Older adults' help-seeking attitudes and treatment beliefs concerning mental health problems

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Abstract

Objectives—Older adults with mental health problems are especially unlikely to seek professional mental health services. It is not clear, however, whether their help-seeking attitudes and treatment beliefs contribute to this problem. The objectives of this study were to compare older adults' attitudes and beliefs to younger adults' and to examine the influence of age on these variables after controlling for other demographic variables, prior help-seeking, and mental disorders.

Methods—We analyzed cross-sectional data from Part II of the National Comorbidity Survey Replication. This dataset includes 5,692 community-dwelling adults, including 1,341 who were 55 years of age and older. Participants responded to three questions assessing attitudes toward seeking professional mental health services and one question examining beliefs about the percentage of people with serious mental health concerns who benefit from professional help. We used logistic regression to predict positive versus negative attitudes and beliefs from age, gender, education, and race/ethnicity, as well as prior help-seeking and mood and/or anxiety disorder diagnosis.

Results—Overall, more than 80% of participants exhibited positive help-seeking attitudes and more than 70% reported positive treatment beliefs. In contrast to the modest effect of age on beliefs, adults 55 to 74 years of age were approximately two to three times more likely to report positive help-seeking attitudes than younger adults.

Conclusions—Older adults' positive attitudes and treatment beliefs are unlikely barriers to their use of mental health services. This finding, which is consistent with recent positive views of aging, suggests that enabling resources and need factors are more likely explanations for older adults' low rates of mental health service use.

Keywords

help-seeking attitudes; treatment beliefs; mental health service utilization

National epidemiologic surveys from Australia (1), Europe (2), and the United States (3) suggest that 12% to 30% of community dwelling individuals have met criteria for a mental disorder in the past year and that 25% to 50% have had one in their lifetimes. In contrast to these high rates of mental health problems, these surveys have also highlighted strikingly low rates of mental health service use, with 65% to 80% of individuals with diagnosable mental health problems not receiving professional help. Despite evidence that mental health service

utilization is on the rise, the majority of people with mental disorders still do not receive treatment (3). Furthermore, certain demographic groups, notably older adults, remain especially unlikely to seek professional help (4,5).

Considerable attention has been directed to reducing the tremendous gap between the need for and use of mental health services. Mental health commissions in both the United States (6) and Canada (7) were recently created to provide recommendations for improving the mental health systems in these countries in general and for particular underserved segments of the population, including older adults. Andersen's (8) influential behavioral model of health service use suggests that decisions to seek help are determined by people's predispositions to use services (e.g., age, social support, and health beliefs), resources that enable or serve as barriers to use (e.g., health insurance, availability of therapists, and knowledge of how to access them), and their need for help. Application of this model to older adults' mental health service use suggests that they are less likely than younger adults to perceive a need to seek help (9,10), and less likely to have enabling resources such as access to properly trained geriatric mental health professionals and health insurance (6,11,12). However, the influence of predisposing factors, such as help-seeking attitudes and treatment beliefs, on older adults' use of services is less clear. This gap in knowledge is important to fill for two reasons. First, there are strong theoretical foundations for the influence of attitudes and beliefs on behavior, including the motivation and opportunity as determinants of behavior (MODE) model (13) and the theory of planned behavior (14). Second, a large body of empirical evidence supports this theoretical work, indicating that beliefs and attitudes can be highly predictive of a variety of behaviors (15), including whether or not individuals seek psychiatric help (16,17).

Unfortunately, it is not clear at the present time whether and to what extent there are age differences in help-seeking attitudes and treatment beliefs. With respect to attitudes, stigma concerns are often cited as a significant contributing factor to older adults' underutilization of mental health services (12,18). However, studies that have examined this issue empirically, albeit with small samples, suggest otherwise (19–21). Also, certain studies have reported prevalent negative treatment beliefs among older adults (22), while others have found that either no age differences exist in beliefs about the effectiveness of therapy (10,23,24) or that older adults have more positive beliefs about taking psychotropic medication (23). Two likely contributors to these discrepancies are small sample sizes which limit generalizability, and grouping adults 65 and older into one age category despite tremendous inter-individual variability among older adults, including between young-old and old-old individuals (25).

The purpose of this study was to use a large, representative sample to examine differences in help-seeking attitudes and treatment beliefs across the lifespan, including adults aged 55–64, 65–74, and 75+. A secondary purpose was to explore the influence of age on attitudes and beliefs in the context of other related variables, including other sociodemographic characteristics, previous help-seeking, and psychiatric disorders (26,27). We hypothesized, based on our review of the literature, that we would find little variation in treatment beliefs across the lifespan and that age would be positively associated with help-seeking attitudes in both unadjusted models and after controlling for demographic, help-seeking, and mood/anxiety covariates.

Method

Sample

Data came from the National Comorbidity Survey Replication (NCS-R); a nationally representative cross-sectional survey of American households between February 2001 and April 2003. Participants were English-speaking, non-institutionalized civilians aged 18 and older in the 48 coterminous states. The NCS-R had a response rate of 70.9% and was

administered in two parts. Part I was administered to all participants (N = 9,282) and included an assessment of core mental disorders. The current study is based on Part II of the survey, which was administered to a sub-sample of Part I participants (N= 5,692) and included an assessment of additional disorders as well as correlates of the core disorders including attitudes toward mental health service use and treatment beliefs. For a detailed description of the NCS-R, including the sample and weighting procedures, see Kessler et al. (28).

Measures

The NCS-R assessed attitudes toward professional mental health services use with three questions. A willingness question inquired whether respondents would seek professional help if they had serious emotional problems (four response options: would definitely go, probably go, probably not go, or definitely not go). A comfort question required respondents to indicate how comfortable they would feel talking about personal problems with a professional (four response options: very, somewhat, not very, or not at all comfortable). Finally, respondents answered a stigma question regarding how embarrassed they would be if their friends knew they were getting professional help for an emotional problem (four response options: very, somewhat, not very, or not at all embarrassed). We reverse coded items, which can range from 1 to 4, so that higher scores indicate more positive attitudes. We then dichotomized each attitude variable, enabling us to predict whether participants held positive attitudes (e.g., very or somewhat comfortable) or negative attitudes (e.g., not very or not at all comfortable). Although dichotomizing variables reduces variance and statistical power to find significant effects, the large sample size in the NCS-R mitigated this concern. We also created a composite variable by summing the raw scores of the three original attitude variables and then dichotomizing this score so that values of 3 to 7 represent overall negative attitudes and values of 8 to 12 indicate overall positive attitudes. The internal consistency of this 3-item attitude composite is low (α = .56) because alpha is constrained by the small number of items, especially when each measures a distinct aspect of helpseeking attitudes. We retained this composite score given that: (a) low internal consistency is expected under such circumstances, (b) the composite has been used in previous research (16,27), and (c) results using it were consistent with findings across the three items that comprise it.

Belief regarding the usefulness of professional mental health services was assessed with the question: "Of the people who see a professional for serious emotional problems, what percent do you think are helped?" Participants could respond to this question with any number from 0 to 100%. We coded responses to this question into positive (belief that 50% or more will benefit from professional help) versus negative (belief that less than 50% will benefit) beliefs. Dichotomizing responses in this way was justified by the fact that the normally distributed responses ranged from 0 to 100, with a mean of 52.37 (SD=24.01) and a median score of 50.

With respect to demographic characteristics, age was our primary predictor variable of interest. We divided age into seven categories (i.e., 18–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75+) to ensure adequate sensitivity to detect non-linear changes in attitudes and beliefs across the lifespan, including differences between young-old and old-old individuals. We anticipated the possibility of non-linear relationships because of the well-documented reverse U-shaped effect of age on mental health service utilization (4) and evidence from the National Comorbidity Survey of non-linear increases in helpseeking attitudes across our four youngest age categories (27). We also included gender, race/ethnicity (four categories: non-Hispanic white, non-Hispanic black, Hispanic, and other), and years of education as covariates in the analyses. We dummy coded gender and race/ethnicity, and entered years of education as a continuous variable to maximize its variance.

We included past-year mood or anxiety disorder as a covariate in the analyses. In the NCS-R, diagnoses were based on the DSM-IV criteria for mental disorders using a modified version

of the World Health Organization's Composite International Diagnostic Interview (29). The mood disorders included in our analysis were major depression, bipolar disorder, and dysthymia, and the anxiety disorders were agoraphobia, panic disorder, post-traumatic stress disorder, social phobia, specific phobia, and generalized anxiety disorder. We collapsed mood and anxiety disorders into a single dichotomous variable representing the presence versus absence of any of these disorders in the past year. We did not include alcohol and substance use disorders due to their low prevalence among older adults.

Finally, we included lifetime professional mental health service use as a covariate in the analyses. Lifetime use was based on responses to the question of whether or not respondents had ever seen a professional for problems with their emotions, nerves, or alcohol or drug use.

Analytic Strategy

We used multiple logistic regression to examine age as a predictor of help-seeking attitudes and treatment beliefs, controlling for the other predisposing and need variables included in our models (i.e., gender, race/ethnicity, years of education, past-year mood or anxiety disorder, and lifetime mental health service use). We performed separate analyses for each attitude item, the composite attitude variable, and the belief variable. We ran additional models to examine interactions between age and the other independent variables. To ensure that the data represented the national population, we employed the appropriate statistical weights based on the stratification information in the NCS-R public use dataset. We used the Taylor Series Linearization method (30) in SUDAAN (31) for variance estimation purposes.

Results

Table 1 presents descriptive statistics for each of the variables in our study across the adult lifespan. Chi-square analyses revealed that age did not interact with gender, but that adults 65 years of age and older were less well educated and more likely to be White than middle-aged and younger participants. In the overall sample, 21.9% of respondents had a mood or anxiety disorder in the past 12 months whereas only 4.6% had seen a professional for mental health problems in their lifetimes. Significant chi-square analyses for these variables reflect decreasing prevalence of both disorders and help-seeking among older adults, with the lowest rates among those 75 and older.

With respect to the overall attitude composite variable, the majority of respondents (83.7%) reported positive attitudes toward mental health services. Data from Table 1 confirms our hypothesis that older adults' help-seeking attitudes are as or more positive than younger adults' attitudes. In our multivariate logistic regression model the only significant predictors of overall attitudes toward seeking mental health services were past-year mood or anxiety disorder and age, Wald $F(6,42) = 3.51$, $p < .01$. Logistic regression output in Table 2 demonstrates that participants in the 55–64 and 65–74 year old age categories were significantly more likely than the young (18–24) reference group to have positive attitudes. In addition, those in the 75 and older age category did not differ significantly from the young reference group. To examine what appeared to be a reverse J-shaped distribution, whereby help-seeking attitudes become increasingly positive across the first 5 age groups with a modest downturn for the two oldest groups, we conducted a follow-up analysis predicting our composite attitude score from the square root of age. The curvilinear effect of age on attitudes was nearly significant, Wald F $(1,42) = 3.88$, $p = .06$; AOR = 1.13 (CI = 1.00–1.27). In analyses examining interactions between age and the other covariates in the model, none of the interaction terms was significantly predictive of attitudes. Wald F values (df = 1, 42) for these 5 interaction terms ranged from 0.06 to 3.41 with p values ranging from .07 to .81.

Separate regression analyses examining the effect of age and the other covariates on the three individual attitude variables revealed similar findings. Specifically, age was a significant predictor of willingness to seek professional help if they had serious emotional problems, Wald $F(6,42) = 2.39$, $p = .04$. In comparison to the young reference group, the likelihood of having positive attitudes was significantly greater for those 55–64 years old (AOR = 1.82, 95% CI = 1.03–3.22) and 65–74 years old (AOR = 1.92, 95% CI = 1.02–3.62). Additionally, those in the 75 and older age category exhibited a non-significant trend toward positive willingness scores (AOR = 1.66, 95% CI = 0.81–3.40). Regarding how comfortable respondents would feel talking about personal problems with a professional, age was not significantly related to attitudes, Wald $F(6,42) = 1.64$, $p = .16$, and none of the older adult groups were significantly different from the 18–24 year-old reference group; adjusted odds ratios were 1.62 (CI = 0.80–3.26) for 55–64 year-olds, 1.63 (CI = 0.79–3.37) for 65–74 year-olds, and 0.89 (CI = 0.47–1.69) for adults 75+. Finally, regarding how embarrassed respondents would be if their friends knew they were getting professional help for an emotional problem, age was a significant predictor of attitudes, Wald $F(6,42) = 5.89$, $p < .001$. However, none of the older adult age categories was significantly different from the 18–24 year-olds; adjusted odds ratios were 1.58 (CI = 0.97–2.57) for 55–64 year-olds, 1.07 (CI = 0.66–1.74) for 65–74 year-olds, and 1.41 (0.80–2.50) for adults 75 years of age and older

The majority of respondents (72%) also reported positive beliefs about the effectiveness of professional mental health services. The non-significant Chi-square test of the association between age and belief in Table 1 supported our hypothesis that treatment beliefs do not vary across the lifespan. As well, the main effect of age on beliefs in our multivariate model was not significant, Wald $F(6,42) = 1.48$, $p = .21$. Despite these negative findings, we included individual age-group predictors in our multivariate model to examine the possibility of a nonlinear association between age and beliefs. The results of this logistic regression model in Table 3 revealed that positive beliefs were associated with younger age, female gender, White race/ethnicity, having received mental health services in one's lifetime, and an absence of mood or anxiety disorders in the past year. With respect to age, respondents 25–34 and 65–74 were significantly more likely to have negative beliefs compared to the young reference group. However, given the similarities in odds ratios among participants older than 24, our results appeared to suggest especially positive beliefs among 18–24 year-olds rather than a decrease in positive beliefs with age. To test this hypothesis, we reran this analysis using adults 65–74 years of age as the reference category. As expected, only those in the youngest age category were significantly more likely to have positive beliefs, providing support for our hypothesis that treatment beliefs remain relatively stable over the adult lifespan. As was the case with attitudes, additional analyses examining interactions between age and the other covariates when predicting treatment beliefs were not significant. Wald F values (df = 1, 42) for these 5 interaction terms ranged from 0.11 to 3.32 with p values ranging from .08 to .74.

Discussion

The key finding from this study is that, contrary to frequent speculation in the gerontological literature, older Americans do not have negative help-seeking attitudes or negative beliefs about the efficacy of treatment for mental health problems. This finding is true in an absolute sense; more than 80% of adults 55 and older had positive attitudes, and more than 70% had positive treatment beliefs. Our results also show that older adults' attitudes are positive relative to younger adults'.

Data from the NCS-R revealed increasingly positive help-seeking attitudes across the lifespan until 55 to 64 years of age, and then a slight decrease among the young-old (65–74) and old-old (75+) age groups. Importantly, adults 55 to 74 years of age exhibited significantly more positive attitudes than those 18 to 24 years of age, and the help-seeking attitudes of our old-

old (75+) age group did not differ from the youngest age group. The first of the baby boom generation, represented by adults 55 to 64 years old in this survey, exhibited the most positive help-seeking attitudes. After controlling for other variables, they were nearly three times more likely than the young reference group to endorse positive attitudes toward seeking professional help for emotional concerns. It may not be a coincidence that this same age group showed the largest increase in outpatient psychotherapy use from 1987 to 1997 in the National Medical Expenditure Survey (32). Longitudinal data are needed to determine whether this peak in positive attitudes among adults in their late 50s and early 60s reflects a developmental change for adults of this age or a cohort effect. Regardless of which of these explanations is true, as this group ages we are likely to see increasing numbers of them seeking mental health services so long as their help-seeking attitudes remain positive.

Age was the only demographic variable in our model that predicted attitudes, having a stronger influence than other demographic factors that have consistently been linked to positive attitudes, including Black race/ethnicity (26,33) and female gender (20,34). The only other variable in our model that was related to attitudes was past-year mood or anxiety disorder. Our finding that the presence of a mood or anxiety disorder in the past year was associated with negative attitudes toward seeking professional help replicates similar findings among U.S. military personnel (35) and older Korean Americans (36). This unsettling finding of negative help-seeking attitudes among those individuals with the greatest mental health needs might be due to the negative cognitive bias seen in mood and anxiety disorder patients (37). Importantly, negative attitudes among those with mood or anxiety disorders does not appear to be due to inadequate mental health care or dissatisfaction with treatment, as prior help-seeking did not emerge as a significant predictor in this model. Additional research is needed to better understand this potentially significant barrier to service use that the data suggests is equally likely to affect younger and older individuals.

With respect to treatment beliefs, there was very little variation across the lifespan with the exception of especially positive beliefs about treatment efficacy among the youngest age group. This peak in positive treatment beliefs among 18 to 24 year-olds is especially puzzling considering that they evidenced the least positive help-seeking attitudes out of any other age group in this study. Given increases in both the prevalence of disorders and help-seeking across our two youngest age groups, it may be that additional experience with mental health problems and associated treatments among 25 to 34 year-olds lead them to become increasingly open to the need to seek help and somewhat more sceptical about the benefits of doing so. With the exception of the youngest age group, however, the absence of strong age effects on treatment beliefs is consistent with other studies that have failed to find differences between younger and older adults' beliefs about the effectiveness of mental health services (10,24).

In contrast to the relatively modest effect of age on treatment beliefs, we found significantly more positive ratings of the effectiveness of seeing a mental health professional among women, White participants, individuals who did not meet criteria for a mental disorder in the past year, and those who had previously sought help. As was the case with attitudes, having a mood or anxiety disorder in the past year was associated with negative treatment beliefs. Such beliefs do not appear to be due to dissatisfaction with treatment given that prior help-seeking in this study, and in Jorm and colleagues' (24), was associated with positive treatment beliefs. These encouraging results suggest that the increasing prevalence of mental health service use over time (3), especially among baby boomers (32), may be responsible for improvements in beliefs about the effectiveness of mental health services (38). Longitudinal research is needed to test this hypothesis and to examine whether older adults are especially likely to exhibit such improvements. With respect to our finding of less positive treatment beliefs among racial and ethnic minorities, similar results were reported by Bystritsky and colleagues (23). However, beliefs about pharmacotherapy and psychotherapy should be examined separately given a

recent internet study of 78,753 adults which found that White participants held especially positive treatment beliefs concerning medication, whereas racial and ethnic minorities held more positive beliefs about counselling (33). Importantly, previous help-seeking, race/ ethnicity, and the other covariates in our model did not interact with age, suggesting that their influences on treatment beliefs are relatively stable across the lifespan, or at least across various age cohorts.

This study's findings that help-seeking attitudes and treatment beliefs are unlikely contributors to older adults' disproportionate underutilization of mental health services should be interpreted in light of the following limitations. First, although survey instruments exist that reliably measure distinct aspects of help-seeking attitudes and treatment beliefs with multiple questions (23,39), the National Comorbidity Surveys examine them as unitary constructs with very few questions, likely because attitudes and beliefs were not primary outcomes. Doing so introduces unreliability into the measurement of these constructs, as evidenced by the low internal consistency of the attitude composite score, and limits our ability to explore them, and their relationships with age, in complex ways. Furthermore, according to the theory of planned behaviour (14), attitudes toward seeking mental health services affect such service use in concert with perceived control over potential barriers to seeking help and perceived social pressure to seek or not seek help. Attitudes, perceived control, and subjective norms are influenced, in turn, by behavioral, normative, and control beliefs, as well as a host of background factors. Clearly, this theoretical model suggests that the assessment of attitudes and beliefs in the NCS-R is limited, and that additional research is needed to explore age differences in more nuanced aspects of the relationship between help-seeking, attitudes, and beliefs. A second limitation is that treatment beliefs in this survey were measured by asking participants what percentage of people who see professionals for serious emotional problems are helped. Although this question provides very useful general information, longitudinal research is needed to examine changes in treatment beliefs as a result of advances in therapy, such as the introduction of selective serotonin reuptake inhibitors into the U.S. market in 1988 (40), or as a result of personal experience with mental health service providers. Third, the cross-sectional nature of the NCS-R does not allow us to determine whether age differences in help-seeking attitudes are due to lifespan development, birth cohort effects, or a combination of these factors. Finally, because the NCS-R excluded institutionalized individuals, including those living in nursing homes, our results are only generalizable to community-dwelling younger and older adults.

Together, evidence of increasing prevalence of mental disorders over time (41), increasing health care costs associated with mental illness, and increases in the proportion of older individuals in the population (42), highlights the importance of better understanding older adults' mental health needs and enhancing their use of mental health services. Attitudes toward seeking help are key determinants of whether or not individuals use mental health services, having a stronger influence than even psychiatric disorders among individuals who perceive a need for help (16). Given their strong influence on service utilization, our results suggest that predisposing attitude and belief factors, according to Andersen's (8) model, are not barriers to mental health service use for a majority of older adults (at least 70% of whom had positive help-seeking attitudes and treatment beliefs in the NCS-R). Our findings suggest that research aimed at understanding and ameliorating older adults' underutilization of mental health services should focus on enabling resources, such as access to properly trained geriatric mental health professionals, as well as objective and perceived indicators of need for help. While it is essential that we continue working toward meeting older adults' mental health needs, their positive attitudes and beliefs in this study remind us of the importance of viewing old age as a time of strength, openness, and resilience, as opposed to a time of weakness, conservatism, and frailty (43–45).

Acknowledgments

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Table 1

Prevalence of demographic factors, lifetime psychiatric help-seeking, and past-year mood or anxiety disorders across the adult lifespan

N (%)[a]

Variable	Total	18–24	25–34	35–44	45–54	55–64	65–74	75+	χ^2	df	p
Gender									7.49	6	0.30
Male	2382 (47.0)	356 (50.2)	468 (45.8)	548 (49.5)	479 (47.7)	268 (45.2)	156 (44.4)	107 (39.7)			
Female	3310 (53.0)	442 (49.8)	673 (54.2)	710 (50.5)	644 (52.3)	395 (54.8)	262 (55.6)	184 (60.3)			
Education									302.1	18	<0.001
0–11 years	849 (16.8)	154 (20.5)	120 (11.3)	143 (12.3)	101 (8.7)	128 (21.0)	98 (25.8)	105 (36.6)			
12 years	1712 (32.5)	259 (34.5)	307 (28.2)	413 (33.8)	305 (30.8)	192 (31.4)	150 (38.9)	86 (32.7)			
13–15 years	1709 (27.6)	293 (34.4)	376 (32.6)	360 (26.0)	356 (29.8)	176 (24.4)	100 (20.6)	48 (14.5)			
16+ years	1422 (23.2)	92 (10.7)	338 (28.0)	342 (27.9)	361 (30.6)	167 (23.2)	70 (14.7)	52 (16.1)			
Race/Ethnicity									234.4	18	<0.001
White	4180 (72.8)	507 (60.7)	786 (66.2)	882 (68.7)	874 (78.3)	519 (78.7)	356 (81.6)	256 (88.3)			
Black	717 (12.4)	120 (16.2)	150 (14.3)	169 (12.7)	141 (11.7)	76 (10.5)	41 (11.1)	20 (5.6)			
Hispanic	527 (11.1)	130 (18.3)	145 (14.0)	131 (14.3)	64 (6.6)	35 (7.6)	13 (6.4)	9 (3.7)			
Other	268 (3.8)	41 (4.7)	60 (5.6)	76 (4.3)	44 (3.3)	33 (3.2)	8 (0.9)	6 (2.5)			
Lifetime help-seeking	176 (4.6)	37 (5.8)	44 (7.1)	36 (4.7)	31 (5.7)	16 (3.6)	10 (1.8)	2 (0.6)	34.3	6	<0.001
Past-year mood/anxiety disorder	2012 (21.9)	301 (23.7)	458 (27.1)	504 (26.0)	398 (23.8)	211 (20.5)	90 (10.1)	50 (7.2)	144.0	6	<0.001
Attitude: Composite									26.1	6	<0.001
Positive	4678 (83.7)	618 (78.3)	941 (83.6)	1001 (82.2)	935 (84.3)	583 (90.8)	364 (87.4)	236 (81.6)			
Negative	939 (16.3)	178 (21.7)	194 (16.4)	245 (17.8)	164 (15.7)	69 (9.2)	50 (12.6)	39 (18.4)			
Attitude: Willingness									32.7	6	<0.001
Positive	4742 (83.7)	600 (76.1)	930 (83.7)	1049 (84.6)	973 (86.6)	589 (87.2)	362 (85.5)	239 (82.2)			
Negative	931 (16.3)	198 (23.9)	210 (16.3)	207 (15.4)	143 (13.4)	71 (12.8)	54 (14.5)	48 (17.8)			
Attitude: Comfortable									17.8	6	0.02
Positive	4496 (79.3)	578 (75.4)	903 (79.9)	974 (77.8)	915 (80.4)	549 (84.4)	347 (82.1)	230 (75.9)			
Negative	1162 (20.7)	219 (24.6)	235 (20.1)	277 (22.2)	196 (19.6)	110 (15.6)	70 (17.9)	55 (24.1)			
Attitude: Stigma									61.7	6	<0.001
Positive	3769 (66.8)	544 (68.9)	742 (63.2)	755 (60.0)	765 (67.2)	478 (74.4)	287 (68.6)	198 (73.8)			
Negative	1893 (33.2)	253 (31.1)	397 (36.8)	498 (40.0)	351 (32.8)	180 (25.6)	129 (31.4)	85 (26.2)			
Belief									4.8	6	0.58

Variable	Total	18–24	25–34	35–44	45–54	55–64	65–74	75+	χ^2	df	p
				N (%)[a]							
0–49% (negative)	3594 (72.0)	537 (74.1)	742 (69.7)	816 (72.4)	716 (71.4)	400 (73.3)	242 (70.9)	141 (72.3)			
50–100% (positive)	1433 (28.0)	209 (25.9)	329 (30.3)	328 (27.6)	282 (28.6)	154 (26.7)	80 (29.1)	51 (27.7)			

[a]Reported Ns are for the sample, whereas percentages are weighted to be representative of the US population.

Table 2

Results of logistic regression predicting help-seeking attitudes from age, other demographic characteristics, previous help-seeking, and psychiatric diagnosis.

Variable	N (%)[a]		AOR (95% CI)	b	p
	Negative Attitude	Positive Attitude			
Age					
18–24	178 (21.7)	618 (78.3)	1.00	--	--
25–34	194 (16.4)	941 (83.6)	1.41 (0.86–2.32)	1.40	0.17
35–44	245 (17.8)	1001 (82.2)	1.12 (0.69–1.82)	0.49	0.63
45–54	164 (15.7)	935 (84.3)	1.37 (0.83–2.27)	1.28	0.21
55–64	69 (9.2)	583 (90.8)	2.93 (1.62–5.30)	3.65	<0.01
65–74	50 (12.6)	364 (87.4)	2.06 (1.05–4.05)	2.17	0.04
75+	39 (18.4)	236 (81.6)	1.18 (0.58–2.42)	0.47	0.64
Gender					
Male	498 (18.5)	1851 (81.5)	1.00	--	--
Female	441 (14.4)	2827 (85.6)	1.21 (0.85–1.71)	1.09	0.28
Race/Ethnicity					
White	682 (16.0)	3437 (84.0)	1.00	--	--
Black	103 (14.9)	609 (85.1)	1.40 (0.90–2.18)	1.54	0.13
Hispanic	100 (17.0)	422 (83.0)	1.18 (0.79–1.77)	0.85	0.40
Other	54 (25.1)	210 (74.9)	0.67 (0.40–1.11)	−1.62	0.11
Education	--	--	0.99 (0.94–1.04)	−0.59	0.56
Lifetime help-seeking					
No	485 (18.8)	1722 (81.2)	1.00	--	--
Yes	40 (20.5)	132 (79.5)	1.06 (0.66–1.72)	0.25	0.80
Past-year mood/anxiety disorder					
No	571 (15.6)	3052 (84.4)	1.00	--	--
Yes	368 (18.9)	1626 (81.1)	0.52 (0.40–0.66)	−5.37	<0.01

Notes. Education is a continuous variable. AOR = adjusted odds ratio with 95% confidence interval.

[a] Reported Ns are for the sample, whereas percentages are weighted to be representative of the US population.

[b] Wald *t*-tests with df = 42.

Table 3

Results of logistic regression predicting treatment beliefs from age, other demographic characteristics, previous help-seeking, and psychiatric diagnosis.

Variable	N (%)[a]		AOR (95% CI)	t[b]	p
	Negative Belief	Positive Belief			
Age					
18–24	209 (25.9)	537 (74.1)	1.00	--	--
25–34	329 (30.3)	742 (69.7)	0.67 (0.44–1.00)	−2.00	0.05
35–44	328 (27.6)	816 (72.4)	0.80 (0.51–1.25)	−1.01	0.32
45–54	282 (28.6)	716 (71.4)	0.70 (0.45–1.09)	−1.64	0.11
55–64	154 (26.7)	400 (73.3)	0.71 (0.42–1.19)	−1.33	0.19
65–74	80 (29.1)	242 (70.9)	0.55 (0.32–0.94)	−2.27	0.03
75+	51 (27.7)	141 (72.3)	0.83 (0.39–1.78)	−0.49	0.63
Gender					
Male	699 (32.9)	1403 (67.1)	1.00	--	--
Female	734 (23.7)	2191 (76.3)	1.80 (1.33–2.45)	3.90	<0.01
Race/Ethnicity					
White	992 (26.3)	2705 (73.7)	1.00	--	--
Black	227 (36.1)	407 (63.9)	0.55 (0.39–0.77)	−3.57	<0.01
Hispanic	132 (28.2)	330 (71.8)	0.75 (0.46–1.23)	−1.17	0.25
Other	82 (32.8)	152 (67.2)	0.76 (0.43–1.38)	−0.92	0.36
Education	--	--	1.03 (0.98–1.07)	1.16	0.25
Lifetime help-seeking					
No	557 (28.4)	1382 (71.6)	1.00	--	--
Yes	42 (21.1)	118 (78.9)	1.58 (1.05–2.38)	2.26	0.03
Past-year mood/anxiety disorder					
No	851 (27.1)	2347 (72.9)	1.00	--	--
Yes	582 (31.0)	1247 (69.0)	0.71 (0.53–0.94)	−2.42	0.02

Notes. Education is a continuous variable. AOR = adjusted odds ratio with 95% confidence interval.

[a] Reported Ns are for the sample, whereas percentages are weighted to be representative of the US population.

[b] Wald *t*-tests with df = 42.