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Cognitive Appraisals of Specialty Mental Health Services and Their Relation to Mental Health Service Utilization in the Rural Population

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Abstract

Purpose—Rural individuals utilize specialty mental health services (eg, psychiatrists, psychologists, counselors, and social workers) at lower rates than their urban counterparts. This study explores whether cognitive appraisals (ie, individual perceptions of need for services, outcome expectancies, and value of a positive therapeutic outcome) of help-seeking for depression symptoms are related to the utilization of specialty mental health services in a rural sample.

Methods—Demographic and environmental characteristics, cultural barriers, cognitive appraisals, and depression symptoms were assessed in one model predicting specialty mental health service utilization (MHSU) in a rural sample. Three hypotheses were proposed: (1) a higher number of environmental barriers (eg, lack of insurance or transportation) would predict lower specialty mental health service utilization; (2) an increase in cultural barriers (stigma, stoicism, and lack of anonymity) would predict lower specialty mental health utilization; and (3) higher cognitive appraisals of mental health services would predict specialty mental health care utilization beyond the predictive capacities of psychiatric symptoms, demographic variables, environmental barriers, and cultural barriers.

Findings—Current depression symptoms significantly predicted lifetime specialty mental health service utilization. Hypotheses 1 and 2 were not supported: more environmental barriers predicted higher levels of specialty MHSU while cultural barriers did not predict specialty mental health service utilization. Hypothesis 3 was supported: cognitive appraisals significantly predicted specialty mental health service utilization.

Conclusions—It will be important to target perceptions and attitudes about mental health services to reduce disparities in specialty MHSU for the rural population.

Keywords

access to care; health disparities; mental health; rural; utilization of health services

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Rural populations experience psychiatric disorders at rates similar to urban populations[1–3] but self-report poorer mental health that those in urban areas.[4] Despite these findings, those who live in rural communities utilize specialty mental health care services (eg, services provided by psychiatrists, psychologists, counselors, and social workers) at a lower rate than their urban counterparts. [4–6] Furthermore, results from the National Comorbidity Study (NCS) and the subsequent NCS replication (NCS-R) found that while the quality, acceptance, and promotion of mental health services increased from 1993 to 2003 for most Americans, there are continued unmet mental health needs for those who live in rural communities. [7,8]

Factors that Impact the Decision to Seek Mental Health Services

While psychiatric symptoms are clearly associated with the decisions to seek specialty mental health care, other factors can have as much or more of an influence on that decision.[9,10] Much of the research on rural mental health service utilization (MHSU) has focused on environmental, sociodemographic, and cultural factors that contribute to utilization disparities (eg, age, sex, income, race or ethnicity, insurance coverage, stigma, stoicism, anonymity).[9]

Research has demonstrated that demographic factors such as older age, male gender, and minority ethnicity or race have been associated with lower rates of MHSU.[11–15] Additionally, environmental factors such as poverty, lower education levels, lower rates of health insurance coverage, and more transportation problems are commonly cited barriers to rural MHSU.[16–22] Rural counties account for 95% of “persistent poverty” counties in the United States[16] and, although education levels in rural areas are rising, a gap in rural and urban education levels persists.[17,18] People living in rural areas are more likely to be uninsured,[19] experience longer periods without insurance, and are less likely to seek services when they cannot pay.[20,21] Finally, the low population density in rural areas impedes access to MHSU because there are fewer mental health specialists in these areas. Therefore, seeking specialty services requires distance traveling and consequently results in greater transportation problems.[21,22]

In addition to demographic and environmental factors, cultural factors such as higher rates of perceived stigma of mental illness, less anonymity when seeking mental health care, and higher stoicism have been associated with lower rural MHSU.[23] For example, one study found that rural people with depression perceive more stigma associated with seeking help for mental illness than urban people with depression.[23] Additionally, higher levels of help-seeking have been associated with lower levels of anonymity and higher levels of stoicism in rural residents.[23–25]

Cognitive Appraisals of Help-Seeking

Although the majority of research on MHSU for the rural population has focused on barriers in the environment, fears and apprehensions about mental illness, and/or the negative social consequences of seeking care, there is also evidence that beliefs about health behaviors and perceived consequences (cognitions) can play a role in decisions to change unwanted behaviors or to engage in healthy behaviors.[23,26–29] In an effort to identify the most

important factors in health behavior change, Maddux, Brawley, and Boykin[30] extracted 3 core elements from the most influential models or theories of health behavior change—the Health Belief Model,[31] Protection Motivation Theory,[32–34] and the Theory of Reasoned Action and Planned Behavior.[35,36] These 3 core elements were perceived need for services, outcome expectancies of services, and outcome value. Perceived need is an appraisal of need for mental health services.[30] Perceived need does not always correspond with the evaluated diagnoses of a professional and it has been demonstrated that, regardless of a person's symptoms or evaluated severity of illness, perceived need for services is important in the decision to utilize mental health services.[37] Outcome expectancy is an appraisal of the likelihood that seeking help from a provider will lead to a decrease in symptoms and distress.[30] Outcome value is an appraisal of whether the problem is severe enough to warrant change efforts, even if those efforts were guaranteed to be successful.[30]

Present Study

Research on MHSU in rural populations has focused on environmental barriers, sociodemographic barriers, and cultural barriers to seeking mental health care. Considerably less attention has focused on cognitive appraisals such as individual perceived need, outcome expectancies, and outcome value of help-seeking. Therefore, this study examined the role of individual cognitive appraisal factors of specialty MHSU in residents of several small, rural towns in the mid-southern United States. In order to reach a more comprehensive understanding of each factor's relationship with MHSU, the unique impact of demographic and environmental characteristics, cultural perceptions of seeking help, cognitive appraisals of health services, and current psychiatric symptoms were assessed in one model predicting specialty MHSU.

Hypotheses

Based on previous research examining barriers to specialty MHSU and cognitive appraisals of mental health care, 3 hypotheses were proposed:

H1 Environmental barriers (eg, lack of insurance or transportation) will be negatively related to specialty MHSU.

H2 Cultural barriers (stigma, stoicism, and lack of anonymity) will be negatively related to specialty MHSU.

H3 Cognitive appraisals of specialty mental health care services (perceived need, outcome expectancy, outcome value) will be positively related to specialty MHSU.

Method

Defining Rural

Rurality is defined in many different ways and there has been much debate in the research community on how to define rural for research purposes.[26,38] Summarizing the definition of rurality, Cromartie and Bucholtz[39] stated that the administrative, land-use, or economic influence of an area and the population size are the most important factors in defining urban

and rural areas. They also point out that rural areas are usually defined as those falling outside of metropolitan areas. Current definitions of metropolitan areas have a lower limit of 50,000 to 2,500 people, depending on the purpose of the definition. [39] Others have argued that there should be less emphasis placed on defining rurality according to proximity to urban areas and more emphasis placed on the underlying causes of disparities in rural areas.[26] Research by Hauestein and colleagues supported this idea: mental health utilization rates were more related to population density than to adjacency to a metropolitan area.[4] This study incorporated the definition posed by Cromartie and Bucholts,[39] along with population size, adjacency to urban areas, and economic influence. Rural in this study was defined as living in a town of fewer than 5,500 people that was situated outside of the major commuting and economic patterns of the metropolitan area (in other words, living at least 30 minutes outside of major cities with populations of 30,000 or more). Participants were recruited at local rural grocery stores to increase the likelihood that their economic activity was centered in the rural community. Participants provided their 5-digit ZIP code for residence verification.

Recruitment

Participants were recruited inside and outside of local grocery stores in 2 towns in the mid-southern United States located 45 minutes to 2 hours from major metropolitan areas. Both towns had populations of fewer than 5,500. Interested individuals were given a brief description of the study and they provided their contact information. Individual structured interviews were conducted over the telephone by trained research assistants.

A total of 267 participants were recruited (35% male, 65% female) and 105 (39%) of those recruited were successfully contacted by telephone and agreed to participate (35% of the women and 46% of the men that were initially recruited participated in the survey, ($\chi^2 = 2.9$, $df = 1$, $P = .09$). No further contact attempts were made for participants who were unable to be reached after 3 attempts (n = 71), for participants who declined to participate (n = 3), or for participants whose telephone numbers were incorrect or disconnected (n = 20). Of the 105 people contacted who completed the interview (44% male), 6 were excluded from the sample because their reported ZIP code was for a city that had a population above 5,500. Therefore, the total number of participants included in the final sample was 99 (43% male).

Procedures

Participants who were contacted by telephone and agreed to participate gave verbal informed consent. They then answered a series of questions, described in detail below. The time required to complete each interview was approximately 15 minutes. After the interview was complete, each participant was mailed a debriefing letter along with a $15 gift card.

Measures

Perceived Need—Perceived need for mental health services was assessed with a vignette. The vignette was based on a story created by Rost and colleagues[23] that describes a major depressive episode. The vignette was modified to refer to the first person but retained all essential elements of the character. The vignette asked participants to imagine that they were experiencing numerous depressive symptoms.

To measure perceived need for services, participants were asked if they should seek help from (1) a doctor, and (2) a counselor or therapist if they were experiencing the situation in the vignette. Answers were recorded on a 4-point scale. Higher scores indicated greater perceived need for that service.

Outcome Expectancy

Outcome expectancy was also assessed using the modified vignette.[23] Participants were asked to what extent they believed that seeing (1) a doctor, and (2) a counselor or therapist would help alleviate the problem described in the vignette. Answers were recorded on a 4-point scale with higher scores indicating greater outcome expectancy.

Outcome Value

Finally, participants were read an addition to the vignette that described 3 potential barriers to service utilization commonly encountered by rural residents[13]: lack of time, work schedule conflicts, and economic hardship. Participants were then asked how important it was that they seek treatment. Answers were recorded on a 7-point scale. Higher scores indicated perceptions of greater importance of treatment (ie, higher outcome value).

Composite Cognitive Appraisal Variable

A single cognitive appraisal variable was calculated to test the third hypothesis in the regression analysis. The variable was calculated by computing z-scores for each of the cognitive appraisal variables (perceived need, outcome expectancy, and outcome value) for a counselor or therapist in order to standardize the metric The total of the 3 z-scores were then computed. Higher scores indicated more positive cognitive appraisals of help-seeking. All of the cognitive appraisal variables were significantly correlated (see Table 1 for correlations.). The composite measure had a Cronbach's alpha of .71.

Perceived Cultural Barriers to MHSU: Stigma, Stoicism, and Anonymity

Perceived cultural barriers to seeking specialty mental health care were assessed using statements in conjunction with the vignette. Participants were asked to report if they "agree" or "disagree" with each statement. Stigma was assessed using the statement: My friends and family will think I am crazy if I see a counselor or therapist. Stoicism was assessed using the statement: My problems are my own business. Anonymity was measured using the statement: My friends and neighbors will know if I see a counselor or therapist.

Psychiatric Symptoms

Symptoms of mental illness were measured using a modified version of the *Brief Symptom Inventory-18* (BSI-18).[40] The BSI-18 has been demonstrated to have good internal consistency (Cronbach α = .89; item to item correlations of .37–.70).[41] For this study, only 17 of the 18 questions were used. One question related to suicidal ideation was excluded. The BSI-18 instructions were also modified by asking people to endorse whether they had experienced symptoms in the past year rather than the past week. Global Severity and Depression Index scores were computed according to the BSI-18 instructions, adjusting for the omission of 1 item.[40] Internal reliability of the modified BSI-18 Global Severity score

was good (Cronbach's α = .93). There was also good internal reliability for the Depression Severity Index score (α = .84).

Service Utilization

In order to determine lifetime use of medical and specialty mental health services for emotional, mental health or substance abuse problems, a series of questions from the National Survey of American Life were utilized.[8] A single variable for specialty MHSU was computed. Lifetime utilization of a psychiatrist, psychologist, social worker, or counselor for an emotional or substance abuse problem was coded as "1" for those who reported use of any of these specialty mental health services and "0" for those who did not.

Sociodemographic Information and Environmental Barriers

A variety of sociodemographic variables and environmental barriers were assessed including age, sex, ethnicity, income, education achievement, medical insurance status, employment status, number of and relationships to persons in the household, presence of reliable transportation, and possession of a valid driver's license. In addition, participants provided their 5-digit ZIP code to determine the size of the town in which they lived.

Composite Environmental Barriers Variable

To test the first hypothesis in the regression analysis, a composite environmental barriers variable was created. First, each of the following variables was coded dichotomously in the following manner: income barrier (1 = annual income less than $25,000), education barrier (1 = less than high school educational attainment), employment barrier (1 = unemployed or disabled), transportation barrier (1 = no reliable transportation), driver's license barrier (1 = no valid driver's license), and insurance barrier (1 = no reported health insurance). These 6 dichotomous variables were then summed to form the composite environmental barriers variable. Scores ranged from 0 to 6, with higher scores indicating greater sociodemographic barriers to help-seeking.

Results

Demographic Information

The final sample (N = 99) was 43% male, and 92% self-identified as white. The average age was 45.4 years (SD = 15.3). A total of 57% of the sample reported less than $25,000 in annual income and only 39% of the sample was employed full-time. The mean household size was 3.1 persons. A total of 18% had not completed high school. Although most people reported having some health insurance, 31% of the sample reported that they were currently uninsured. Detailed demographic and clinical information is available in Table 2.

BSI-18 Clinically Elevated Symptoms

When comparing participant responses to community norms stratified by gender, 12% of the total sample scored in the clinical range on the Global Severity Index of the BSI-18 (*t* score above 65). Additionally, 12% of the sample scored in the clinical range on the Depression Severity Index.

Service Utilization

Service utilization rates for participants are shown in Table 2. Of the total sample, 45% endorsed lifetime utilization of a health professional for an emotional or substance abuse problem. Slightly more of the interviewees that endorsed help-seeking reported utilizing medical health care services (73%) rather than specialty mental health care services (67%). Additionally, 19% of the sample utilized both medical and specialty mental health services.

Cognitive Appraisals of Help-Seeking

Most participants endorsed a need to seek help when confronted with the depressive symptoms in the vignette (perceived need). There was higher perceived need for a medical doctor ($M = 3.37$, SD = 0.97) than a counselor or therapist ($M = 2.87$, SD = 1.09, $t = 3.93$, $df = 95$, $P < .01$). There were also higher-perceived expectations that a doctor could help with the problems in the vignette (outcome expectancy; $M = 3.35$, SD = 0.66) than a counselor or therapist ($M = 3.16$, SD = 0.93, $t = 3.05$, $df = 95$, $P = < .01$). The total sample responded that it would be important to seek help despite cost or time barriers (outcome value). The mean response for outcome value was 5.73 (SD = 1.45; answers ranged from 1 to 7). For more cognitive appraisals information, see Table 3.

Demographic, Cultural, and Cognitive Appraisal Variables Predicting MHSU

A logistic regression model predicting lifetime specialty MHSU was conducted to test hypotheses 1–3 (Table 4). Demographic variables (sex, age), BSI-18 Depression Index scores, stigma, stoicism, anonymity, environmental barriers composite scores (lower income, lower education, lack of insurance, and lack of transportation), and cognitive appraisals composite scores (average standardized scores for perceived need, outcome expectancy, and outcome value) were entered into the model. There were 12 participants with missing data. Covariates with missing values were imputed using the MI and MIANALYZE procedures in SAS (SAS Institute Inc., Cary, NC), which uses multiple imputation methods.

The imputed regression models were significant, $\chi^2 \approx 45$, $df = 8$, $P < .001$. Depression symptoms significantly distinguished those who utilized specialty mental health care from those who did not (OR = 1.28, 95% CI = 1.11–1.47, $P = .001$). Specifically, experiencing clinically elevated depression symptoms in the past year increased the likelihood that the person had sought specialty mental health care services. Gender (OR = 1.04, 95% CI = 0.30–3.53, $P = .95$) and age (OR = .99, 95% CI = 0.95–1.03, $P = .68$) were not significant.

In contrast to hypothesis 1, participants who endorsed more environmental barriers were significantly more likely to have higher specialty MHSU (OR = 1.66, 95% CI = 1.01–2.75, $P = .05$). Additionally, in contrast to hypothesis 2, cultural barriers (stigma OR = 0.45, 95% CI = 0.017–1.60, $P = .12$; stoicism OR = 1.34, 95% CI = 0.32–5.59, $P = .68$; and anonymity OR = 0.82, 95% CI = 0.21–3.17, $P = .77$) did not significantly distinguish between participants who sought specialty mental health care services and those who did not. In support of hypothesis 3, cognitive appraisals significantly distinguished participants who utilized specialty mental health services from those who did not (OR = 1.62, 95% CI =

1.13–2.32, *P* = .01). Higher cognitive appraisals for specialty mental health services significantly predicted specialty MHSU.

Additional Post Hoc Analyses

In order to understand whether having health insurance was related to service utilization, 2 Fisher's exact tests were conducted: 1 for utilization of medical care and 1 for utilization of specialty mental health care. There was no significant relationship between having health insurance and seeking help from a medical professional or a specialty mental health professional. Of those who saw a medical doctor, 66.7% had health insurance and 33.3% did not. Of those who did not see amedical doctor, 58.3% had health insurance and 41.6% did not (*P* = .72). Of those that saw a mental health professional, 56.7% had health insurance while 43.3% did not, and of those who did not see a mental health professional, 80.0% had health insurance and 20.0% did not (*P* = .18). A Pearson product-moment correlation was conducted between BSI-18 Global Severity Index scores and the environmental barriers composite score to assess the relationship between depressive symptoms and environmental barriers. The results of this analysis revealed a significant positive correlation (r = 0.23, *P* = .03).

Discussion

This study sought to explore the role that demographic, cultural, and cognitive factors have in utilization of specialty mental health services in a rural sample. The demographic profile of the sample was consistent with the county populations from which they were drawn.[42,43] Gender and age did not significantly predict MHSU in this sample. It is possible that gender and other demographic differences may not have been detected due to low statistical power. There were some trends for women to report a higher perceived need and outcome expectancy for a counselor or therapist, but these results were not statistically significant. It may also be that although gender may influence help-seeking, other factors such as environmental barriers and cognitive appraisals overshadow these influences.

Because this sample was limited to a small geographic region, it is important to compare psychiatric symptoms in the sample to those in national samples. The 1-year prevalence of clinically elevated psychiatric symptoms in the current sample was 12%. This is consistent with previous findings of 10.5% of rural residents reporting "fair" or "poor" mental health and the approximately 10.9% of adults who experience "serious psychological distress" in a year.[4] The 1-year prevalence rate of clinically elevated depression symptoms was also 12%. This is also consistent with previously reported 12-month prevalence rates of major depressive disorders from 4.2% to 11.9% based on age and gender.[44] It should be noted that the change in instructions from 1 month to 1 year on the BSI likely increased the number of symptoms endorsed and may also have increased the prevalence of clinically elevated symptoms in this sample.

In support of previous research,[4] this sample of rural residents utilized primary care at a slightly higher rate than specialty mental health care for emotional and substance abuse problems. Participants also perceived primary care services as more useful and had more favorable outcome expectancies for primary care than for specialty mental health services

for depressive symptoms. There are many possible explanations for this. First, results support the important roles that perceived need and outcome expectancy may play in influencing the decision of where to seek help. Alternately, results may suggest that little experience with specialty mental health services may lead to lower perceived need and outcome expectancy of these services. There may also be a relationship among increasing media campaigns for antidepressant and other psychopharmacological products as treatments for mental illness and the perception of the perceived need and perceived effectiveness of primary care. Other explanations may be that primary care is more readily available than specialty mental health care in rural areas and, therefore, individuals are more likely to perceive a need and expect favorable outcomes for services that are available to them.[13,21,45] Indeed, more participants sought help for emotional problems from doctors than from therapists or counselors and this greater familiarity with primary care providers may have resulted in higher cognitive appraisals of medical help-seeking for psychiatric problems.

Consistent with previous research, this study supported a relationship of environmental barriers such as income, insurance status, education, employment status, and transportation to specialtyMHSU; however, this relationship was not in the expected direction. The results of this study suggest that more environmental barriers are associated with higher levels of specialty mental health care. One explanation for this result is that there is a positive relationship between environmental barriers and psychiatric symptoms and it is the psychiatric symptoms that prompt a higher need formental health services. This idea is supported by results of this study that revealed a positive correlation between severity of psychiatric symptoms and environmental barriers ($r = 0.23$, $P = .03$). This study did not find a significant relationship between reported insurance status and the utilization of primary medical or specialty mental health care. A high percentage of those who sought treatment from any provider did not have health insurance. This could be due to community health and mental health centers accepting patients regardless of ability to pay or changes in health insurance status since seeking services.

Despite prior research to the contrary,[23] this study did not support the hypothesis that increased cultural barriers such as stigma, stoicism, and anonymity would significantly predict lower mental health care utilization. The fact that each variable was measured with only 1 dichotomously coded question may have limited the predictive ability of the variables. Another explanation is that knowledge about mental illness has improved with greater education and media campaigns for psychiatric medications, which could mean that stigma associated with seeking mental health care is decreasing over time.[28]

The results of this study did support the hypothesis that cognitive appraisals of the need to seek specialty mental health services, the expectations that specialty mental health services will be beneficial, and the value of seeking mental health services are related to specialty MHSU in a rural sample. It may be that improving perceptions of the need for and effectiveness of mental health care could decrease the commonly found disparity in MHSU between rural and nonrural populations.

Limitations and Future Directions

This study has some important limitations. First of all, MHSU was measured as past lifetime utilization. This means that a temporal relationship between cognitive appraisals and MHSU cannot be determined from these analyses. It is entirely possible that prior utilization of mental health services may have increased positive cognitive appraisals of these services. Therefore, prospective studies are needed to better understand the relation between cognitive appraisals and mental health care utilization.

Resources, time constraints, and few standardized measures limited the ability of this study to measure the variables of interest in a comprehensive way. It is hoped that these preliminary results will increase interest in exploring the roles and measurement of cognitive appraisals in the future.

The sample in this study was carefully selected to represent rural residents of the region. Recruitment occurred in remote areas of the region, away from major commuting routes to the major cities within these counties. Given the lack of a consistent definition of rurality in the literature and to ensure the homogeneity of the sample, the portions of the sample that qualified as metropolitan under the Rural-Urban Continuum Code (RUCC) definition of rural were compared to those who did not. Although all of the participants in the study resided in towns with populations less than 5,500, approximately half of the sample resided in a county that was defined as metropolitan according to the RUCC. Therefore, although the sample can be considered rural, it is not likely representative of the most frontier areas, and generalizations from this study to frontier populations should be made with caution. Analyses of the data comparing participants by RUCC regions revealed very few differences on all key demographic and study variables. Moreover, the sample demographic information was consistent with the demographic characteristics of other rural samples.[4] This lack of a difference in the samples coming from “rural” and “metropolitan” areas based on RUCC definitions supports the arguments that definitions of rural should take into account more than adjacency to metropolitan areas. As research in rural health continues, and especially as research expands to more cultural and individual characteristics (eg, cognitive appraisals), it will be critical to continue to explore how definitions of rurality impact the results of research and if the current definitions are appropriate for understanding the health and well-being of this population.

Finally, the survey did not employ a comparison group of urban residents. Without this comparison group, it is impossible to determine to what extent the relations observed among the variables are unique to rural residents. Future studies should seek to include an urban comparison group to identify common barriers and those that relate more specifically to rural areas so that efforts to increase utilization of mental health services can be specifically tailored to community needs.

Despite the above limitations, the study provides evidence that cognitive appraisals common to most models of health behaviors[37] (specifically, perceived need, outcome expectancy, and outcome value) are predictive of reported MHSU. As such, they should be included in future research on service utilization. More importantly, these cognitive variables may be important targets for intervention efforts that seek to reduce health disparities. Although

continued efforts to increase access to and affordability of specialty mental health care services will remain critical, this study suggests that there is much that can be done at the individual level as well as the community level. By increasing recognition of need for services, educating the public about the efficacy of mental health services to address these needs, and providing hope for how life can improve when these needs are properly addressed, disparities in specialty MHSU may be reduced further, especially in rural areas.

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Table 1

Correlations of Cognitive Appraisal Variables for a Counselor or Therapist

	Perceived Need r (*P value*)	**Outcome Expectancy r (*P value*)**	**Outcome Value r (*P value*)**
Perceived need[a]	-	0.62 (.0001)	0.32 (.0014)
Outcome expectancy[b]	0.62 (.0001)	-	0.37 (.0002)
Outcome value[c]	0.32 (.0014)	0.37 (.0002)	-

[a] Perceived need: participants were asked if they should seek help from a counselor or therapist if they were experiencing the problem (depression symptoms) in the vignette.

[b] Outcome expectancy: participants were asked to what extent they believed that seeing a counselor or therapist would help alleviate the problem (depression symptoms) described in the vignette.

[c] Outcome value was measured on a scale of 1–7 (1 = not important that I seek help; 7 = imperative that I seek help).

Table 2

Demographic, Utilization, and Clinical Characteristics of Participants

Variables	Total Sample N = 99 Percent or *M* (SD)
Age	45.40 (15.3)
Male	43%
White	92%
Annual household income <$25,000	57%
Married	53%
Number living in household	3.10 (1.7)
Living with spouse/partner	61%
Have children under 18	37%
<High school graduate	18%
Employment	
Full-time	39%
Part-time	6%
Unemployed	14%
Retired	19%
Disabled	14%
Homemaker	6%
Insurance	
Uninsured	31%
Insured	69%
Of those insured…	
Employer-based insurance	46%
Individual insurance	9%
Medicare/Medicaid	37%
Has mental health benefits (MHB)	54%
Does not have MHB	9%
Does not know about MHB	37%
Transportation	
No reliable transportation	8%
No driver's license	11%
Utilization of services for emotional/substance use problems	45%
Medical	73%
Specialty mental health	67%
Modified Brief Symptom Inventory (BSI)[a]	
Global Severity Index	12%
Depression Severity Index	12%

[a]Percentage scoring in the clinical range (*t* score above 65).

Table 3

Descriptive Statistics for Cognitive Appraisal Variables by Provider Type

	Total Sample N = 99 % reporting "yes" or "definitely yes"	**Male N = 43 % reporting "yes" or "definitely yes"**	**Female N = 56 % reporting "yes" or "definitely yes"**	
Perceived need[a]				
Doctor	81%	79%	82%	$\chi^2 = 0.19$, $df = 1$, $P = .66$
Counselor or therapist	71%	62%	78%	$\chi = 3.07$, $df = 1$, $P = .08$
Outcome expectancy[b]				
Doctor	95%	98%	95%	$\chi^2 = 0.51$, $df = 1$, $P = .47$
Counselor or therapist	81%	74%	86%	$\chi^2 = 2.05$, $df = 1$, $P = .15$
	Mean (SD)	Mean (SD)	Mean (SD)	
Outcome value[c]	5.73 (1.45)	5.56 (1.62)	5.88 (1.29)	$t = -1.08$, $df = 97$, $P = .28$

[a] Perceived need: participants were asked if they should seek help from (1) a doctor, and (2) a counselor or therapist if they were experiencing the problem (depression symptoms) in the vignette.

[b] Outcome expectancy: participants were asked to what extent they believed that seeing (1) a doctor, and (2) a counselor or therapist would help alleviate the problem (depression symptoms) described in the vignette.

[c] Outcome value was measured on a scale of 1–7 (1 = not important that I seek help; 7 = imperative that I seek help).

Table 4

Logistic Regression Model Predicting Specialty Mental Health Service Utilization

Variables	Odds Ratio (95% Confidence Intervals)	*P* value
Age	0.99 (0.95–1.03)	.68
Gender	1.03 (0.30–3.53)	.95
BSI Depression Index	1.28 (1.17–1.48)[a]	.001
Environmental barriers	1.66 (1.01–2.75)[b]	.05
Stigma	0.46 (0.02–3.17)	.68
Stoicism	1.34 (0.32–5.59)	.12
Anonymity	0.82 (0.21–3.17)	.77
Cognitive appraisals	1.62 (1.13–2.31)[a]	.01

Note. Odds reflect being categorized into group of those who reported utilizing specialty mental health services (psychiatrist, psychologist, counselor, and/or social worker).

[a] $P \leq .01$;

[b] $P \leq .05$.