Barriers to Mental Health Service Use and Preferences for Addressing Emotional Concerns among Lung Cancer Patients

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Abstract

Objective—This study examined barriers to mental health service use and preferences for addressing emotional concerns among lung cancer patients (*N*=165) at two medical centers in the midwestern United States.

Methods—Lung cancer patients completed an assessment of anxiety and depressive symptoms, mental health service use, barriers to using these services, and preferences for addressing emotional concerns.

Results—Only 45% of distressed patients received mental health care since their lung cancer diagnosis. The most prevalent patient-reported barriers to mental health service use among non-users of these services (*n*=110) included the desire to independently manage emotional concerns (58%) and inadequate knowledge of services (19%). In addition, 57% of distressed patients who did not access mental health services did not perceive the need for help. Seventy-five percent of respondents (123/164) preferred to talk to a primary care physician if they were to have an emotional concern. Preferences for counseling, psychiatric medication, peer support, spiritual care, or independently managing emotional concerns also were endorsed by many patients (range=40%–50%). Older age was associated with a lower likelihood of preferring to see a counselor.

Conclusions—Findings suggest that many distressed lung cancer patients underuse mental health services and do not perceive the need for such services. Efforts to increase appropriate use of services should address patients' desire for autonomy and lack of awareness of services.

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Keywords

lung cancer; oncology; mental health service use; barriers; psychological; distress

Background

Lung cancer is one of the most common cancers diagnosed in men and women, with over 228,000 new cases in the United States expected in 2013 [1]. Lung cancer patients report greater anxiety and depressive symptoms and more unmet psychological needs than other cancer patients [2–5]. Research suggests that up to 52% of lung cancer patients show clinically significant anxiety and depressive symptoms [6–9].

Although a substantial proportion of lung and other cancer patients show significant psychiatric symptoms [5, 8], their rates of mental health service use are generally low [10–11]. One study found that less than half (45%) of advanced cancer patients with a psychiatric diagnosis accessed mental health care in the U.S. [11]. Few American studies have specifically examined lung cancer patients' receipt of support services. One study at an academic cancer center found that few newly diagnosed lung cancer patients received support from social workers (14%), chaplains (7%), or psychiatrists (3%) over a 6-month period [12]. Another study at an academic cancer center showed lower rates of support service use (e.g., use of mental health services, nutritional counseling, physical therapy) among lung cancer patients compared to gastrointestinal or breast cancer patients (39% vs. 58% and 59%, respectively) [10].

Although lung and other cancer patients' underuse of mental health services has been documented [10–11, 13–14], patient-reported barriers to mental health service use have rarely been studied. Preliminary evidence suggests that many cancer patients perceive both practical and psychological barriers to mental health care [15–17]. For example, one study in the U.S. examined barriers to use of an HMO Cancer Counseling Center among individuals diagnosed with breast, prostate, or colorectal cancer [16]. The most common barriers included perceiving social support from other sources to be adequate (32%), lack of awareness of the Cancer Counseling Center (25%), and lack of physician recommendation (13%). Another study in the U.S. found that cancer patients who had undergone hematopoietic stem cell transplantation reported four types of barriers to mental health service use, including time constraints, physical impairment, lack of knowledge of services, and feelings of embarrassment or discomfort associated with service use [15]. Similarly, a study of lung cancer patients in Japan found a range of patient-reported barriers to use of counseling services and psychotropic medication [17]. Common barriers to counseling service use included discomfort discussing emotions and its perceived ineffectiveness, whereas barriers to psychotropic medication use included concerns about the potential for addiction and side effects as well as a perceived lack of need for such medications. Continued examination of perceived barriers to mental health service use among cancer patients is important because attitudes toward these services have predicted service use in this population [18]. In contrast, efforts to identify objective indicators of cancer patients' need for mental health services (e.g., distress) as correlates of their receptivity to such services have not yielded consistent findings [19–20].

Cancer patients' attitudes toward mental health services may reflect those of the general population. For example, although population-based surveys in the U.S. have found improved attitudes toward mental health treatment seeking over time, a substantial minority of Americans continue to report stigma and discomfort associated with use of mental health services [21–22]. Evidence of prevalent stigmatizing attitudes toward depression and its treatment also has been found in Canadian and Australian studies [23–24]. Thus, in Western cultures, cancer patients' decisions regarding mental health care may be influenced by societal stereotypes of mental illness and professional help-seeking.

Cancer patients' preferences for addressing emotional concerns, including interest in mental health services, also have received little research attention. One study of prostate cancer patients undergoing androgen deprivation therapy found that a minority (22%) showed interest in psychosocial services [25]. Other researchers surveyed lung cancer patients at medical centers in Southern California and found that over half (51%) believed that they would benefit from psychological services if available at no cost [26]. Knowledge of lung cancer patients' preferences for addressing emotional concerns and barriers to mental health service use is essential for guiding the development of interventions that are acceptable and readily sustainable in clinical practice.

To address these gaps in the literature, questionnaires were administered to lung cancer patients to determine: (1) their use of mental health services since the cancer diagnosis; (2) perceived barriers to mental health service use for patients who did not access these services; and (3) patients' preferences for addressing emotional concerns (e.g., talking to their primary care physician, seeing a spiritual leader, waiting for it to get better) and demographic, medical, and psychological (i.e., anxiety and depressive symptoms) predictors of these preferences.

Methods

Participants and procedures

Following institutional review board approval, lung cancer patients were approached in the oncology clinics at the Roudebush VA Medical Center (Indianapolis, IN) and the Indiana University Simon Cancer Center (IUSCC; Indianapolis, IN). Eligibility criteria included English fluency, at least 18 years of age, and no significant cognitive impairment. Medical records were reviewed to initially assess patient eligibility. The patient's oncologist was consulted to evaluate whether the patient was too ill or incapacitated to complete the study and/or provide valid responses. During a clinic visit, a research assistant approached potentially eligible patients. The study was described to patients and those who were interested in study participation signed a consent form.

Consenting patients completed a 30- to 40-minute telephone assessment that included questions regarding their demographic and medical information, anxiety and depressive symptoms, mental health service use, barriers to using these services, and preferences for addressing emotional concerns. After participating in the assessment, each patient received a $25 check. All participants also received a brochure from our study team describing various mental health services (e.g., psychological, social work, and psychiatric services) available

at the study site. Distress screening and referral to mental health services were not routinely conducted by oncology clinic staff at the study sites.

Measures

Demographic and medical information—Demographic information was self-reported, and medical information (i.e., type and stage of lung cancer, time since diagnosis, and treatments received) was obtained via chart review. In addition, the Karnofsky Self-Reported Performance Rating Scale (KPS-SR) [27–28] assessed functional status or impairment caused by physical symptoms. This measure has been correlated with survival in lung cancer patients [28].

Transportation difficulties—Difficulty traveling to appointments for medical or supportive services was assessed on a 4-point scale from 1 (*not at all difficult*) to 4 (*extremely difficult*) [25].

Smoking status—Smoking status was assessed using two validated items from the Behavioral Risk Factor Surveillance System Survey [29]. The first item asked about patients' smoking history (i.e., whether they had smoked at least 100 cigarettes in their lifetime). The second item assessed current smoking status (i.e., whether they currently smoked cigarettes every day, some days, or not at all).

Anxiety and depressive symptoms—The 14-item Hospital Anxiety and Depression Scale assessed symptoms of anxiety and depression during the past week [30–31]. The telephone-administered HADS has shown evidence of validity in previous studies with cancer patients [32–33]. For the present research, coefficient alphas for the Anxiety and Depression subscales were .84 and .82, respectively.

Mental health service use—Several items assessed mental health service use. Patients reported whether they had "ever seen anyone for emotional or psychiatric problems" or "taken medication for an emotional problem" before their lung cancer diagnosis. Patients also reported whether they had "received counseling, attended support groups, or taken medication for an emotional problem" since their lung cancer diagnosis. If they had received services, they were asked to identify the type of service.

Barriers to mental health service use—Ten items from the Barriers to Treatment Questionnaire (BTQ) [34] assessed perceived barriers to seeking mental health services following the lung cancer diagnosis in the following domains: logistical and financial, stigma, and perceptions of treatment. The BTQ was based on similar questionnaires from the literature on barriers to treatment [34]. For the current study, two new items were added to assess the perception that one does not need help and that one is too sick to travel to appointments. For each of the 12 items, participants indicated whether the barrier had caused them to delay or avoid seeking mental health services following their lung cancer diagnosis (see Table 2 for individual items).

Preferences for addressing emotional concerns—Six items adapted from the Michigan Interview for Life Events (MILE) of the Michigan Depression Project [25, 35] assessed patients' preferences for addressing emotional concerns related to their cancer, such as talking to a spiritual leader or primary care physician or taking medications. An item was added to assess the preference to see a community member who had personal experience with cancer. Patients provided a yes or no response to each of the seven items.

Statistical Analyses

Data were analyzed with SPSS statistical software (version 20.0; SPSS, Chicago, IL, USA). First, descriptive statistics were computed to characterize participants' demographic and medical information, anxiety and depressive symptoms, mental health service use, barriers to mental health service use, and preferences for addressing emotional concerns. T-tests and chi-square analyses were used to examine whether demographic and medical factors and study variables differed between study sites. Next, chi-square analyses were conducted to examine whether use of mental health services before and after the lung cancer diagnosis was associated with each preference for addressing emotional concerns. Then logistic regression models estimated the bivariate effects of demographic and medical factors and anxiety and depressive symptoms on each preference for addressing emotional concerns. An additional set of logistic regression models simultaneously estimated all significant bivariate effects. All reported *p* values were two-tailed with values of *p* < .05 considered statistically significant.

Results

Sample Characteristics

A research assistant approached 187 eligible lung cancer patients during an oncology clinic visit, and 96% (*n* = 180) consented to participate in this study. Of those who consented to participate, 93% (*n* = 167) completed the assessments. Reasons for withdrawal prior to completing the assessments were study refusal (*n* = 7), death (*n* = 2), medical conditions (i.e., cognitive impairment or hearing loss; *n* = 2), and inability to reach the patient via phone (*n* = 2). Reasons for study refusal before or after the consent process were time constraints, dissatisfaction with conducting the assessments via phone, and physical and psychological distress. Data from two patients were omitted from the current analyses due to missing values.

Sample demographics and medical characteristics are shown in Table 1. The majority of participants were Caucasian (80%), male (51%), and married (57%). Participants were, on average, 63 years of age (*SD* = 9). The median annual household income was over $30,000 with a wide range of income levels represented. The average participant had completed some college, and 22% had full or part-time employment. Participants were, on average, 18 months post-diagnosis of lung cancer, and 47% had stage III or IV non-small cell lung cancer. Most participants (73%) were former smokers. Nearly one-fourth of participants (24%, 40/165) reported clinically elevated anxiety or depressive symptoms based on validated cutoffs for the HADS (i.e., score   9 on the Anxiety subscale or score   8 on the Depression subscale) [31].

Demographics, medical factors, and study variables were compared between recruitment locations (i.e., Roudebush VA and IUSCC). VA patients were more likely to be male, $\chi^2(1, N = 165) = 19.87$, $p < .001$, and lack health insurance, $\chi^2(1, N = 164) = 36.95$, $p < .001$, compared to IUSCC patients. Additionally, VA patients had less income, $t(155) = 3.49$, $p < .01$, and had been diagnosed with lung cancer more recently, $t(151) = 2.08$, $p < .05$, compared to IUSCC patients. VA patients also reported more difficulty traveling to appointments for medical or supportive services, $t(162) = −3.52$, $p < .01$, and higher levels of depressive symptoms, $t(161) = −2.22$, $p < .05$, than IUSCC patients. In addition, VA patients were more likely to report that they would prefer to treat an emotional concern by working on it on their own, $\chi^2(1, N = 164) = 14.49$, $p < .001$, compared to IUSCC patients. None of the other study variables differed by recruitment location.

Mental Health Service Use and Barriers to Service Use

A substantial minority of participants (42%, 69/165) had received mental health services prior to their lung cancer diagnosis. Additionally, one-third of participants (55/165) reported that they had received mental health services since their lung cancer diagnosis. Only 13 patients without a history of mental health service use accessed these services following the lung cancer diagnosis. Fifty-four patients reported the type of mental health services they had received since their diagnosis, including psychiatric medication (49/54), psychotherapy (12/54), and support groups (7/54). Among those with clinically elevated anxiety or depressive symptoms, 45% (18/40) reported receiving mental health services since their lung cancer diagnosis.

Perceived barriers to mental health service use for patients who did not use these services since the cancer diagnosis ($n = 110$) are presented in Table 2. The most prevalent barriers included thinking they did not need help (75%), wanting to handle emotional concerns on their own (58%), and lack of knowledge of services (19%). Furthermore, among patients with significant anxiety or depressive symptoms who did not access mental health services, 57% (12/21) did not perceive the need for help. Less common barriers to mental health service use included concerns about costs or time constraints, feeling too sick to travel to appointments, and stigma or discomfort associated with service use (range = 4% to 12%).

Preferences for Addressing Emotional Concerns

Table 3 presents preferences for addressing emotional concerns and comparisons of these preferences between users and non-users of mental health services since the lung cancer diagnosis. In the entire sample, the most frequently reported preferences were talking to a primary care physician (75%), seeing a spiritual leader (50%), and addressing the emotional concern on their own (49%). Less than one-third of the sample (32%) preferred to simply wait for the emotional concern to improve. When analyzing preferences for addressing emotional concerns as a function of mental health service use, patients who had used mental health services prior to their lung cancer diagnosis were more likely to prefer to see a counselor than those who had not used these services, $\chi^2 (1, N = 164) = 9.57$, $p < .01$. The two groups, however, did not differ with regard to any of the other preferences for addressing emotional concerns. In addition, patients who had used mental health services since the lung cancer diagnosis were more likely to prefer to see a counselor and take

psychiatric medication than those who had not used these services (see Table 3). Other preferences did not vary between the two groups.

Preferences for addressing emotional concerns also were examined in relationship to demographics, medical factors, and anxiety and depressive symptoms. Results of bivariate and multivariate analyses are shown in Table 4. As noted above, participant characteristics varied by recruitment location; thus, we controlled for recruitment location in all analyses. In bivariate analyses, preferring to see a counselor was correlated with younger age, ethnic minority status, and greater difficulty traveling to appointments. Multivariate analyses showed that these three variables correctly classified 63% of the sample with regard to this preference and uniquely predicted this outcome. Preferring to see a spiritual leader was associated with lower levels of income and having a religious affiliation. In the multivariate model, these variables correctly classified 61% of the sample with regard to this preference and uniquely predicted this outcome. Preferring to talk to a primary care physician was associated with lower levels of education and income as well as not having health insurance. Multivariate analyses showed that these three variables correctly classified 74% of the sample with regard to this preference; however only lower levels of education uniquely predicted this preference. In addition, preferring to see a community member with personal cancer experience was only correlated with greater anxiety symptoms, and preferring to wait for the emotional concern to improve was only correlated with greater difficulty traveling to appointments. Finally, none of the study variables were significantly associated with preferences to take psychiatric medication or address the emotional concern on one's own (all ps > .05).

Conclusions

This study is among the first to examine mental health service use, barriers to using these services, and preferences for addressing emotional concerns in lung cancer patients. Twenty-four percent of patients reported significant anxiety or depressive symptoms, which is similar to that found in previous research with this population [36]. Although most patients had health insurance and all were receiving care at medical centers with comprehensive mental health services, only 45% of patients with significant anxiety or depressive symptoms received mental health care since their lung cancer diagnosis. Similarly, another study in the U.S. found that less than half of advanced cancer patients with a psychiatric disorder received mental health care [11].

In this study, patients who did not access mental health services reported a range of barriers to using these services. The most common barriers included a desire to independently manage emotional concerns (58%) and inadequate knowledge of services (19%). In addition, 57% of distressed individuals who did not access mental health services did not perceive the need for help. Less common barriers to mental health service use included financial concerns, time constraints, feeling too ill to travel to appointments, and stigma or discomfort associated with service use. Two other studies of cancer patients in the U.S. also found little endorsement of practical, emotional, and illness-related barriers to mental health care [15–16]. However, in studies conducted in the U.S. and Japan, many cancer patients have endorsed lack of awareness of mental health services [16–17]. Taken together, research

findings point to the need to educate patients regarding existing mental health services and the benefits of using these services.

Lung cancer patients' preferences for addressing emotional concerns also were examined. The majority of patients reported that, if they had a cancer-related emotional concern, they would prefer to talk to their primary care physician (75%). Preferences for peer support, counseling, psychiatric medication, spiritual care, or taking steps on their own to address emotional concerns also were reported by a number of patients (range = 40% to 50%). Fewer patients (32%) preferred to wait for emotional concerns to lessen. Similarly, in a study of prostate cancer patients, the most common preferences for addressing depression were talking to a primary care physician or a mental health professional, and fewer patients indicated that they would cope with depression alone [25]. Interestingly, in this study, preferences for addressing emotional concerns did not differ between users and non-users of mental health services since the lung cancer diagnosis, with the exception that users were more likely to prefer seeing a counselor or taking psychiatric medication than non-users. The large differences in receptivity to counseling and psychiatric medication use and similar receptivity to non-psychiatric services (e.g., primary care physician) between users and non-users of mental health services point to potential stigma specific to mental health care. Although most patients in this study did not report stigmatizing attitudes toward mental health service use, these attitudes are highly prevalent in general population surveys [21–22]. Thus, a more in-depth analysis of stigma may be warranted in future research with distressed lung cancer patients who do not access mental health services, including anticipated negative self-perceptions and social reactions to service use.

Associations between demographic factors and preferences for addressing emotional concerns also were examined. Younger age was associated with a greater likelihood of preferring to see a counselor. In addition, ethnic minority group members, almost all of whom were African American, were more likely to prefer to see a counselor than Caucasians. In prior research with the general population, age has shown mixed relationships with attitudes toward mental health services [37–38], and African Americans have shown more positive attitudes towards mental health services than Caucasians, despite their lower rates of service use [21, 39]. In our study, rates of mental health service use before and after the lung cancer diagnosis did not significantly differ between ethnic minorities and Caucasians (data not shown); thus, prior experience with mental health services does not account for the findings. In-depth qualitative research may help to elucidate reasons for racial differences in attitudes toward mental health service use.

Our study also found that indices of socioeconomic status were associated with preferences for addressing emotional concerns. For example, lower income was correlated with the preference to see a spiritual leader (a free service), and lower levels of education were correlated with the preference to talk to a primary care physician. Difficulty traveling to appointments did not show consistent associations with preferences for addressing emotional concerns, as it was positively correlated with the preference to see a counselor as well as the preference to wait for the emotional concern to improve. Further research is needed to better understand the receptivity of demographic subgroups of cancer patients to mental health care and alternatives to this care.

Limitations of this study and directions for future research warrant discussion. Although the sample was diverse with regard to income, education, and disease characteristics, participants were primarily Caucasian and Christian. The extent to which findings generalize to other cultural and religious groups requires study. In addition, causal relations among variables could not be determined due to the cross-sectional design. Future investigations may examine changes in lung cancer patients' mental health service use, barriers to using these services, and preferences for addressing emotional concerns over the course of the illness. Furthermore, use of a theoretical framework such as Andersen's model of health service use [40] or the Theory of Planned Behavior [41] would enhance our understanding of contextual and psychological predictors of service use. For example, clinician referrals to services, social support, stigma associated with lung cancer and mental health service use, and perceptions of mental health professionals could be assessed within Andersen's framework [40]. Additionally, a more comprehensive assessment of barriers to mental health service use would require a qualitative and quantitative approach and the involvement of practitioners, patients, and patients' family members in the research. Finally, although conducting telephone assessments of barriers to service use and other participant characteristics minimized missing data and allowed us to monitor participant distress, social desirability and other respondent biases are potential limitations of this approach.

The present results inform future research and clinical care. Our findings highlight high rates of significant anxiety and depressive symptoms and underuse of mental health services among lung cancer patients. The primary barriers to mental health service use were a perceived lack of need for services, even among patients with significant distress, a desire to independently address emotional problems, and inadequate knowledge of services. To address barriers to service use, researchers should evaluate whether routine distress screening followed by referrals to mental health services results in better management of distress than other strategies (e.g., preventive intervention offered to all patients). In addition, Internet-based mental health services may address a number of barriers to service use (e.g., stigma, desire for autonomy, physical limitations). However, evidence indicates that lung cancer patients are less receptive to Internet-based support relative to other cancer patient groups [42].

The current findings also suggest that preferences for addressing emotional concerns vary by age, race, and socioeconomic status; thus, research and clinical efforts to educate patients about existing mental health services should be tailored to demographic characteristics and perceived barriers to service use. For example, older adults' discomfort or unfamiliarity with counseling may be addressed when promoting mental health services. In addition, research is required to develop and evaluate psychological interventions for lung cancer patients that are acceptable to patients and readily sustainable in clinical practice [43]. Given the substantial physical and psychological challenges faced by lung cancer patients, developing and disseminating effective mental health interventions for this population should be a high priority for future research and clinical care.

Acknowledgments

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Table 1

Sample characteristics (N = 165)

Variable	*n* (%)	*M* (*SD*)	Range
Sex—Male	84 (51%)		
Race/Ethnicity			
Non-Hispanic White	132 (80%)		
African American/Black	32 (19%)		
Native American	1 (0.6%)		
Age (years)		63 (9)	36 to 84
Marital Status			
Married or marriage equivalent	94 (57%)		
Widowed	19 (12%)		
Divorced or separated	32 (19%)		
Single	20 (12%)		
Religious Affiliation			
Catholic	28 (17%)		
Protestant/Other Christian	115 (70%)		
Other religious affiliation	2 (1%)		
None	19 (12%)		
Missing	1 (0.6%)		
Annual Household Income (median)		>$30,000	<$11,000 to >$100,000
Education (years)		13 (3)	5 to 24
Employment Status			
Employed full or part-time	37 (22%)		
Retired	72 (44%)		
Unemployed	50 (30%)		
Homemaker/Other	6 (4%)		
Receipt of Health Insurance	144 (87%)		
Smoking status			
Current smoker	31 (19%)		
Former smoker	120 (73%)		
Never smoked	13 (8%)		
Missing data	1 (0.6%)		
Months since Lung Cancer Diagnosis		18 (22)	.00 to 114
Non-small Cell Lung Cancer Stage (*n* = 141)			
I	42 (30%)		
II	20 (14%)		
III	41 (29%)		
IV	37 (26%)		
Missing	1 (0.7%)		
Small Cell Lung Cancer Stage (*n* = 24)			
Limited	9 (38%)		

Variable	*n* (%)	*M* (*SD*)	Range
Extensive	15 (63%)		
Type of Lung Cancer Treatment			
Surgery	95 (58%)		
Chemotherapy	114 (69%)		
Radiation	79 (48%)		
Treatment Center			
Indiana University Simon	137 (83%)		
Cancer Center			
Roudebush VA Medical Center	28 (17%)		

Table 2

Proportion of patients endorsing barriers to mental health service use

Barrier	% Yes (No./Total)
Did not think that I needed help	75 (82/109)
Wanted to handle it on my own	58 (64/110)
Unsure who to see or where to go	19 (21/110)
Didn't think treatment would work	14 (15/108)
Problems with transportation or scheduling	14 (15/110)
Worried about how much it would cost	12 (13/110)
Thought it would be too inconvenient or take too much time	7 (8/109)
Health insurance would not cover treatment	6 (6/104)
Worried about what people would think if they knew I was in treatment	6 (6/110)
Not comfortable discussing my problems with a health professional	5 (5/110)
Received treatment before and it did not work	5 (5/110)
Felt too sick to go to an appointment	4 (4/99)

Note. Only data from patients who did not use mental health services (i.e., psychotherapy, psychiatric medication, or support groups) following their lung cancer diagnosis are reported.

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Table 3

Preferences for addressing emotional concerns among users and non-users of mental health services

Preference	Total sample % Yes (No./Total)	Users of mental health services[a] % Yes (No./Total)	Non-users of mental health services % Yes (No./Total)	χ^2 $(df = 1)$[b]
Talk to primary care physician	75 (123/164)	76 (42/55)	74 (81/109)	.08
See a spiritual leader	50 (82/165)	46 (25/55)	52 (57/110)	.59
Work on it on my own	49 (81/164)	46 (25/55)	51 (56/109)	.51
Take medications	47 (75/161)	57 (31/54)	41 (44/107)	3.83[*]
See a counselor	44 (72/164)	62 (34/55)	35 (38/109)	10.79[**]
See a community member with personal cancer experience	40 (64/162)	38 (21/55)	40 (43/107)	.06
Wait for it to get better	32 (52/161)	33 (18/55)	32 (34/106)	.01

[a]Users of mental health service had received psychotherapy, taken psychiatric medication, or attended support groups since the lung cancer diagnosis.

[b]Chi-square for comparing users and non-users of mental health services with regard to their preferences for addressing emotional concerns.

[*]$p < .05$.

[**]$p < .01$.

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Table 4

Logistic regression analyses predicting preferences for addressing emotional concerns

Outcome	Predictors	Bivariate Analyses				Multivariate Analyses			
		B	Wald χ^2	Odds ratio	95% CI for odds ratio	B	Wald χ^2	Odds ratio	95% CI for odds ratio
See a counselor									
	Age	-.04*	5.43	.96	.93 to .99	-.04*	4.85	.96	.93 to 1.00
	White race[a]	-.85*	4.55	.43	.20 to .93	-.79*	3.78	.45	.20 to 1.01
	Difficulty traveling to appointments	.39*	3.92	1.48	1.00 to 2.17	.40*	3.98	1.49	1.01 to 2.19
See a spiritual leader									
	Income	-.27*	6.04	.77	.61 to .95	-.22*	3.94	.80	.64 to 1.00
	Religious affiliation[a]	1.13*	4.26	3.09	1.06 to 9.04	1.22*	4.09	3.38	1.04 to 11.00
Talk to primary care physician									
	Education (years)	-.22**	9.79	.80	.70 to .92	-.21*	6.08	.81	.69 to .96
	Income	-.26*	3.82	.77	.59 to 1.00	-.04	.06	.96	.71 to 1.31
	Health insurance[a]	-1.67*	3.89	.19	.04 to .99	-1.35	2.39	.26	.05 to 1.44
See a community member with personal cancer experience									
	Anxiety	.08*	3.83	1.09	1.00 to 1.18				
Wait for it to get better									
	Difficulty traveling to appointments	.67**	10.74	1.96	1.31 to 2.94				

Note. CI = confidence interval. For all chi-square analyses, df = 1. Recruitment location was a control variable in all analyses (omitted from the table). For the preference to see a counselor, ns = 163–164; for the preference to see a spiritual leader, ns = 156–164; for the preference to talk to a primary care physician, ns = 156–164; for the preference to see a community member with personal cancer experience, n = 161; for the preference to wait for it to get better, n = 160.

[a] Coded 0 = no, 1 = yes.

*
$p < .05$.

**
$p < .01$.