31.4%)		
Age				
≥65 yrs	141 (73.8%)	50 (26.2%)	0.54 (0.31–0.94)	0.03
<65 yrs	162 (84.4%)	30 (15.6%)		
Education				
High school or less	83 (75.5%)	27 (24.5%)	0.85 (0.48–1.48)	0.55
Some college or more	220 (80.6%)	53 (19.4%)		
Race				
White	273 (79.8%)	69 (20.2%)	1.18 (0.51–2.71)	0.69
Nonwhite	30 (73.2%)	11 (26.8%)		
Cancer aggressiveness				
Aggressive cancer	143 (75.7%)	46 (24.3%)	0.75 (0.45–1.26)	0.28
Less aggressive cancer	160 (82.5%)	34 (17.5%)		
Insurance status				
Medicaid/uninsured	36 (73.5%)	13 (26.5%)	0.66 (0.29–1.47)	0.30
Medicare/private insurance	267 (79.9%)	67 (20.1%)		
Financial strain				
Present	95 (78.5%)	26 (21.5%)	0.85 (0.45–1.62)	0.62
Absent	208 (79.4%)	54 (20.6%)		

PC = palliative care; OR = odds ratio.

All variables in this column were included in the multivariate logistic regression analysis. In the survey, palliative care was described as comfort care that focuses on quality of life, but not a cure. The outcome variable in the logistic regression was favorable attitudes, defined as responding definitely yes or possibly yes to the question “If your cancer doctor advised you that there is no further anticancer treatment available that would be helpful, would you want palliative care?” Gender remained a significant predictor in sensitivity analyses that accounted for additional covariates [2.79 (1.60–4.86)] and analyses that treated the outcome variable as ordinal [2.47 (1.67–3.65)].

less and those with more education [0.85 (0.48–1.48)]. Similar findings were observed in the sensitivity analysis [0.69 (0.38–1.26)] and the ordinal regression model [1.06 (0.69–1.63)].

Older adults were less likely than younger adults to prefer palliative care [0.54 (CI 0.31–0.94)]. This difference remained statistically significant in the sensitivity analysis accounting for additional covariates [0.49 (0.28–0.88)]. It was not significant in the ordinal regression [0.96 (0.64–1.43)], presumably because most older patients who were categorized as not favoring PC were unsure (*N* = 34, 68%); only a minority were possibly or definitely opposed to PC. No other covariates were statistically significant.

Discussion

Consistent with our hypothesis, women were more likely than men to prefer palliative care. Premised on the assumption that favorable attitudes toward palliative care services during the course of a serious illness may translate into less aggressive EOLC, the current findings could partially explain gender disparities in the receipt of palliative care at the EOL. The hypothesized effect of education was not observed. It is not very likely, therefore, that education disparities in EOLC can be explained by education differences in preferences for PC.

Our finding of a gender discrepancy in preferences for PC is consistent with prior research on preferences for PC and broadly consistent with the literature on gender differences in treatment preferences and treatment seeking.^{7,8,12,26} These gender differences may be explained by gender differences in role socialization. Men and women adopt beliefs about gender roles that reflect prevailing social norms.²⁷ These beliefs guide decisions about socially acceptable and unacceptable attitudes such as being stoic, fearless, less expressive of symptoms, and invulnerable. If there is a “war” on cancer, and treatments and hopes for cures are portrayed as “fights” in media, then societal beliefs may push men, in particular, to fight the disease over receiving palliative care.²⁶ Of course, women, too, may be moved by war imagery. On the other hand, social norms in many societies worldwide provide women with greater permission to express emotions, report symptoms, and seek social support; to be comfortable is considered a right rather than a sign of weakness—a philosophy that is consistent with the goals of palliative care.^{28–30}

The observed gender difference in preferences for palliative care could partially explain gender differences in EOLC and resource utilization.⁸ In a study of advanced cancer patients, Sharma et al. reported that men were more likely than women to receive aggressive care near the end of life.⁴ Similar findings

have been observed in other cohorts, including a large cohort of Medicare patients with cancer.³¹

The hypothesized effect of education was not supported, perhaps because only 28% of our sample had not attended college. It is plausible that we did not observe the hypothesized effect of education in this fairly well-educated sample because we had an insufficient number of patients at the lower end of educational attainment. Using a different cutoff to define low education (bachelors or higher), Hoerger et al. reported no relationship between educational attainment and PC preference.¹¹ Like our cohort, theirs included a relatively small number of participants with low educational attainment. Future research on more educationally diverse samples is needed to further examine the relationship between educational attainment and attitudes toward PC.

In our cohort, older patients were less likely to prefer PC in logistic regression models. However, this finding did not persist in the ordinal regression presumably because most older patients (68%) who were categorized as not favoring PC in the logistic regressions responded they were unsure about PC (as opposed to “definitely or “probably” against receiving PC). It is plausible that many older patients are unsure about PC services due to a lack of knowledge about PC. In a survey of patients across the adult age range, more than three-quarters of the sample had never heard of PC.³² Beyond lack of knowledge, there are other reasons why many patients may be “unsure” about treatment preferences. High-stakes treatment decisions are often made in concert with family members, and some patients may not know their own “preferences” until they have solicited input from trusted loved ones.

Our study findings suggest that there is a need to promote palliative care services among men.³³ Educational interventions have been shown to lead to more favorable attitudes toward PC,^{11,12,28} and broad-scale public service announcements or messaging interventions could be considered. Moreover, clinicians may wish to consider gender differences while discussing PC option/referral with their patients. Distinct, gender-specific communication skills and techniques might be needed to facilitate EOL discussions.³⁴ For example, helping men understand that PC can benefit not only themselves but also other family members may increase their receptivity toward PC.³⁵

A major strength of this study is the cohort. Prior studies on attitudes toward treatment and EOLC typically ask nonpatient participants to respond to hypothetical scenarios of questionable personal relevance.³⁶ Our study only included patients with advanced disease for whom responses about EOLC are less hypothetical. Our study has some limitations as well. The cross-sectional design precludes causal

inferences and does not permit analyses of demographic influences on how preferences for treatments at the EOL change over time.³⁷ Generalizability is limited by the cohort, which included patients of oncologists in NY and CA who are willing to enter a clinical trial to improve communication. Findings cannot be presumed to generalize to patients with hematological cancers. We were unable to account for additional covariates such as religious practice, spirituality, death anxiety, health literacy, and knowledge about end-of-life issues. Finally, it is possible that the phrasing of the PC preference item (“no further anticancer treatment ... would be helpful”) may have affected the study findings. Results may have differed had a different operational definition of PC been used than the one employed here (“comfort care focusing on quality of life, but not a cure”).

In summary, we observed gender differences but no education differences in patients’ preference for PC. These findings, which could partially account for the observed gender disparities in EOLC, underscore the need for future interventions to promote palliative care services among men.

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Appendix

Supplemental Table 1

Sensitivity Analyses of Ordinal Regression Predicting Preference for Palliative Care (N = 383)

Independent Variable	Adjusted OR (95% CI)	P-value
Gender, female	2.47 (1.67–3.65)	<0.0001
Age ≥ 65 yrs	0.96 (0.64–1.43)	0.85
Education, high school or less	1.06 (0.69–1.63)	0.38
Race, white	1.19 (0.62–2.26)	0.48
Cancer, aggressive	0.80 (0.55–1.17)	0.60
Insurance, Medicaid/Medi-Cal/uninsured	0.81 (0.43–1.50)	0.83
Financial strain, present	1.02 (0.64–1.61)	0.44