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Data collection

The survey was conducted from 11/18/19 to 3/8/20 (median completion date: 11/21/19). The NHRVS sample was drawn from KnowledgePanel, a research panel of more than 50,000 households that is maintained by Ipsos, a survey research firm. KnowledgePanel® is a probability-based, online non-volunteer access survey panel of a nationally representative sample of U.S. adults that covers approximately 98% of U.S. households. Panel members are recruited through national random samples, originally by telephone and now almost entirely by postal mail. Households are provided with access to the Internet and computer hardware if needed. KnowledgePanel® recruitment uses dual sampling frames that include both listed and unlisted telephone numbers, telephone and non-telephone households, and cell-phone-only households, as well as households with and without Internet access. The target population for the NHRVS was non-institutionalized adults age 18 and older residing in the U.S. who are U.S. military veterans. A total of 7,860 panel members who reported having served in the U.S. military received an email invitation to complete the survey and 4,069 completed it (52% participation rate). To generalize study results to the entire population of U.S. veterans, Ipsos statisticians calculated post-stratification weights from the following benchmark distributions of U.S. military veterans from the most recent (August 2019) Current Veteran Population Supplemental Survey of the U.S. Census Bureau's American Community Survey: age, gender, race/ethnicity, Census Region, metropolitan status, education, household income, branch of service, and years in service. Final post-stratification weights were produced via an iterative proportional fitting (raking) procedure.

Results from examining veterans without a positive screen for a mental or substance use disorder.

We ran parallel analyses in the subset of veterans ($n=3007$; 74%) without a probable mental or substance use disorder. Of these veterans, 186 (6%) were engaged in mental health treatment.

Multivariable analyses indicated that younger age (OR=0.96, 95% CI=0.94-0.97, $p<.001$), not being married/partnered (OR=0.52, 95% CI=0.33-0.80, $p=.003$), current employment (OR=0.53, 95% CI=0.33-0.84, $p=.007$), greater received social support (OR=1.06, 95% CI=1.01-1.11, $p=.015$), greater psychological distress (OR=2.84, 95% CI=1.79-4.53, $p<.001$), more medical conditions (OR=1.27, 95% CI=1.15-1.39, $p<.001$), lifetime suicide attempt (OR=3.95, 95% CI=1.82-8.56, $p=.001$), lower functioning (OR=0.43, 95% CI=0.30-0.62, $p<.001$), lower resilience (OR=0.95, 95% CI=0.92-0.99, $p=.022$), and not endorsing the beliefs “I do not know where to get help” (OR=0.21, 95% CI=0.05-0.77, $p<.001$), “Getting treatment costs too much money” (OR=0.47, 95% CI=0.23-0.95), and “I do not trust mental health professionals” (OR=0.38, 95% CI=0.15-0.99), and endorsing the belief “It is difficult to schedule an appointment” (OR=3.56, 95% CI=1.45-8.75) were associated with greater likelihood of mental healthcare utilization.

Relative importance analysis indicated that mental (17%) and cognitive (12%) dysfunction, PTSD symptom severity (11%), chronic pain (9%), and not endorsing the belief “I do not trust mental health professionals” (8%) explained the majority of the variance in mental health treatment utilization.

Table S1. Study measures

Variable	Assessment	Factor loading
Current probable PTSD	PTSD Checklist for DSM-5 (50), where a positive screen was defined as a score ≥ 33 ($\alpha = 0.96$; 45).	-
Current probable major depressive disorder	Patient Health Questionnaire-4 (49), where scores of ≥ 3 on the depression items ($\alpha = 0.87$) are indicative of a positive screen for major depressive disorder.	-
Current probable GAD	Patient Health Questionnaire-4 (49), where scores of ≥ 3 on the anxiety items ($\alpha = 0.86$) are indicative of a positive screen for GAD.	-
Current probable drug use disorder	Screen of Drug Use (51), a brief validated measure of probable drug use disorder. Response of ≥ 7 days to the following question is indicative of a positive screen for drug use disorder: “How many days in the past year have you used non-prescription drugs?;” if the response to this question is 6 or fewer days, a response of ≥ 2 days to the question “How many days in the past 12 months have you used drugs more than you meant to?” is indicative of a positive screen for drug use disorder.	-
Current probable alcohol use disorder	Alcohol Use Disorders Identification Test (52); score of ≥ 8 indicates a positive screen.	-
Sociodemographic characteristics	A general sociodemographic questionnaire was used to assess age (continuous), gender (male vs. female), race/ethnicity (non-Hispanic Caucasian vs. not), and education (\geq college graduate vs. $<$ college graduate), marital status (married/partnered vs. not), employment status (currently employed vs. not), annual household income ($<$ \$60k vs. $>$ \$60k), and health insurance status.	-
Combat exposure	Assessed via number of deployments: “How many times did you deploy to a combat or war zone?” (0 vs. 1 vs. ≥ 2).	-
Disability	Any disability in activities of daily living. The following question was asked: “At the present time, do you need help from another person to do the following?” (e.g., bathe; walk around your home or apartment; get in and out of chair). Endorsement of any of these activities was indicative of having a disability with an activity of daily living (53).	-
Received social support	Score on 5-item version of the Medical Outcomes Study Social Support Scale (54).	-
Lifetime trauma burden	Count of potentially traumatic events on the Life Events Checklist for DSM-5 (55).	-
Adverse childhood experiences	Score on Adverse Childhood Experiences Questionnaire (56), which assesses for seven types of childhood maltreatment (e.g., physical abuse, emotional neglect), occurring between birth and age 18 years. Items were summed for a total score, with higher scores indicating greater maltreatment.	-
Military sexual trauma	Positive endorsement of the following dichotomous item: “When you were in the military, did you have sexual contact against your will or when you were unable to say no (for example, after being	-

	forced or threatened or to avoid other consequences)?”	
Current psychological distress factor	To attenuate potential multicollinearity among variables, a composite psychological distress score was computed using an exploratory factor analysis of scores on measures of depressive and anxiety symptoms (PHQ-4) (49) and posttraumatic stress symptoms (PCL-5) (50). This regression-weighted factor score provides a standardized measure of psychological distress, with 0=mean and 1=standard deviation, and higher scores indicating greater distress.	
Depression symptoms	Score on the Patient Health Questionnaire-2 (49), which assess the 2 core symptoms of depression.	.901
GAD symptoms	Score on the Generalized Anxiety Disorder-2 (49), which assess the 2 core symptoms of GAD.	.894
PTSD symptoms	Score on past-month version of the PTSD Checklist for DSM-5 (50), which assessed PTSD symptoms related to veterans’ ‘worst’ event endorsed on the Life Events Checklist for DSM-5.	.837
Number of medical conditions	Sum of number of medical conditions endorsed in response to question: “Has a doctor or healthcare professional ever told you that you have any of the following medical conditions?” (e.g., arthritis, cancer, diabetes, heart disease, asthma, kidney disease). Range: 0-24 conditions.	-
Insomnia severity	Score on the Insomnia Severity Index (57).	-
Lifetime suicide attempt	Positive endorsement of dichotomous item: “Have you ever tried to kill yourself?”	-
Functioning composite score	To attenuate potential multicollinearity among variables, a composite functioning factor was computed using an exploratory factor analysis of scores on the physical and mental functioning component summary scores of the Short Form Health Survey-8 (58), the Medical Outcomes Study Cognitive Functioning Scale (59), and the Brief Inventory of Psychosocial Functioning (60). This regression-weighted factor score provides a standardized measure of functioning, with 0=mean and 1=standard deviation, and higher scores indicating better functioning.	
Physical functioning	Score on the Physical Component Summary on the Short Form Health Survey-8 (58), capturing pain, general health, and the degree to which physical health affects physical activities and daily activities.	.528
Mental functioning	Score on the Mental Component Summary on the Short Form Health Survey-8 (58), capturing vitality/energy, social functioning, emotional problems (i.e., depression, anxiety), and the degree to which mental health affects work, school, and daily activities.	.846
Cognitive functioning	Score on the Medical Outcomes Study Cognitive Functioning Scale (59), capturing impairment across various cognitive functions, such as memory, reasoning, confusion, and attention/concentration.	.835
Psychosocial functioning	Score from the Brief Inventory of Psychosocial Functioning (reverse-scored) (60), capturing functional impairment in several domains: romantic relationships, family relationships, work, friendships and socializing, parenting, education, and self-care.	.853
Purpose in life	Score on Purpose in Life Test-Short Form (61), assessing meaning and purpose in life.	-
Dispositional optimism	Score on single-item measure of optimism from Life Orientation Test-Revised (62); “In uncertain	-

Grit	times, I usually expect the best”); rating 1=strongly disagree to 7=strongly agree. Score on the Short Grit Scale (36). Grit refers to trait perseverance, extending to one’s decision/commitment to address needs on their own.	-
Stigma and barriers	Score on the Perceived Stigma and Barriers to Care Scale (63).	-
Negative beliefs about mental healthcare	Two dichotomous items: “Mental healthcare does not work”; “I do not trust mental health professionals”	-
Current mental healthcare use	Positively endorsing either of the following two dichotomous items: “Are you currently receiving psychotherapy or counseling for a psychiatric or emotional problem?”; “Are you currently taking prescription medication for a psychiatric or emotional problem?”	

Note. DSM-5 = Diagnostic and Statistical Manual of Mental Disorders, 5th Edition; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder.

Table S2. Bivariate associations between characteristics of the full sample by current mental healthcare utilization status

	<i>No current utilization</i> (<i>N</i> =3,588, 88%)		<i>Current utilization</i> (<i>N</i> =433, 12%)		<i>t</i> or χ^2	<i>p</i>
	<i>N</i>	<i>Weighted %</i>	<i>N</i>	<i>Weighted %</i>		
<i>Predisposing factors</i>						
Age (years) (<i>M</i> ± <i>SD</i>)	63.3±15.5		53.4±14.7		13.09	<.001
Gender (Male)	3,211	92	319	79	73.01	<.001
Race/ethnicity (Non-Hispanic white)	2,958	79	325	73	9.86	.002
Education (College graduate or more)	1,609	33	193	33	0.01	.94
# of deployments					55.19	<.001
0 (ref)	2,438	68	255	51		
1 deployment	707	19	102	26		
2 or more deployments	419	13	72	23		
<i>Enabling factors</i>						
Marital status (married/partnered)	2,579	73	273	67	7.57	.006
Annual household income (> \$60k)	2,105	60	226	52	10.78	.001
Employment (Yes)	1,423	48	169	48	0.10	.75
Health insurance	3,522	98	421	97	2.61	.11
VA is primary source of healthcare	580	17	195	50	275.25	<.001
ADL and/or IADL Disability	430	12	146	35	170.65	<.001
Received social support (<i>M</i> ± <i>SD</i>)	18.9±5.1		16.1±5.3		11.14	<.001
<i>Need factors</i>						
ACES (<i>M</i> ± <i>SD</i>)	1.4±1.8		2.5±2.5		11.77	<.001
# of traumas (<i>M</i> ± <i>SD</i>)	8.5±8.2		12.2±10.0		8.81	<.001
Military sexual trauma (yes)	224	6	90	20	122.62	<.001
Psychological distress (<i>M</i> ± <i>SD</i>)	-0.2±0.8		1.2±1.5		31.57	<.001
Current alcohol use disorder or drug use disorder (yes)	487	17	106	26	25.22	<.001
# of medical conditions (<i>M</i> ± <i>SD</i>)	2.8±2.1		4.1±2.4		13.02	<.001

Insomnia severity (<i>M±SD</i>)	6.3±5.0		12.1±7.1		22.45	<.001
Lifetime Suicide Attempt (yes)	72	3	64	15	160.02	<.001
Functioning (<i>M±SD</i>)	0.2±0.8		-1.3±1.4		32.90	<.001
Resilience (<i>M±SD</i>)	39.7±6.4		34.3±8.1		16.68	<.001
Purpose in life (<i>M±SD</i>)	21.6±4.5		18.3±5.9		14.16	<.001
Dispositional optimism (<i>M±SD</i>)	5.2±1.4		4.1±1.8		15.05	<.001
Grit (<i>M±SD</i>)	3.8±0.6		3.3±0.7		15.73	<.001
<i>Perceived stigma and barriers to care</i>						
It would be too embarrassing	373	12	41	10	2.07	.15
It would harm my reputation	309	10	36	8	0.55	.46
My peers might treat me differently	362	11	48	11	0.00	.99
My peers would blame me for the problem	187	6	30	8	5.90	.015
I would be seen as weak	391	12	60	16	5.69	.017
People important to me would think less of me	355	11	53	15	4.33	.038
I do not know where to get help	251	8	32	9	0.84	.36
I do not have adequate transportation	76	3	22	6	14.94	<.001
It is difficult to schedule an appointment	136	5	54	16	85.63	<.001
Getting treatment costs too much money	524	16	78	20	4.33	.037
Mental healthcare does not work	257	8	38	11	4.51	.034
I do not trust mental health professionals	420	13	53	17	4.02	.045

Note. ACES = Adverse Childhood Experiences Scale; ADL = activities of daily living; OR = odds ratio; IADL = instrumental activities of daily living.

Table S3. Bivariate associations between veterans' characteristics and current mental healthcare utilization status among veterans who screened positive for a mental and/or substance use disorder^a

	<i>No current utilization</i> (<i>N</i> =685, 73%)		<i>Current utilization</i> (<i>N</i> =239, 27%)		<i>t</i> or <i>x</i> ²	<i>p</i>
	<i>N</i>	<i>Weighted %</i>	<i>N</i>	<i>Weighted %</i>		
<i>Predisposing Factors</i>						
Age (years) (<i>M</i> ± <i>SD</i>)	57.0±15.7		50.6±13.6		6.02	<.001
Gender (Male)	590	90	177	78	25.56	<.001
Race/ethnicity (Non-Hispanic white)	538	77	173	72	2.99	.084
Education (College graduate or more)	247	27	99	30	1.05	.31
# of deployments					39.89	<.001
0 (ref)	462	66	132	45		
1 deployment	130	21	58	29		
2 or more deployments	88	14	48	26		
<i>Enabling Factors</i>						
Marital status (married/partnered)	456	67	151	66	0.04	.84
Annual household income (> \$60k)	366	52	119	47	1.98	.16
Employment (Yes)	309	54	92	49	2.22	.14
Health insurance	666	96	231	95	0.27	.60
VA is primary source of healthcare	142	22	128	59	135.27	<.001
ADL and/or IADL Disability	129	21	102	44	51.77	<.001
Received social support (<i>M</i> ± <i>SD</i>)	17.1±5.5		14.8±5.3		6.12	<.001
<i>Need Factors</i>						
ACES (<i>M</i> ± <i>SD</i>)	2.1±2.2		2.9±2.6		4.61	<.001
# of traumas (<i>M</i> ± <i>SD</i>)	10.8±10.2		13.8±10.5		4.25	<.001
Military sexual trauma (yes)	85	10	57	25	37.32	<.001
Psychological distress (<i>M</i> ± <i>SD</i>)	0.6±1.1		1.9±1.5		15.62	<.001
# of medical conditions (<i>M</i> ± <i>SD</i>)	2.9±2.2		4.4±2.4		9.27	<.001
Insomnia severity (<i>M</i> ± <i>SD</i>)	9.1±5.8		14.6±6.8		12.92	<.001

Lifetime Suicide Attempt (yes)	36	6	45	17	29.57	<.001
Functioning (<i>M±SD</i>)	-0.5±1.1		-1.9±1.4		17.03	<.001
Resilience (<i>M±SD</i>)	37.5±6.9		32.9±8.3		9.09	<.001
Purpose in life (<i>M±SD</i>)	19.3±5.2		16.7±6.2		6.81	<.001
Dispositional optimism (<i>M±SD</i>)	4.6±1.5		3.7±1.8		7.66	<.001
Grit (<i>M±SD</i>)	3.6±0.6		3.1±0.7		9.78	<.001
<i>Perceived stigma and barriers to care</i>						
It would be too embarrassing	113	18	26	10	10.12	.001
It would harm my reputation	90	14	25	10	2.12	.14
My peers might treat me differently	101	14	36	14	0.06	.81
My peers would blame me for the problem	62	9	23	11	1.12	.29
I would be seen as weak	118	18	48	21	1.13	.29
People important to me would think less of me	111	17	40	18	0.01	.91
I do not know where to get help	74	12	25	11	0.03	.87
I do not have adequate transportation	21	4	18	8	7.27	.007
It is difficult to schedule an appointment	54	10	41	20	19.90	<.001
Getting treatment costs too much money	152	25	56	25	0.00	1.00
Mental healthcare does not work	93	15	32	16	0.02	.87
I do not trust mental health professionals	139	20	44	24	1.22	.27

Note. ACES = Adverse Childhood Experiences Scale; ADL = activities of daily living; OR = odds ratio; IADL = instrumental activities of daily living.

^a Veterans in his subgroup were veterans who screened positive for current posttraumatic stress disorder, major depressive disorder, generalized anxiety disorder, alcohol use disorder, and/or drug use disorder.

Figure S1. Results of relative importance analyses of factors associated with current mental healthcare utilization in U.S. military veterans

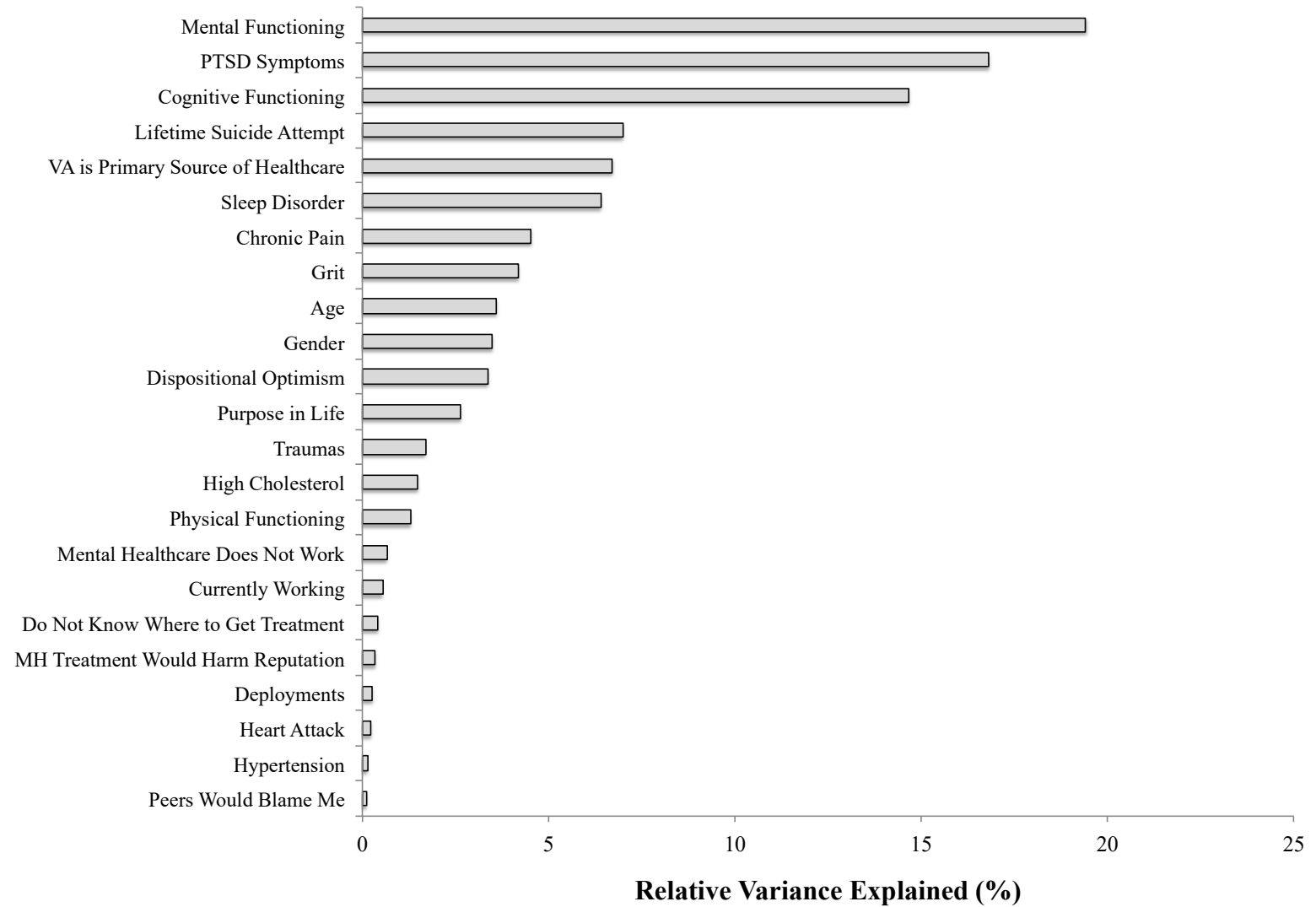


Figure S2. Results of relative importance analyses of factors associated with current mental healthcare utilization in U.S. military veterans who screened positive for a mental and/or substance use disorder

