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HELP-SEEKING AMONG PSYCHIATRICALLY HOSPITALIZED MILITARY PERSONNEL AT RISK FOR SUICIDE

by

Laura A. Novak

Thesis Submitted to the Faculty of the
Clinical Psychology Graduate Program
Uniformed Services University of the Health Sciences
In Partial Fulfillment of the Requirements for the Degree of

Master of Science, 2021

UNIFORMED SERVICES UNIVERSITY, SCHOOL OF MEDICINE GRADUATE PROGRAMS
Graduate Education Office (A 1045), 4301 Jones Bridge Road, Bethesda, MD 20814

June 3, 2021

APPROVAL SHEET

Title of Dissertation: **Help-Seeking among Psychiatrically Hospitalized Military Personnel at Risk for Suicide**

Name of Candidate: **Laura Novak**, Master of Science **in Medical and Clinical Psychology, June 2, 2021**

THESIS AND ABSTRACT APPROVED:

DATE: June 14, 2021

[redacted]
Marjan Ghahramanlou Holloway, Ph.D.
DEPARTMENT OF MEDICAL AND CLINICAL PSYCHOLOGY
Committee Chairperson/Thesis Advisor

[redacted] June 3, 2021
Tracy Sbrocco, Ph.D.
DEPARTMENT OF MEDICAL AND CLINICAL PSYCHOLOGY
Committee Member

[redacted] 4 June 2021
Jeffrey L. Goodie, Ph.D., ABPP
DEPARTMENT OF MEDICAL AND CLINICAL PSYCHOLOGY
Committee Member

[redacted] 6.14.21
Natasha A. Schvey, Ph.D.
DEPARTMENT OF MEDICAL AND CLINICAL PSYCHOLOGY
Committee Member

ACKNOWLEDGMENTS

I would like to first thank the participants in the PACT trial, from whom this thesis was generated. Their willingness to discuss their experiences and participate in research to improve the lives of Service members is admirable, and they continue to help others with their participation. Second, I would like to thank Dr. Marjan Holloway, my Thesis Advisor and Committee Chairperson. She has spent countless days, nights, and weekends working with me to pursue my research interests in a meaningful way. Third, I would like to thank my Thesis Committee Members, Dr. Tracy Sbrocco, CAPT Jeffrey Goodie, and Dr. Natasha Schvey. Their expertise and feedback has improved the project immensely. Finally, I would like to thank Dr. Jessica LaCroix, Dr. Cara Olsen, and Ms. Kanchana Perera, who provided additional statistical support and mentorship throughout this project.

DEDICATION

This work is dedicated to all of those who seek help for psychological health concerns, all of those who may not seek help, and all of those who provide help to others.

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Laura Novak, M.P.S.
Department of Medical and Clinical Psychology
Uniformed Services University
06/16/2021

ABSTRACT

Help-Seeking among Psychiatrically Hospitalized Military Personnel at Risk for Suicide

Laura A. Novak, M.P.S., 2021

Thesis directed by: Marjan Ghahramanlou Holloway, Ph.D., Professor, Department of Medical & Clinical Psychology

Background: Promoting help-seeking is a suicide prevention strategy. Limited research has examined types and perceived helpfulness of resources sought, and how multiple determinants (e.g., mental health [MH] treatment stigma, perceived social support) influence help-seeking among suicidal Service members.

Methods: Participants were active duty Service members (N=111) hospitalized for a suicide-related event. Secondary analyses described the types and helpfulness of resources sought 30-days before hospitalization, and examined associations among types of helping resources, MH treatment stigma, and perceived social support.

Results: The most frequently sought resources included behavioral health providers and friends. Generally, helping resources were considered helpful. Adjusting for covariates, MH treatment stigma was not associated with seeking or not seeking help from any resource type. Higher perceived social support was associated with greater likelihood of help-seeking from a friend (OR=1.08, p=.013 [95% CI=1.02, 1.14]).

Conclusion: Understanding factors that influence help-seeking from different types of resources may expand care and prevent suicidal crises.

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CHAPTER 1: Introduction

PUBLIC HEALTH SIGNIFICANCE OF SUICIDE

Suicide poses a significant global and national public health problem. Suicide was the fourteenth leading cause of death globally in 2017, with a death rate of 10.0 deaths per 100,000 people (34). In 2019, suicide was the tenth leading cause of death in the United States (U.S.; 20; 46). According to the 2019 U.S. National Survey on Drug Use and Health, 12 million adults (an estimated 4.8% of the population) had serious thoughts of suicide in 2019, 3.5 million adults (1.4%) had a suicide plan, and 1.4 million adults (0.6%) made a suicide attempt (77).

Suicide is of particular concern to the U.S. military. Suicide was among the top three leading causes of death among active duty Service members in the U.S. from 1998 to 2013 (7). In the U.S. military, 541 active duty, Reserve, and National Guard Service members died by suicide across all service branches in 2018, with a suicide rate of 24.8 deaths per 100,000 people (78). Furthermore, 1,496 suicide attempts were reported among the active and reserve components (78). In a representative sample of U.S. adults with a history of military service, prevalence of suicide ideation in the past year was 3.8% (16). In 2018, 6,435 Veterans died by suicide, with an age- and sex-adjusted suicide rate of 27.5 deaths per 100,000 people (79). Above and beyond the emotional cost of suicide – which is often not precisely measurable – the overall economic cost of suicide and suicide attempts has been approximated at $93.5 billion in 2013 (73).

PROMOTION OF HELP-SEEKING AS A SUICIDE PREVENTION STRATEGY

Historically, a critical suicide prevention strategy has centered on connecting those at risk for suicide with care. In fact, strengthening access to and delivery of care for

those at risk for suicide – which includes promotion of help-seeking – is a key national suicide prevention strategy outlined by the Centers for Disease Control and Prevention (75) and emphasized within the Zero Suicide model (28). At the same time, facilitating autonomous help-seeking on the part of the suicidal individual remains a notable challenge. Help-seeking is defined as an action to meet a perceived need for assistance (9). Help may be sought from external formal (e.g., behavioral health[1] providers, medical professionals) and/or informal (e.g., family members, friends) helping resources, and can include obtaining direct care, a referral to care, or informal discussion with someone else about the help needed (9). Understanding help-seeking in the context of those at risk for suicide is necessary for further developing, refining, and implementing effective suicide prevention and intervention programs.

HELP-SEEKING AMONG SUICIDE DECEDENTS

Help-seeking prior to suicide death has been examined in various samples. A review of data from the U.S. National Violent Death Reporting System from 2005 to 2014 indicated 23% to 26% of suicide decedents disclosed suicidal intent to someone within the month prior to death (22). In a qualitative study, 36% of suicide decedents who sought professional help before their death were influenced by relatives or friends to seek help (59). Medical record review of 800 U.S. military suicide decedents indicated 52% of decedents had at least one mental health visit prior to death (68). Moreover, approximately 31% of active component suicide decedents communicated intent of self-harm prior to death, with 11% disclosing to a spouse, 10% to a friend, and 9% to mental health staff (78).

[1] The term "behavioral health" is used interchangeably with "mental health" throughout this paper.

Help-Seeking among Individuals with Suicide Ideation and/or Behaviors

Help-seeking among individuals with a history of suicide ideation and/or attempt(s) has also been explored. Generally, help-seeking may decrease as suicide ideation increases (63). In a review of studies evaluating mental health help-seeking rates, approximately 30% of individuals sought or initiated mental health care for suicide ideation, plans, or attempts in a one-year period (39). In a national Australian survey, 37% of individuals with a suicide plan and 42% of individuals with a history of suicide attempt sought help from a formal source (26). Among U.S. military active component Service members who reported a suicide attempt in 2018, approximately 62% had a Military Health System (MHS) appointment in the 90 days prior to attempt; 20% communicated self-harm intent to someone prior to the attempt, with 6% disclosing to a spouse, 7% to a friend, and 4% to mental health staff (78). Due to these generally low rates of help-seeking, it is imperative to understand determinants that influence help-seeking.

Determinants of Help-Seeking

A variety of determinants influence the decision to seek help. According to the Social Ecological Model (SEM; 52), both the individual and their environment influence each other. Thus, help-seeking behaviors occur based on interactions among multiple levels, including individual, interpersonal, community, and societal levels. Considerations related to these levels include when to seek help and from whom specifically (e.g., behavioral health provider, family member). Internal barriers to care, such as lack of recognition of need, lack of knowledge about care, perceived stigma, and negative beliefs about treatment have been associated with decreased help-seeking among

individuals at risk for suicide (36; 39). External factors including access to care barriers (e.g., high cost, time constraints, unavailability of resources) and lack of social support are also associated with decreased help-seeking (36; 39).

Demographic factors such as gender, race/ethnicity, and age may also influence help-seeking. Generally, research suggests males at risk for suicide are typically less likely than females to seek help from formal helping resources (29; 36; 39). In the U.S., individuals who identify as racial and ethnic minorities (e.g., Black, Hispanic, Asian, Hawaiian/Pacific Islander, or Alaskan Native/Native American) are also less likely to seek formal care prior to suicide attempts compared to non-Hispanic white individuals, potentially due to a variety of attitudinal, stigma, bias, discrimination, and structural barriers to care (4; 5; 72). Younger age has also been associated with less help-seeking for suicide ideation or attempts (4; 29).

HELP-SEEKING FROM FORMAL VERSUS INFORMAL RESOURCES

Individuals who seek help may do so from a variety of different helping resources, including formal and informal resources (8; 47; 63; 64; 69). Differences between formal and informal helping resources vary depending on the group and problem being studied (64). Formal help-seeking is especially important because it may reduce immediate suicide risk before it becomes active ideation or behavior (63). The majority of research on help-seeking in individuals at risk for suicide has focused on formal help-seeking from behavioral health and primary care providers. Little research has focused on help-seeking from informal resources in order to prevent suicide (10; 64). However, many people indicate a preference for seeking help for psychological health issues from informal rather than formal resources (8; 10; 29; 39; 54; 63).

Perceived Helpfulness and Harmfulness

Perceived helpfulness and harmfulness of different helping resources may also influence help-seeking. Level of satisfaction with prior mental health treatment and perceived positive or negative experiences may influence the relationship between past and future help-seeking behavior (8; 25; 36; 39; 55; 69; 76). For example, it may be that early experiences with mental health care facilitate help-seeking in the future, particularly if the early experiences with formal health care are perceived as positive (8). It could also be that perceived negative past experiences with formal helping resources may be associated with increased negative attitudes toward formal helping resources and less frequent use of services in the future (39; 55; 69). Yet, negative perceptions of past help may not fully account for lower help-seeking rates (61; 63).

Perceived Mental Health Treatment Stigma

One determinant commonly associated with help-seeking is mental health treatment stigma, which is specific to stigma associated with seeking or obtaining mental health-related treatment (23). Various facets of stigma related to mental health exist, including experienced, perceived, and internalized stigma. Experienced stigma reflects actual, personal experiences of being treated or perceived unfairly (23). Perceived stigma is defined as one's views and beliefs about whether other people stigmatize against individuals based on mental health-related factors (23). Internalized stigma includes having stigmatized views about oneself (23).

Generally, greater perceived mental health treatment stigma has been associated with lower intentions to seek help (36). A systematic review found that stigma had a moderate negative effect on formal help-seeking for mental health problems, and was

reported as a barrier to help-seeking by up to one third of study participants (23). Individuals at risk for suicide may report lack of perceived need for mental health treatment, partly because of stigma in which they believe seeking help is a sign of weakness or failure (39; 69). Stigma may also be a barrier when seeking help from informal helping resources. Participants in one qualitative study reported stigma associated with fear of negative reactions from individuals in their social networks (69).

Although some research has reported a negative association between facets of stigma like treatment stigma and internalized stigma and help-seeking, other studies have not found a significant negative association between certain facets of stigma like perceived stigma and help-seeking, or have proposed that stigma enhances help-seeking (15; 18; 23). Thus, research findings about whether stigma is a significant barrier to help-seeking, particularly within subgroups like the military, are unclear (21; 23; 39).

PERCEIVED SOCIAL SUPPORT

Another determinant associated with help-seeking is perceived social support. Social support includes the perception that an individual has trusting relationships with others who will listen and be helpful in times of need (60). The association between social support and help-seeking for mental health problems is complex; findings on whether social support increases or decreases help-seeking are mixed. Some research has found that informal sources of help provide encouragement for individuals to seek professional help for suicide-related thoughts and behaviors (26; 27; 29; 36; 39; 69; 84). Low levels of social support may also encourage individuals to seek help from formal resources (48).

Alternatively, social support may not be associated with increased use of formal helping resources. Greater social support may be associated with less mental health treatment use, as individuals may perceive less treatment need or distress (25; 27; 36). Furthermore, some individuals may be less apt to disclose suicidal thoughts to family members due to perceived shame, concerns about worrying their family, or fear of losing authority within the family (63; 69).

MILITARY CULTURAL FACTORS

Help-seeking among certain subgroups, including Service members and Veterans, may be a particularly unique process influenced by various determinants. Research has called for additional study of factors related to help-seeking that might be particularly salient in Service member populations (15). In the military, lines between formal and informal relationships with Service members seeking help may be blurred based on unit roles and duties (32). In addition, military members may be more likely to seek help from informal rather than formal helping resources. In a study of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans, approximately 22% of participants reported being most likely to seek help for a psychological problem in the next year from an intimate partner, family member, or friend, whereas most participants reported they would be extremely unlikely to seek help from a formal source (61).

Stigma may also be a more salient barrier to help-seeking amongst certain subgroups, including Service members and males, for whom masculinity and male gender stereotypes may reduce help-seeking (23). For example, Service members and males may perceive the need to be self-sufficient and controlled, demonstrating resilience rather than seeking help (1; 2). Furthermore, Service members face unique concerns

related to perceived and actual career impacts of seeking help for mental health concerns, including potential notification of leadership for seeking help from mental health providers, and potential influences on performing certain duties, receiving promotions, and obtaining or maintaining security clearances (1; 2). Findings on the association between stigma and treatment initiation or utilization in Service members and Veterans are mixed, with some studies finding a negative association (19), some finding a positive association (74), and some finding no significant association (6; 37; 66).

Research on social support and help-seeking within military subgroups is also mixed. In a study of OEF/OIF veterans, low social support was negatively correlated with past help-seeking for mental health problems (61), whereas other studies suggest support from informal resources may encourage Service members to seek formal help for psychological problems (82; 86).

Research Gaps in Help-Seeking and Suicide Prevention Literature

The U.S. Preventive Services Task Force (80) recently identified gaps related to suicide risk across age groups, including a need to better understand how to help individuals with suicide intentions before they act and identify ways to link individuals at risk for suicide to clinical and community resources. Thus, research focused on help-seeking among those vulnerable to suicide, targeting the types of resources individuals actually use, remains essential to advance suicide-focused care. Specifically, additional research is needed to determine 1) whether different types of helping resources play a significant role in help-seeking for suicidal thoughts and behaviors, and 2) their impact on the help-seeking process. Furthermore, scientific understanding of *how* different determinants are associated with help-seeking from specific helping resources and even

with each other is mixed. In order to understand the complex process of help-seeking, research examining associations among different determinants and the processes associated with these determinants is needed (50; 63). Finally, additional research into the process of help-seeking among Service members may ultimately improve outreach and provision of services for Service members, Veterans, and military beneficiaries in need of help for psychological problems (61).

AIMS AND HYPOTHESES

Despite the existing literature on help-seeking for mental health concerns and suicidality, findings on the strength of associations between several determinants of help-seeking and actual use of different helping resources are inconclusive, particularly among active duty military personnel at risk for suicide. Thus, the objective of this study is to advance understanding of help-seeking for suicide-related thoughts and behaviors among active duty U.S. Service members. Specifically, this study examined the types and perceived helpfulness of helping resources sought by Service members at risk for suicide, and explored how determinants including perceived mental health treatment stigma and perceived social support interact and influence help-seeking from different helping resources.

The first two aims of the study were descriptive. The first aim of this study was to describe the helping resources Service members utilized in the month prior to their suicide-related hospitalization. The second aim was to describe the perceived helpfulness and harmfulness of each helping resource utilized.

The third aim was to examine associations between perceived mental health treatment stigma and type of helping resource sought. It was hypothesized that higher

perceived mental health treatment stigma would be associated with help sought from intimate partners, friends, parents, chaplains, and other unit members, or no help sought from any resource. In contrast, it was hypothesized that lower perceived mental health treatment stigma would be associated with help sought from behavioral health professionals and unit command.

The fourth aim was to examine associations between perceived social support and type of helping resource sought. It was hypothesized that higher perceived social support would be associated with help sought from intimate partners, friends, parents, and other unit members. Conversely, lower perceived social support was expected to be associated with help sought from behavioral health professionals, chaplains, and unit command, or no help sought from any resource.

The final study aim was to examine associations between both determinants and type of helping resource sought. It was hypothesized that, compared to perceived social support, perceived mental health treatment stigma would be more strongly associated with seeking help from behavioral health professionals, chaplains, and unit command. Moreover, compared to perceived mental health treatment stigma, perceived social support would be more strongly associated with seeking help from intimate partners, friends, parents, and other unit members. Finally, it was expected that both low perceived mental health treatment stigma and high perceived social support would be significantly associated with seeking help from at least one resource.

CHAPTER 2: Methods

DESIGN

This study is a cross-sectional, secondary analysis of baseline data collected as part of a multi-site, single-blind randomized controlled trial (RCT) entitled, "Post Admission Cognitive Therapy (PACT) for the Inpatient Treatment of Military Personnel and DEERS Eligible Adult Dependents with Suicidal Behaviors: A Multi-Site Randomized Controlled Trial." The purpose of the parent RCT was to evaluate the efficacy of an inpatient, cognitive-behavioral intervention for suicide, designed to be used with military personnel and adult dependents hospitalized for a suicide-related event (33). The purpose of this secondary analysis was to advance understanding of help-seeking for suicide-related thoughts and behaviors among active duty U.S. Service members by examining associations between perceived mental health treatment stigma, perceived social support, and different types of helping resources utilized.

PARTICIPANTS

Data for the parent RCT were collected from U.S. Service members, Veterans, and adult military beneficiaries psychiatrically hospitalized for a suicide-related event. Other inclusion criteria included being 18 years of age or older, completing baseline assessments within 48 to 72 hours of hospital admission, being able to communicate in English, and being able to provide informed consent for study participation. Exclusion criteria included medical incapacity to participate and/or serious cognitive impairment (e.g., active psychosis, acute severe traumatic brain injury) as determined by providers on the inpatient unit, expected discharge from the inpatient unit without adequate time to administer study screening and baseline assessments, being under the age of 18, being

unable to communicate in English or provide informed consent, and reporting a reason for admission to the inpatient unit that is different than the admission reason indicated by the referring physician.

For the secondary data analysis performed in this study, information from a subset of participants (N = 111; 51% of parent RCT) was used. Cases were selected for inclusion in the secondary analysis if participants were active duty Service members who completed the outcome measure (Actual Help Seeking Questionnaire; AHSQ) as part of baseline assessments within the parent RCT. Active duty Service members were selected as the target of this study because of the unique help-seeking experiences they may encounter, including unique types of helping resources available and potential impacts of help-seeking on one's military career. Individuals were excluded from secondary analyses if they were active duty Service members who did not complete the AHSQ as part of the baseline assessments (n = 46; Service members who completed baseline assessments prior to Institutional Review Board [IRB] approval of the AHSQ measure), military beneficiaries (n = 26), Veterans (n = 30), or Reservists (n = 5).

Military beneficiaries were excluded from this secondary analysis because they do not experience the same potential effects of help-seeking on their status as beneficiaries as active duty Service members may. In addition, the types of helping resources available to military beneficiaries may differ from those available to active duty Service members (e.g., unit command, unit member). Veterans were excluded because they also may not experience the same effects of help-seeking on their careers since they are no longer actively serving in the military, and they also may not have access to the same types of helping resources as active duty Service members. Reservists were also excluded because

they may not have access to the same helping resources since they are not part of the active duty force. Furthermore, the measure of mental health treatment stigma included in the study (Perceived Barriers to Care; PBTC) was specific to stigma experienced by current members of the military.

RECRUITMENT

Participants in the parent RCT were recruited from inpatient units at Walter Reed National Military Medical Center (WRNMMC), Fort Belvoir Community Hospital (FBCH), and the Washington DC VA Medical Center. The 111 cases selected for secondary analysis were exclusively recruited from the two military treatment facilities (i.e., WRNMMC and FBCH). Study personnel attended morning report meetings daily across the three inpatient units to learn about individuals admitted for a suicide-related event. The inpatient treatment team made determinations about study eligibility criteria and referred interested patients to the research team. Informed consent was performed by Bachelor's or Master's level research personnel during the inpatient stay.

PROCEDURES

Following informed consent, a screening measure was administered to further confirm study eligibility. Individuals who did not endorse thoughts of killing oneself, intention to act on those thoughts, starting to work out details of how to kill oneself, and ever doing anything or preparing to do anything to end their life, over the course of their life, were considered ineligible and thanked for their willingness to participate in the study. Individuals who met screening criteria based on suicide ideation severity entered the baseline phase of the parent RCT. Baseline assessments were administered by study personnel within 48 to 72 hours of admission on the inpatient unit. Phase 1 of the

baseline assessment consisted of self-report measures. Phase 2 of the baseline assessment consisted of clinician-administered interviews performed by doctoral level clinicians. De-identified data for the present study were drawn from the self-report measures administered during the Phase 1 baseline assessments.

MEASURES

The following measures (presented alphabetically) were selected for the secondary data analysis.

Demographics

A demographics form developed by study investigators was used to assess participant age, gender, race/ethnicity, sexual orientation, education level, marital status, religious affiliation, religious meeting attendance frequency, and religiosity/spirituality. Military characteristics assessed included length of service, branch of service, pay grade, and history of deployment.

Actual Help Seeking Questionnaire (AHSQ)

The Actual Help Seeking Questionnaire (AHSQ; 65), is a self-report questionnaire that assessed whether participants seek help from different types of helping resources for a psychological problem. In the parent RCT, the AHSQ was modified to include helping resources available within the military community. Thus, the modified AHSQ used in this secondary analysis assessed 12 different types of helping resources (i.e., intimate partner, friend, parent, other relative or family member, behavioral health professional, chaplain, phone help line, unit command, other unit member(s), primary care physician, other, or none) sought one month before the participants' most recent

hospitalization. Specifically, the modified AHSQ asked participants 1) to indicate whether or not they sought help for depression, anxiety, distress, or suicidal thoughts from each of these different helping resources via yes/no questions, and 2) to classify whether care from each helping resource endorsed was helpful and/or harmful via yes/no questions. If a participant sought help from a specific resource, a "yes" response was indicated for that resource. If a specific resource was endorsed, participants were asked if the response from the resource was helpful (yes or no) and if the response was harmful (yes or no). Participants could report seeking help from multiple resources, and could indicate that a resource was helpful, harmful, both helpful and harmful, or neither helpful nor harmful.

Reliability and validity estimates for the AHSQ are difficult to determine because the use of dichotomous yes/no endorsement of each type of helping resource utilized does not lend itself to psychometric analyses, and the measure is frequently modified based on the population and health issue being studied. Actual help-seeking behavior from behavioral health professionals, one type of helping resource measured by the AHSQ, has demonstrated moderate predictive validity with measures of general help-seeking intentions from a mental health professional for suicidal thoughts (r = .57) and personal-emotional problems (r = .51) among adolescents (83).

Columbia-Suicide Severity Rating Scale (C-SSRS)

The Columbia-Suicide Severity Rating Scale (C-SSRS; 62) is a semi-structured interview that assessed suicidal ideation and behavior. The C-SSRS is comprised of four subscales measuring: 1) suicide ideation severity, rated on a 5-point ordinal scale from 1 ("wish to die") to 5 ("thoughts with some intent to act and plan"); 2) suicide ideation

intensity, consisting of five items measured on a 5-point ordinal scale; 3) suicidal behaviors, rated on a 5-point nominal scale from "non-suicidal self-injurious behavior" to "actual attempt;" and 4) lethality of suicide attempts, rated on a 6-point ordinal scale ranging from "no physical damage" to "death" (62). In this study, the C-SSRS was used to describe suicide risk characteristics of the sample, as measured at the baseline assessment of the parent RCT.

The C-SSRS intensity subscale has demonstrated moderate internal consistency in samples of adolescents diagnosed with major depressive disorder (Cronbach's $\alpha = .73$) and adults presenting to the emergency department for psychiatric reasons (Cronbach's $\alpha = .73$), and high internal consistency in a sample of adolescents with a recent suicide attempt since their last treatment visit (Cronbach's $\alpha = .94$) and in the last week (Cronbach's $\alpha = .95$; 62). The C-SSRS has also exhibited predictive validity in a sample of adolescents with a recent suicide attempt enrolled in a treatment program, with baseline C-SSRS suicide ideation severity ratings significantly predicting suicide attempts during treatment (OR = 1.45, p = .02 [95% CI = 1.07-1.98]; 62).

Interpersonal Support Evaluation List-12 (ISEL-12)

The Interpersonal Support Evaluation List-12 (ISEL-12; 24) is a 12-item self-report questionnaire that assessed the perceived availability of social support. Items on the ISEL-12 ask participants to rate how true different statements about social support are about the individual, rated on a 4-point scale (1 = "definitely false," 2 = "probably false," 3 = "probably true," 4 = "definitely true"), with total scores ranging from 12 to 48 (24). The ISEL-12 is comprised of three subscales measuring three social support resources, including tangible support, appraisal support, and belonging support (24). Items on the

tangible support subscale assess an individual's perceived availability of material support, including "If I were sick, I could easily find someone to help me with my daily chores" (24). Items on the *appraisal* support subscale assess one's perceived availability to discuss personal issues with someone else, including "I feel that there is no one I can share my most private worries and fears with" (24). Items on the *belonging* support subscale assess one's perceived availability of others with whom the individual can identify and socialize with, including "If I wanted to have lunch with someone, I could easily find someone to join me" (24). Higher ISEL-12 total and subscale scores indicate higher levels of perceived social support (24).

For this study, the ISEL-12 total social support score was used with good internal consistency (Cronbach's $\alpha = .90$). The ISEL-12 has demonstrated good internal consistency in other samples as well, including homeless adult smokers (Cronbach's $\alpha = .89$; 57) and a community sample of English and Spanish speaking Hispanic/Latino individuals in the U.S. (Cronbach's $\alpha = .82$; 53). The original, 40-item version of the ISEL, from which the ISEL-12 was derived, has demonstrated predictive validity of depressive symptomatology (24).

Perceived Barriers to Care (PBTC)

The Perceived Barriers to Care (PBTC) measure is a 13-item self-report questionnaire that assessed participants' attitudes toward seeking mental health treatment (38). Items are rated on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), with total scores ranging from 13 to 65 (38). Previous research examining the principal component structure of the PBTC has identified a two-factor solution (stigma and perceived barriers to care; 17; 85), a three-factor solution

(organizational barriers, stigma, and negative attitudes toward treatment/individual barriers; 45; 81), and, most recently, a four-factor solution (negative beliefs about mental healthcare, logistic barriers, fear of negative consequences, and internalized mental health stigma; 70).

In this study, we used the three-factor model identified by VanSickle and colleagues (81) consisting of three subscales – organizational, stigma-related, and individual barriers to care. Items included in the stigma component of this three-factor model are consistent with the stigma factors found in previous studies, and the separation of additional items into organizational and individual barriers to care provides more specific information about other barriers to care controlled for in this secondary data analysis. Items on the *stigma* subscale assess barriers related to perceived stigma and harm to career, including, "I would be seen as weak" and "My unit leadership might treat me differently" (38). Items on the *organizational* subscale assess institutional and cultural barriers to care, including "It is difficult to schedule an appointment" (38). Items on the *individual* subscale assess attitudes toward mental health care such as, "Mental health care doesn't work" (38). Higher total score and higher scores on each subscale of the PBTC indicate greater barriers to care (38). In this study, scores on the stigma subscale of the PBTC were used to measure mental health treatment stigma.

The total PBTC score demonstrated good internal consistency in this sample (Cronbach's $\alpha = .89$), and this is in line with prior performance in a Marine sample (Cronbach's $\alpha = .88$; 81). The PBTC subscales also demonstrated adequate to good internal consistency in this sample: *organizational* subscale (Cronbach's $\alpha = .63$), *individual* subscale, (Cronbach's $\alpha = .73$), and *stigma* subscale (Cronbach's $\alpha = .93$) The

PBTC's predictive validity has also been examined. More specifically, negative attitudes about mental health treatment on the PBTC predicted treatment utilization in a sample of active duty Army soldiers, (AOR = 0.63, p = 0.005 [95% CI = 0.45–0.87]; 45).

Scale for Suicide Ideation (SSI)

The Scale for Suicide Ideation (SSI; 13) is a 19-item self-report questionnaire that assessed characteristics of attitudes towards living/dying, suicide ideation, suicide plans, and preparatory behaviors currently (SSI-C) and at the worst timepoint in one's life (SSI-W). Items on the SSI ask participants to rate responses on a 3-point scale of intensity ranging from 0 (lowest level) to 2 (highest level), with total scores ranging from 0 to 38 (13). In this study, the SSI-W score was used to understand suicide ideation severity at the worst time in participants' lives.

The SSI has demonstrated good internal consistency in samples of individuals on psychiatric inpatient units (Cronbach' s α = .89; 13) and individuals receiving psychiatric outpatient care (Cronbach's α = .84 for SSI-C, Cronbach's α = .89 for SSI-W; 11). The SSI has also demonstrated predictive validity. Previous research suggests individuals who score 16 or greater (considered "higher risk" on the SSI-W) have 14 times higher odds of dying by suicide compared to individuals who score in the "lower risk" category (12).

HUMAN SUBJECTS PROTECTION

The parent RCT, as a Greater than Minimal Risk study, was approved by the IRBs at WRNMMC, Uniformed Services University of the Health Sciences (USU), FBCH, and the Washington DC VA Medical Center. A Data Safety Monitoring Board (DSMB) and a Medical Monitor were appointed to provide oversight for human subjects. The secondary

data analysis, performed for this study, is protected under the same IRB protocol; de-identified data were shared by the Principal Investigator and the parent RCT's Data Manager, through DoD SAFE (Secure Access File Exchange), with the investigator for this study.

STATISTICAL ANALYSES

First, descriptive statistics were used to summarize the sample demographics, the helping resources utilized in the month prior to the index suicide-related hospitalization (Aim 1), and the perceived helpfulness or harmfulness of each helping resource utilized (Aim 2). Next, a series of hierarchical binary logistic regressions were conducted, with the inclusion of past helping resources, endorsed by at least 20% of the sample (i.e., intimate partner, friend, parent, behavioral health professional, chaplain, unit command, other unit members) as the dichotomous dependent variable. Helping resources endorsed by less than 20% of the sample (i.e., other relative or family member, phone help lines, primary care physicians, and other resources) were excluded from regression analyses. There was missing data from two participants on help sought from an intimate partner; therefore, analyses for the intimate partner helping resource included 109 participants, whereas analyses for all remaining resources and no help sought included all 111 participants. A detailed description of each hierarchical binary logistic regression is included in the results section below. All analyses were conducted using IBM SPSS Statistics 25.

Covariate Selection

Demographic covariates were first determined based on a review of the literature and recommendations set forth for the purposeful selection of covariates (41). To

examine the covariate options further, a logistic regression with potential covariates including age, gender, education, marital status, military rank, race/ethnicity, and sexual orientation entered as the independent variables, and each type of helping resource entered as the dependent variable, was conducted. Any variable with statistical significance at the 0.25 level was then entered into a logistic regression with the type of helping resource as the dependent variable, and only those independent variables with significance at the 0.05 level were retained as a covariate for the final hierarchical binary logistic regression models (41). In order to maintain consistency in the covariates included within the main analysis models, those covariates that were significantly associated with any of the types of helping resources at the 0.05 level and/or that were identified as potential covariates within the literature were included in all models (e.g., gender, education level, marital status, and race/ethnicity).

CHAPTER 3: Results

DEMOGRAPHICS

The mean age within the active duty military sample (N = 111) was 27.8 years old (*SD* = 7.9). The majority of participants were male (71.2%), with some college education (71.2%). Race and ethnicity categories were grouped as follows: White, Non-Hispanic (59.5%), Black, African American (12.6%), Hispanic (14.4%), Asian, Native Hawaiian, or Pacific Islander (9.0%), Mixed Race/Ethnicity (3.6%), and Other (0.9%). Approximately half (46.9%) were never married and/or cohabitating, while one-third (37.8%) were married, and the remaining 15.3% separated or divorced. Sexual orientation consisted of 73.9% heterosexual, 11.7% bisexual, 9.9% gay or lesbian, with the remaining 4.5% electing not to respond. One fifth (20.8%) classified their religious affiliation as Christian, and slightly more than half of the participants (59.5%) reported being slightly, somewhat, or very religious/spiritual. Of those who reported attending religious meetings (61.2%), about 29% attended meetings less than once a year. Table 1 presents detailed information on the demographic characteristics of the sample.

MILITARY SERVICE CHARACTERISTICS

Participants were primarily enlisted (82.9%), followed by 11.7% Warrant or Commissioned Officers, and 5.4% Cadet or Midshipmen. Of those enlisted, nearly half (47.8%) were within lower enlisted ranks of E1 to E4 and one-third (35.1%) were higher enlisted ranks of E5 to E9. The sample included Service members from the Army (38.7%), Navy (28.8%), Marine Corps (17.1%), Air Force (14.5%), and Coast Guard (0.9%). The average time in service was 7.5 years (*SD* = 7.1). Table 2 presents detailed information on the military characteristics of the sample.

Suicide Risk Characteristics

All participants were admitted to the psychiatric inpatient unit for suicide ideation. Approximately 81% of the total study sample reported a lifetime history of at least one suicide attempt and nearly half (48.6%) reported a history of two or more lifetime suicide attempts. In addition, nearly 38% reported a lifetime history of at least one non-suicidal self-injurious behavior. Current suicide ideation intensity, measured at baseline, was high, with the majority of the sample (82.9%) reporting active suicide ideation with intent and a specific plan. Moreover, the mean score on worst lifetime suicide ideation was 28.6 (*SD* = 4.8) based on the Scale for Suicide Ideation (SSI; 13). Table 3 presents the suicide risk information for the sample.

Stigma and Social Support Characteristics

Mean scores on the three PBTC subscales were as follows: 1) the *stigma* subscale: 16.2 (*SD* = 6.1); 2) the *organizational* subscale: 11.2 (*SD* = 3.7); and 3) the *individual* subscale: 7.1 (*SD* = 2.7). The mean total score on the ISEL-12 was 32.1 (*SD* = 8.2). Almost half of participants (48.6%) endorsed current marital or relationship stress.

Actual Help-Seeking

Help-seeking from any resource in the month prior to hospitalization was endorsed by 90.9% of the sample. The average number of helping resources sought by participants was 3.2 (*SD* = 1.9) resources. Overall, the most frequently sought helping resources included behavioral health professionals (64.9%), friends (54.1%), and intimate partners (46.8%); participants demonstrated generally low utilization of other types of helping resources. The resources generally not sought by most participants included phone help lines (8.1%), other resources (e.g., neighbor, professor; 10.8%), primary care

physicians (14.4%), other relatives/family members (16.2%), parents (20.7%), chaplains (22.5%), other unit members (27.0%), and unit command (36.0%). Of the helping resources sought by at least 22 participants (i.e., 20% of the sample), the resources perceived as helpful by the greatest proportion of participants included other unit members (73.3%), friends (65.0%), and behavioral health professionals (62.5%). The helping resources perceived as harmful by the greatest proportion of participants included parents (21.7%), chaplains (20.0%), and intimate partners (17.6%). None of the helping resources were perceived as harmful by a higher proportion of participants than perceived as helpful. Table 4 displays the endorsement frequency of each type of helping resource (Aim 1); Figure 1 displays whether participants perceived each helping resource as helpful only, harmful only, both helpful and harmful, or neither (Aim 2).

PERCEIVED MENTAL HEALTH TREATMENT STIGMA (AIM 3)

First (step 1), perceived mental health treatment stigma (as measured by the PBTC stigma subscale) was entered as the continuous independent variable in a series of hierarchical binary logistic regressions, with each type of past helping resource utilized entered as the dichotomous dependent variable. Second (step 2), the demographic covariates (gender, race/ethnicity, marital status, and education level) were included in the regression models. Third (step 3), perceived barrier to care covariates, including the PBTC individual subscale and PBTC organizational subscale scores were entered into the regression model. Adjustments for demographic covariates (step 2) demonstrated a good fit throughout all analyses. However, adjustments for both demographic and perceived barrier to care-related covariates (step 3), demonstrated the best fit (Table 5).

Help Sought

In the final models, perceived mental health treatment stigma was not associated with help-seeking from any type of helping resource. Marital status was significantly associated with a greater likelihood of seeking help from an intimate partner (married: OR = 6.51, $p < .001$ [95% CI = 2.34, 18.10] and separated/divorced: OR = 6.63, $p = .010$ [95% CI = 1.58, 27.79]). Higher scores on the PBTC organizational subscale, which indicate greater perceived institutional and cultural barriers to care, were associated with a greater likelihood of seeking help from a friend (OR = 1.16, $p = .038$ [95% CI = 1.01, 1.34]).

No Help Sought

In the final models, perceived mental health treatment was not associated with the likelihood of help-seeking. Being married was associated with a greater likelihood of not seeking help (OR = 6.66, $p = .043$ 95% CI = 1.06, 41.93]). A lower education level was associated with a higher likelihood of not seeking help from any resource. Participants with a high school degree or equivalent had 20 times higher odds of not seeking help compared to participants with some college, no degree (OR = 20.0, $p = .011$ [95% CI 2.04, 250]) and seven times higher odds of not seeking help compared to participants with an Associate's degree or higher (OR = 7.14, $p = .050$ [95% CI 1, 50]).

Summary

In summary, higher perceived mental health treatment stigma was expected to associate with a greater likelihood of seeking help from intimate partners, friends, parents, chaplains, other unit members, or no help sought; whereas lower perceived mental health treatment stigma was expected to associate with a greater likelihood of seeking help from behavioral health professionals and unit command. Overall, this

hypothesis was not supported, as perceived mental health treatment stigma was not associated with help-seeking nor with help-seeking from a specific resource across any of the regression models.

PERCEIVED SOCIAL SUPPORT (AIM 4)

First (step 1), perceived social support (as measured by the ISEL-12 total score) was entered as the continuous independent variable in a series of hierarchical binary logistic regressions, with each type of past helping resource utilized entered as the dichotomous dependent variable. Second (step 2), the demographic covariates (gender, race/ethnicity, marital status, and education level) were included in the regression models. Results of the unadjusted hierarchical binary logistic regression analyses (step 1) indicated that higher perceived social support was significantly associated with a greater likelihood of seeking help from a friend (OR = 1.06, p = .022 [95% CI = 1.01, 1.11]).

Help Sought

After adjustments for demographic covariates (step 2; Table 6), the association between higher perceived social support and a greater likelihood of seeking help from a friend remained significant (OR = 1.07, p = .014 [95% CI = 1.01, 1.13]). Perceived social support was not significantly associated with help-seeking from any other type of helping resource. Male gender was associated with lower likelihood of help-seeking from an intimate partner (OR = 0.34, p = .040 [95% CI = 0.12, 0.95). Marital status was associated with a greater likelihood of seeking help from an intimate partner (married: OR = 6.06, p < .001 [95% CI = 2.28, 16.06]; separated/divorced: OR = 6.26, p = .010 [95% CI = 1.55, 25.27]). Being married was associated with a lower likelihood of seeking help from a friend (OR = 0.31, p = .015 [95% CI = 0.12, 0.80]). Being separated/divorced

was associated with a lower likelihood of seeking help from another unit member (OR = 0.18, p = .048 [95% CI = 0.03, 0.99]). Having an Associate's degree or higher level of education was associated with greater likelihood of seeking help from a parent (OR = 4.85, p = .025 [95% CI = 1.22, 19.28]).

No Help Sought

Perceived social support was not associated with no help sought. A lower education level was associated with a higher likelihood of not seeking help from any resource. Participants with a high school degree or equivalent had 20 times higher odds of not seeking help compared to participants with some college, no degree (OR = 20.0, p = .013 [95% CI 1.88, 200]) and six times higher odds of not seeking help compared to participants with an Associate's degree or higher (OR = 6.25, p = .044 [95% CI 1.04, 33.33]).

Summary

In summary, higher perceived social support was expected to associate with a greater likelihood of seeking help from intimate partners, friends, parents, and other unit members; whereas lower perceived social support was expected to associate with a greater likelihood of seeking help from behavioral health professionals, chaplains, and unit command, or no help sought. Overall, this hypothesis was partially supported for the relationship between perceived social support and help-seeking from friends; however, perceived social support was not significantly associated with help-seeking from any other types of helping resources, or no help sought.

ALL DETERMINANTS (AIM 5)

First (step 1), perceived mental health treatment stigma (as measured by the PBTC stigma subscale) was entered as a continuous independent variable in a series of hierarchical binary logistic regressions, with each type of helping resource as the dependent variable. Second (step 2), perceived mental health treatment stigma and perceived social support (as measured by the ISEL-12 total score) were entered as continuous independent variables. Third (step 3), demographic covariates (gender, race/ethnicity, marital status, and education level) and perceived barrier to care covariates (PBTC individual and organizational subscales) were included in the regression models.

Help Sought

The third step of the models, including all covariates, demonstrated the best fit (Table 7). In summary, perceived mental health treatment stigma was not significantly associated with seeking help from any type of helping resource, while higher perceived social support remained associated with a greater likelihood of seeking help from a friend (OR = 1.08, p = .013 [95% CI = 1.02, 1.14]). Marital status remained significantly associated with greater likelihood of seeking help from an intimate partner (married: OR = 6.47, p < .001 [95% CI = 2.32, 18.02]; separated/divorced: OR = 6.62, p = .010 [95% CI = 1.56, 28.11]). Being married was associated with a lower likelihood of seeking help from a friend (OR = 0.35, p = .036 [95% CI = 0.13, 0.94]). Higher PBTC organizational subscale scores remained associated with greater likelihood of seeking help from a friend (OR = 1.18, p = .029 [95% CI = 1.02, 1.37]).

No Help Sought

Neither perceived mental health treatment nor perceived social support were associated with no help sought. Being married was associated with greater likelihood of

not seeking help (OR = 6.35, p = .050 [95% CI 1.00, 40.27]). Participants with a high school degree or equivalent had 20 times higher odds of not seeking help compared with participants with some college, no degree (OR = 20.0, p = .012 [95% CI 1.96, 250]).

Summary

In summary, perceived mental health treatment stigma (compared to perceived social support) was expected to associate with a greater likelihood of seeking help from behavioral health professionals, chaplains, and unit command, (not supported). In contrast, perceived social support (compared to perceived mental health treatment stigma) was expected to associate with a greater likelihood of seeking help from intimate partners, friends, parents, and other unit members (partially supported, as perceived social support was only significantly associated with seeking help from a friend). Taken together, both low perceived mental health treatment stigma and high perceived social support were expected to associate with a greater likelihood of seeking help from at least one resource (not supported).

CHAPTER 4: Discussion

The overall objective of this study was to advance our understanding of help-seeking in relation to perceived mental health treatment stigma and perceived social support within a sample of military psychiatric inpatients hospitalized following a suicide-related crisis. First, we examined utilization of different types of helping resources by active duty Service members in the month prior to their psychiatric hospitalization for a suicide-related event, as well as the perceived helpfulness and harmfulness of each helping resource sought. Approximately 90% of Service members had sought help from an average of three types of resources in the month prior to their psychiatric hospitalization. This notably high help-seeking trend appears to differ from what has been reported in the scientific literature for civilians with suicide ideation and/or suicide attempt histories.

More specifically, rates of help-seeking from formal helping resources have ranged from approximately 30% among civilians with suicide ideation and/or attempts during a one-year period (39), to 42% among civilians in Australia with a history of suicide attempts (26). Studies (e.g., 10) examining help sought from both formal and informal resources have found that friends and family, compared with formal resources, are more frequently contacted in the 30 days prior to an attempted suicide. Help-seeking rates for suicide ideation range from 20% from health professionals to greater than 40% from family members and close friends among civilians in France (29). Scientific data on help-seeking patterns among suicidal Service members is limited, thereby necessitating the study presented here. Among Service members reporting a suicide attempt in 2018,

approximately 62% reported having a medical appointment in the 90 days prior to the attempt; however, it is unknown if individuals were assessed for or disclosed suicidality during these appointments (78).

What is evident is that rates of help-seeking appear to differ internationally, across studies, and within specific clinical versus non-clinical samples. Moreover, variability in the measurement of helping resources is a key limitation for this type of research. For instance, this study examined a variety of both formal and informal helping resources, whereas other studies (26; 39) examined help-seeking from only formal helping resources, or from limited types of informal resources (e.g., family, friends; 10; 29). Notably, while considering potential differences among civilians and military samples, it is reasonable to assume that Service members may have more readily available access to a greater variety of types of helping resources compared to civilians. For example, active duty Service members have access to behavioral health providers as part of the health care program within the MHS (TRICARE), and may have resources like chaplains embedded within their unit. This availability of resources may further increase overall help-seeking rates among this sample.

Attention must also be paid to those who do not choose to seek help and the reasons underlying this lack of engagement. In the realm of this study, there is no clear understanding of the rationale for almost 10% of the Service members (i.e., a total of 11 participants) who chose not to seek help. Contrary to our hypotheses, for instance, perceived mental health treatment stigma and perceived social support were not significantly associated with no help sought in the month prior to psychiatric hospitalization. In the scientific literature, however, multiple determinants have been

associated with decreased help-seeking for suicidal thoughts and behaviors including stigma, lack of social support, barriers to care, male gender, and identification as racial and ethnic minorities (4; 5; 29; 36; 39). Larger sample sizes are required to fully understand the reasons underlying the absence of help-seeking, particularly among at-risk suicidal military personnel.

Above and beyond rates of help-seeking, it is important to consider what resources are specifically favored over others. In this study, the most frequently utilized helping resources consisted of behavioral health professionals, friends, and intimate partners. Moderately utilized helping resources included unit command or a unit member, chaplains, and parents. The least frequently utilized resources were other relatives, primary care physicians, and phone help lines, along with other helping resources not captured in the categories listed. Research has indicated that, for psychological health issues, informal sources of help are preferred to formal sources among samples of youth and young adults at risk for suicide (54), adolescents and young adults hospitalized following a suicide attempt (10), college students with a lifetime history of suicide ideation (8), and a community sample of adults (29). One study (29) found that one-fifth of adults in their sample reported talking to a health professional about their suicide ideation, whereas approximately two-fifths reported talking to a close friend or family member. A review of six studies of help-seeking in civilians up to age 26 found that higher rates of help-seeking were sought from informal sources (40% to 68% of participants) as compared to formal help-seeking (less than 50% of participants; 54).

In this study, both formal and informal resources were among the most and least frequently sought resources; thus, our findings are generally inconsistent with previous

literature. Our sample only included adults, the majority of whom reported a lifetime history of suicide ideation and suicide attempt, and all of whom were psychiatrically hospitalized for a suicide-related event. Although we did not assess whether Service members in this sample were voluntarily or involuntarily hospitalized, it is important to consider whether the circumstances of hospitalization may be associated with help-seeking. Participants in this study also reported high levels of suicide ideation, both currently and at the worst point during their lifetime. Due to the suicide risk severity of this sample, as well as the lifetime history of suicide attempts, participants may have previously been connected to helping resources prior to their current hospitalization. This past connection to services may explain the greater help-seeking rates observed, particularly from formal resources including behavioral health professionals. Additional research is also necessary to best understand how to increase utilization of potentially helpful resources that are free of charge and widely available, such as a 24/7 crisis help line, which was notably underutilized within this sample.

Generally, the majority of Service members who utilized resources perceived them as helpful. The resources perceived as most helpful by the greatest proportion of participants included other unit members, friends, and behavioral health professionals. The helping resources perceived as most harmful, as reported by approximately one-fifth of participants who endorsed that resource, included parents, chaplains, and intimate partners. Previous research has suggested that early experiences with mental health care facilitate help-seeking in the future, particularly if the early experiences with formal health care are perceived as positive (8; 39; 40). Research also suggests that perceived negative past experiences with formal helping resources may be associated with

increased negative attitudes toward formal helping resources and less frequent use of services in the future (39; 55; 69). Consistent with this research, participants who perceived past helping resources as helpful may have been more likely to seek help from certain resources in our study. Indeed, the helping resources that were perceived as the most helpful among participants were also among the resources most frequently or moderately sought.

Alternatively, intimate partners, who were among the most frequently sought resources in this sample, were also considered by some participants to be harmful. This could be because approximately half of participants reported marital or relationship stress; consistent with other studies (49), this stress may have contributed to participants' suicide risk and negatively influenced perceptions of helpfulness when seeking help. Still, because the majority of participants in this study perceived all of the helping resources as primarily helpful, findings suggest a variety of helping resources may be useful for Service members at risk for suicide. Interestingly, another issue to consider is the accuracy of an individual's perceptions about the helpfulness and/or harmfulness of a helping resource while experiencing mental health difficulties such as depression. Interventions such as cognitive behavioral therapy often emphasize that many of us can experience cognitive distortions, and at times, these may be directed at services and/or people within our social network, ready and able to assist.

Furthermore, this study examined the associations among type of helping resource sought, perceived mental health treatment stigma, and perceived social support in a stepwise and methodical manner. The results section outlines the findings for each aim of the study and all models considered. Here, our discussion focuses on the findings based

on the inclusion of all determinants in the final series of hierarchical binary logistic regression models, since these provide the clearest pathway to understanding the observed relationships.

Overall, perceived mental health treatment stigma was not significantly associated with seeking help from a specific type of helping resource, or from no help sought. This finding was contrary to our hypotheses that higher perceived mental health treatment stigma would associate with help sought from intimate partners, friends, parents, chaplains, other unit members, or no help sought, whereas lower perceived mental health treatment stigma would associate with help sought from behavioral health professionals and unit command. The mean score on the PBTC stigma subscale was 16.2 (*SD* = 6.1) out of a possible score of 25, and the average score on each of the stigma scale items was 3.25 out of 5, suggesting a moderate level of perceived stigma. Notably, it is difficult to compare PBTC scores across studies, as items on the measure are often modified to reflect specific samples studied, and item-level endorsement is often reported. In this study, the average score on each item of the PBTC stigma subscale was similar to item scores in a sample of U.S. Marines (81).

Previous research on the influence of stigma on help-seeking is mixed. Some research has identified stigma as a barrier to help-seeking from both formal (23) and informal resources (69). Alternatively, other studies have not found significant associations between stigma and the use of medication and/or psychotherapy for psychological health issues among samples of National Guard Soldiers (6), Iraq and Afghanistan Veterans (37), U.S. Army soldiers (45), and VA service users (66). Research on stigma among military members often identifies concerns about being treated

differently by unit leadership or other unit members as important components of stigma (71), as well as actual and perceived concerns about career impacts related to reporting and seeking help for mental health concerns (1; 2). Furthermore, some research suggests other determinants such as symptom severity and perceived need are strongly associated with greater help-seeking (27; 51).

Findings from this study are consistent with literature that did not find significant associations between stigma and help-seeking among military personnel and Veterans, but are inconsistent with the expected relationship between perceived mental health treatment stigma and help-seeking from various resources, and with studies that have identified stigma as a significant determinant of help-seeking. Perceived mental health treatment stigma may not have been a significant determinant of help-seeking within this study's sample for several reasons. As previously stated, the majority of the sample sought help from at least one resource and, on average, used three resources. Ultimately, all participants in this study received help for their suicidal crisis given their psychiatric admission. One explanation for a null finding on perceived mental health treatment stigma may be related to potential positive experiences with prior help-seeking, thereby shaping beliefs and attitudes about mental health treatment and reducing the impact of perceived mental health treatment stigma on help-seeking behavior. However, this explanation may be less likely in this study since participants still reported a moderate level of perceived stigma. Additionally, unit command and other unit members were frequently utilized as help-seeking resources and were generally perceived as helpful among this study sample. Thus, participants in this sample may not have experienced some of the commonly reported stigma factors among Service members found in other

studies, instead finding unit leaders and members to be supportive. Possibly, the chronicity of the mental health-related issues may have provided the individual with a longer timeline to overcome any perceived mental health treatment-related stigma issues. Moreover, participants in this study reported high levels of suicide ideation and most reported history of one or more suicide attempts during their lifetime. Thus, there may be more homogeneity of suicide risk severity in this sample, and participants may have considered symptom severity or perceived need to be more relevant determinants of help-seeking than perceived mental health treatment stigma. Finally, in this study, perceived mental health treatment stigma was assessed in relation to help-seeking, yet other facets of stigma (e.g., internalized or experienced stigma) may influence help-seeking as well.

In reference to perceived social support, the mean total score on the ISEL-12 among participants in this sample was 32.1 (*SD* = 8.2) out of a possible score of 48, indicating relatively low levels of social support. This score is similar to the average ISEL-12 total score in a sample of homeless adults who smoke (57), and lower than the average ISEL-12 score among a national cohort study of Hispanic/Latino and White adults in the U.S. (53), and among a sample of adults with a diagnosis of heart failure (14). Participants may have perceived low levels of social support for several reasons. For example, individuals may lack or be separated from actual social support resources (43). In the military, Service members may be disconnected from social support resources like friends, intimate partners, and family members due to changing duty locations, training exercises, or deployment (3; 58). Furthermore, individuals with acute suicidality may experience help negation, whereby support is rejected and perceptions of support may be skewed, partially due to symptoms of hopelessness and maladaptive coping

strategies (67). Thwarted belongingness, or feeling alienated from important supportive relationships with others, is an essential component of the interpersonal-psychological theory of suicide (44), and may also explain the low levels of perceived social support in this sample of Service members with a history of suicidal ideation and/or attempts. Even though perceived social support levels were low in this sample, the majority of participants still sought help from at least one resource.

In addition, higher perceived social support was only significantly associated with a greater likelihood of seeking help from a friend and, not as hypothesized, associated with seeking or not seeking help from any other type of helping resource, or not seeking help from any resource. Existing research on the relationship between perceived social support and help-seeking from different types of helping resources is mixed. For example, social support may encourage help-seeking; in a sample of U.S. college students, approximately 64% were encouraged by a personal resource to seek formal help (27), and in a French community sample, individuals were more likely to talk to a health professional if they had also talked to family members or friends about their suicidal ideation (29). Other studies have found that greater social support is not related to increased help-seeking from formal resources because individuals may not perceive need for more formal treatment (25; 27). Additional research suggests that individuals with lower levels of social support may be more likely to report intentions to seek care from a mental health provider for a mental health problem, compared to another type of helping resource (48). Service members in this sample reported generally low levels of perceived social support compared to other samples, which may explain why social support was only a significant determinant when seeking help from a friend. Despite the lower levels

of perceived social support reported, service members still sought help from a variety of helping resources, indicating that other determinants may be more important to help-seeking than perceived social support among this sample.

In the final regression models used in this study, being married or separated/divorced was associated with greater likelihood of help-seeking from intimate partners. Being married was also associated with lower likelihood of seeking help from a friend, and greater likelihood of not seeking help. Previous studies of U.S. and Canadian Service members have found that being married or separated/divorced is associated with greater help-seeking intentions and use of formal resources for mental health concerns (15; 30; 51). These studies suggest that significant others may encourage their partners to seek help from formal resources (15; 30; 51), or the loss of a relationship among individuals who are separated/divorced may motivate one to seek help from other resources (30). Findings from our study are different than existing literature, which has primarily examined the influence of marital status on help-seeking from formal resources. More specifically, marital status was not associated with help-seeking from formal resources like behavioral health providers. Still, findings from our study are somewhat intuitive. Someone with an intimate partner, either currently (married) or in the past (separated/divorced), may be more likely to seek help for suicidal thoughts and behaviors from that partner, and less likely to seek help from a friend instead. However, being married was also associated with no help sought. Here, it could be that married individuals may feel uncomfortable seeking help from any resource due to fears they would worry their family or lose their place within the family unit (69). Furthermore, approximately 17% of participants who sought help from an intimate partner perceived

the response as harmful; thus, some married individuals may have anticipated a harmful response and been reluctant to seek help from any resource.

Next, higher education (e.g., some college) was associated with lower likelihood of not seeking help. There is a dearth of literature on the association between education level and help-seeking for suicide or other psychological health concerns. A study of high school and college students found that higher education levels were associated with more positive attitudes about seeking help from a mental health professional (31). Interventions developed to increase help-seeking for suicide (e.g., peer and gatekeeper training models) have often been implemented in school and university settings (39). A review of studies of help-seeking for mental health problems among adolescents and young adults indicates that lack of knowledge about mental health services is often a barrier to help-seeking, whereas education and awareness about mental health problems and treatment are considered facilitators of help-seeking (35). Findings in our study are consistent with the limited literature suggesting higher education may be associated with less likelihood of not seeking help; however, education level was not significantly associated with greater likelihood of help-seeking from any specific type of helping resource. Thus, the relationship between education and help-seeking is still unclear.

Finally, greater scores on the PBTC organizational subscale were associated with greater likelihood of seeking help from a friend. Some research has found that perceived organizational barriers to care (e.g., difficulty getting appointments, difficulty getting time off work for treatment) are often reported among active duty Service members and may be associated with decreased likelihood of seeking formal help (38; 86), whereas other studies have not found that organizational barriers predict treatment utilization

among active duty soldiers (45) or help-seeking intentions from formal or informal resources among military members serving in OEF/OIF (61). Findings from this study are generally consistent with research that has not found a significant association between organizational barriers to care and help-seeking among military personnel. However, findings suggest that individuals who perceive organizational barriers to care may initially turn to available informal resources like friends for help.

In summary, findings from this study advance our understanding of help-seeking within military samples. Reducing perceived mental health treatment stigma has been a focus of many programs within the MHS (e.g., the Real Warrior Campaign, Afterdeployment.org) and those aimed at culture shift and increasing access to care (e.g., Ask, Care, Escort; 1). Results from this study perhaps highlight the efficacy of ongoing efforts that have been undertaken to provide support for Service members experiencing suicidal thoughts and behaviors, and to connect these individuals to behavioral health. Still, there is a proportion of Service members who do not report seeking help from any type of resource prior to a suicide crisis, which remains a concern.

Seeking help in the month prior to a psychiatric hospitalization may have helped participants reach the necessary level of care they required, but suggests there is room for improvement in getting Service members timely and effective care for suicide-related thoughts and behaviors in an effort to prevent future suicide risk. Based on our sample alone, findings also suggest that perceived mental health treatment stigma and perceived social support may not be as salient among Service members as other determinants of help-seeking. Gaining a better understanding of what determinants are relevant for Service members seeking help for suicide-related thoughts and behaviors, and developing

ways to identify or address these determinants may help increase and improve the quality of help-seeking within the Armed Forces. Overall, findings stress the importance of studying multiple determinants when trying to better understand the complex process of help-seeking among active duty Service members. Therefore, a one-size-fits-all approach to messaging about help-seeking may not be the most effective.

LIMITATIONS AND STRENGTHS

This study has several limitations. First, the small sample size limited our power. Associations between variables may be weak; thus, this study may not be powered to detect small effect sizes. Second, this study is cross-sectional, yet determinants of help-seeking likely change over time. The timing of our assessments may especially reflect this limitation. Perceived mental health treatment stigma and perceived social support were assessed at the time of participants' current hospitalization, while actual help-seeking was reported for the 30 days prior to hospitalization. Therefore, perceived mental health treatment stigma and social support may have changed within the measurement time frame, or been influenced by the patient's help-seeking experiences within the prior month. Third, our sample all sought inpatient care; thus, they may have more connection to or prior experience with helping resources for psychological health concerns. Fourth, our study was limited to active duty Service member participants. Other National Guard and Reserve Service members, or Veterans and beneficiaries receiving psychological health care in the MHS may utilize different helping resources and be influenced by perceived mental health treatment stigma, perceived social support, and other help-seeking determinants in different ways.

Despite these limitations, this study has several strengths. This study examined determinants of help-seeking among both formal and informal types of helping resources, whereas the majority of existing literature has focused primarily on formal resources (10; 64). Examining a variety of both formal and informal helping resources provides a better understanding of where Service members actually seek help for suicide-related concerns and their perceptions of the helpfulness or harmfulness of those resources. In addition, we examined actual help-seeking behaviors rather than help-seeking intentions. Although much of the literature examining determinants of help-seeking has examined help-seeking intentions, less research has focused on help-seeking behaviors, which may be influenced by different determinants (56). We also examined multiple determinants within each model, rather than focusing on only one determinant. This reflects the complexity of help-seeking, helping us better understand how different determinants may or may not be associated with help-seeking for suicidality from specific types of resources.

FUTURE DIRECTIONS

Future research that includes other determinants that may be relevant to help-seeking for suicidality among Service members, including perceived need, symptom severity, or facilitation by others, may provide additional information about modifiable factors that can be targeted to improve help-seeking and care delivered by different helping resources. Furthermore, longitudinal studies examining whether other determinants such as cognitions (e.g., “I would be labeled as crazy and put in a hospital”) and emotions (e.g., shame, anxiety) predict future help-seeking behaviors are essential to understanding how determinants predict actual help-seeking over time. Additional

qualitative and quantitative studies evaluating both informal and formal types of resources sought (including other types of helping resources not examined in this study, like text-based counseling services) and their perceived helpfulness and harmfulness will continue to help identify areas where suicide prevention and intervention efforts can be implemented and improved in order to reduce suicide risk among U.S. Service members.

IMPLICATIONS

Results from this study have several clinical and policy implications. First, findings suggest friends are one of the most frequently utilized helping resources by Service members at risk for suicide. Investing in peer-based prevention and intervention efforts (e.g., encouraging patients to include friends on safety plans) and expanding these resources into the communities where friends may live may be one way to reduce suicide risk. Increasing social support among Service members at risk for suicide may be an important aspect of prevention and intervention efforts that could be associated with future help-seeking as well, particularly since increased social support was associated with greater likelihood of seeking help from friends in this study. Results also indicate behavioral health professionals were the most frequently endorsed helping resource, and resources like other unit members and unit command were utilized frequently and generally perceived as helpful. Therefore, military policy makers and clinicians should continue to provide training and disseminate programs aimed at providing assistance to Service members with suicidal thoughts and behaviors.

Still, there are areas for improvement in providing help to Service members with suicidality. Resources such as phone help lines and primary care physicians, which are resources often readily accessible to individuals, were infrequently utilized in this

sample. Interestingly, some of the less frequently utilized resources, such as phone help lines and other relatives/family members, were considered helpful by the greatest proportion of participants. This may be because the resources were utilized infrequently; however, it may also suggest that these helpful resources are underutilized, and efforts to increase utilization may be beneficial (e.g., via Crisis Line Facilitation intervention; 42). Additionally, resources that were considered harmful by the largest proportion of participants in this study (e.g., parents, chaplains, intimate partners) indicate areas where efforts to increase or improve training on effective ways to manage suicidality and psychological health concerns reported by Service members may be necessary. Qualitative studies can provide a preliminary understanding of why and how these types of resources can be perceived as harmful.

CONCLUSION

In conclusion, findings from this study provide additional information about help-seeking behavior for suicide-related thoughts and behaviors among active duty Service members hospitalized for a suicide crisis. The majority of Service members in this study sought help from informal and/or formal helping resources in the month prior to hospitalization, and the helping resources sought were generally perceived as helpful. Perceived mental health treatment stigma was not associated with help-seeking from any type of helping resource, and perceived social support was only associated with seeking help from a friend. Other determinants, including marital status, education level, and perceived organizational barriers to care were associated with seeking help from certain types of helping resources. Altogether, findings suggest programs focused on suicide prevention and intervention that involve helping resources frequently utilized by Service

members, such as behavioral health professionals, friends and intimate partners, should continue to be developed and implemented within the MHS. Improving delivery of suicide care among resources infrequently utilized (e.g., help line facilitation) or perceived as harmful is also important. Longitudinal research examining whether different determinants predict future help-seeking behaviors may provide additional information to better understand help-seeking among Service members. Ultimately, understanding the types of helping resources Service members use prior to or during a suicidal crisis and the determinants associated with different helping resources can improve the delivery of care in order to reduce suicide risk and prevent future suicidal crises.

Table 1. Sample Demographic Characteristics (N = 111)

	Active Duty Service Members	
	n	%
Age, Mean (*SD)*, Years	27.8	7.9
Gender		
Female	32	28.8
Male	79	71.2
Race/Ethnicity		
White, Non-Hispanic	66	59.5
Black/African American	14	12.6
Hispanic	16	14.4
Asian, Native Hawaiian, or Pacific Islander	10	9.0
Mixed Race/Ethnicity	4	3.6
Other	1	0.9
Sexual Orientation		
Heterosexual	82	73.9
Bisexual	13	11.7
Gay or Lesbian	11	9.9
I Prefer Not to Answer	5	4.5
Education		
High School Diploma or Equivalent	32	28.8
Some College, No Degree	39	35.2
Associate's Degree	15	13.5
Bachelor's Degree	20	18.0
Graduate or Professional Degree	5	4.5
Marital Status		
Never Married/Cohabitating	52	46.9
Married	42	37.8
Separated/Divorced	17	15.3
Religious Affiliation		
Agnostic	14	12.6
Atheist	10	9.0
Buddhist	3	2.7
Catholic	12	10.8
Christian	23	20.8
Protestant	5	4.5
Spiritual	24	21.6
Unitarian	1	0.9
Other	11	9.9
Not Applicable	8	7.2
Frequency of Attending Religious Meetings		
1+ Times Per Week	7	6.3
1+ Times Per Month	10	9.0
1+ Times Per Year	19	17.1
Less Than Once per Year	32	28.8
Not Applicable	43	38.8
Self-Reported Religiosity/Spirituality		
Very Religious/Spiritual	12	10.8
Somewhat Religious/Spiritual	21	18.9
Slightly Religious/Spiritual	33	29.8
Not at all Religious/Spiritual	21	18.9
Unsure	24	21.6

Notes. Data presented as No. (%), except as noted.

Table 2. Sample Military Characteristics (N = 111)

	Active Duty Service Members	
	n	%
Time in Service, Mean (*SD),* Years	7.5	7.1
Branch of Service		
Air Force	16	14.5
Army	43	38.7
Coast Guard	1	0.9
Marine Corps	19	17.1
Navy	32	28.8
Rank		
Cadet/Midshipmen	6	5.4
Enlisted (E1 – E4)	53	47.8
Enlisted (E5 – E9)	39	35.1
Warrant Officer (W1 – W5)	2	1.8
Commissioned Officer (O1 – O10)	11	9.9
History of Deployment		
Yes	46	41.4
No	62	55.9
Not Applicable (Cadet/Midshipmen)	3	2.7

Notes. Data presented as No. (%), except as noted.

Table 3. Baseline Suicide Risk Characteristics (N = 111)

	Active Duty Service Members	
	n	%
Hospital Admission Reason		
SI[a], with Lifetime Suicide Attempts Reported	90	81.1
SI, with No Lifetime Suicide Attempts Reported	21	18.9
C-SSRS[b] Lifetime Non-Suicidal Self-Injurious Behavior		
No	68	61.3
Yes	42	37.8
Missing Data	1	0.9
C-SSRS Suicide Ideation Intensity		
Wish To Be Dead	1	0.9
Non-Specific Active Suicidal Thoughts	0	0
Active SI, Without Intent or Plan	3	2.7
Active SI With Intent, Without Plan	15	13.5
Active SI With Intent and Plan	92	82.9
C-SSRS Total Number of Lifetime Suicide Attempts		
0	21	18.9
1	36	32.5
2	23	20.7
3 or More	31	27.9
SSI[c], Worst Day, Mean (*SD*)	28.6	4.8

Notes. Data presented as No. (%), except as noted.

[a] SI: suicide ideation.

[b] C-SSRS: Columbia-Suicide Severity Rating Scale.

[c] SSI: Scale for Suicide Ideation.

Table 4. Patterns of Actual Help Seeking (N = 111)

	Actual Help-Seeking by Active Duty Service Members			
	Yes		No	
	n	%	n	%
Type of Helping Resource on AHSQ[a]				
Intimate Partner[b]	51	46.8	58	53.2
Friend	60	54.1	51	45.9
Parent (Mother/Father)	23	20.7	88	79.3
Other Relative/Family Member	18	16.2	93	83.8
Behavioral Health Professional	72	64.9	39	35.1
Chaplain	25	22.5	86	77.5
Phone Help Line	9	8.1	102	91.9
Unit Command	40	36.0	71	64.0
Other Unit Member(s)	30	27.0	81	73.0
Primary Care Physician	16	14.4	95	85.6
Other	12	10.8	99	89.2
No Help Sought	11	9.9	N/A	N/A
Number of Helping Resources, Mean (*SD*)	3.21	1.94	-	-

Notes. Data presented as No. (%), except as noted.

[a] AHSQ: Actual Help Seeking Questionnaire.

[b] n = 109 due to missing data from two participants.

Table 5. Association Between Mental Health Treatment Stigma and Type of Helping Resource Utilized (N = 111)

	Type of Helping Resource: AOR[a] (95% CI[b])			
	Intimate Partner[c]	Friend	Parent	Other Unit Member(s)
Variable	n = 109	n = 111	n = 111	n = 111
PBTC[d] Stigma[e]	1.00 (0.91, 1.11)	0.94 (0.85, 1.03)	1.08 (0.95, 1.22)	0.99 (0.90, 1.10)
Gender				
Female	1.00	1.00	1.00	1.00
Male	0.39 (0.14, 1.09)	0.76 (0.31, 1.91)	0.88 (0.29, 2.66)	1.53 (0.54, 4.31)
Race/Ethnicity				
White	1.00	1.00	1.00	1.00
Black/African American	0.86 (0.21, 3.46)	2.53 (0.65, 9.82)	1.31 (0.30, 5.69)	0.80 (0.18, 3.57)
All Others[f]	0.86 (0.29, 2.60)	0.81 (0.31, 2.09)	0.37 (0.10, 1.35)	0.54 (0.18, 1.57)
Marital Status				
Not Married/Cohabitating	1.00	1.00	1.00	1.00
Married	6.51 (2.34, 18.10)***	0.40 (0.16, 1.03)	0.42 (0.12, 1.48)	0.72 (0.27, 1.92)
Separated/Divorced	6.63 (1.58, 27.79)*	0.40 (0.11, 1.47)	0.99 (0.23, 4.18)	0.19 (0.04, 1.04)
Education Level				
High School[g]	1.00	1.00	1.00	1.00
Some College	2.38 (0.73, 7.82)	1.85 (0.63, 5.47)	1.11 (0.24, 5.16)	1.98 (0.60, 6.60)
College Degree[h]	2.74 (0.82, 9.15)	2.12 (0.70, 6.42)	3.29 (0.82, 13.28)	2.91 (0.87, 9.77)
PBTC Organizational[e]	1.04 (0.90, 1.20)	1.16 (1.01, 1.34)*	1.02 (0.87, 1.19)	0.99 (0.86, 1.14)
PBTC Individual[e]	0.88 (0.69, 1.11)	0.95 (0.77, 1.18)	0.77 (0.59, 1.02)	0.98 (0.78, 1.24)
R^{2i}	.332	.170	.214	.105
X^{2j}	9.59, $p = .295$	5.07, $p = .750$	7.54, $p = .480$	6.11, $p = .635$

[a] *AOR: Adjusted Odds Ratio.*
[b] *CI: Confidence Interval.*
[c] *n = 109 due to data missing from two participants.*
[d] *PBTC: Perceived Barriers to Care.*
[e] *PBTC Stigma, PBTC Organizational, and PBTC Individual are continuous scales.*
[f] *Hispanic; Asian, Native Hawaiian, or Pacific Islander; Mixed Race; and Other Race/Ethnicity.*
[g] *Includes High School Diploma or Equivalent.*
[h] *Associate's Degree or Higher.*
[i] *Nagelkerke R^2 for logistic regression.*
[j] *Hosmer and Lemeshow Test.*
** $p < .05$; ** $p < .01$; *** $p < .001$*

Table 5 (Continued). Association Between Mental Health Treatment Stigma and Type of Helping Resource Utilized (N = 111)

	Type of Helping Resource: AOR[a] (95% CI[b])			
	Behavioral Health Professional	Chaplain	Unit Command	No Help Sought
Variable	n = 111	n = 111	n = 111	n = 111
PBTC[d] Stigma[e]	1.00 (0.90, 1.10)	1.04 (0.92, 1.16)	0.98 (0.88, 1.08)	0.93 (0.79, 1.10)
Gender				
Female	1.00	1.00	1.00	1.00
Male	0.43 (0.16, 1.15)	1.28 (0.44, 3.76)	1.23 (0.49, 3.12)	4.86 (0.51, 45.96)
Race/Ethnicity				
White	1.00	1.00	1.00	1.00
Black/African American	1.84 (0.46, 7.33)	1.51 (0.37, 6.19)	1.89 (0.53, 6.79)	--
All Others[f]	0.87 (0.33, 2.31)	1.24 (0.41, 3.76)	1.38 (0.53, 3.58)	2.08 (0.39, 11.03)
Marital Status				
Not Married/Cohabitating	1.00	1.00	1.00	1.00
Married	1.40 (0.53, 3.68)	0.67 (0.22, 2.03)	0.53 (0.20, 1.38)	6.66 (1.06, 41.93)*
Separated/Divorced	0.46 (0.13, 1.65)	1.23 (0.30, 4.97)	0.38 (0.10, 1.48)	4.79 (0.25, 90.67)
Education Level				
High School[g]	1.00	1.00	1.00	1.00
Some College	1.07 (0.37, 3.13)	2.24 (0.66, 7.60)	0.89 (0.29, 2.67)	0.05 (0.00, 0.49)*
College Degree[h]	1.69 (0.55, 5.17)	0.89 (0.23, 3.42)	2.01 (0.67, 6.01)	0.14 (0.02, 1.00)*
PBTC Organizational[e]	1.07 (0.94, 1.23)	1.02 (0.87, 1.19)	1.11 (0.97, 1.27)	1.08 (0.85, 1.37)
PBTC Individual[e]	1.03 (0.83, 1.27)	1.01 (0.79, 1.30)	0.98 (0.79, 1.21)	1.14 (0.82, 1.59)
R^{2i}	.111	.068	.116	.330
X^{2j}	5.22, p = .734	11.91, p = .155	10.15, p = .255	4.04, p = .854

[a] *AOR: Adjusted Odds Ratio.*
[b] *CI: Confidence Interval.*
[c] *n = 109 due to data missing from two participants.*
[d] *PBTC: Perceived Barriers to Care.*
[e] *PBTC Stigma, PBTC Organizational, and PBTC Individual are continuous scales.*
[f] *Hispanic; Asian, Native Hawaiian, or Pacific Islander; Mixed Race; and Other Race/Ethnicity.*
[g] *Includes High School Diploma or Equivalent.*
[h] *Associate's Degree or Higher.*
[i] *Nagelkerke R^2 for logistic regression.*
[j] *Hosmer and Lemeshow Test.*
** $p < .05$; ** $p < .01$; *** $p < .001$*

Table 6. Association Between Perceived Social Support and Type of Helping Resource Utilized (N = 111)

	Type of Helping Resource: AOR[a] (95% CI[b])			
Variable	Intimate Partner[c] n = 109	Friend n = 111	Parent n = 111	Other Unit Member(s) n = 111
ISEL-12[d]	1.03 (0.97, 1.08)	1.07 (1.01, 1.13)*	1.05 (0.99, 1.12)	1.01 (0.95, 1.06)
Gender				
Female	1.00	1.00	1.00	1.00
Male	0.34 (0.12, 0.95)*	0.66 (0.27, 1.62)	0.66 (0.23, 1.94)	1.53 (0.56, 4.20)
Race/Ethnicity				
White	1.00	1.00	1.00	1.00
Black/African American	1.03 (0.27, 3.96)	2.94 (0.74, 11.68)	1.44 (0.34, 6.05)	0.84 (0.20, 3.62)
All Others[e]	0.97 (0.33, 2.80)	0.76 (0.30, 1.92)	0.37 (0.10, 1.39)	0.56 (0.20, 1.58)
Marital Status				
Not Married/Cohabitating	1.00	1.00	1.00	1.00
Married	6.06 (2.28, 16.06)***	0.31 (0.12, 0.80)*	0.47 (0.14, 1.55)	0.71 (0.28, 1.83)
Separated/Divorced	6.26 (1.55, 25.27)*	0.33 (0.09, 1.25)	1.08 (0.27, 4.26)	0.18 (0.03, .99)*
Education Level				
High School[f]	1.00	1.00	1.00	1.00
Some College	2.72 (0.86, 8.63)	2.31 (0.79, 6.73)	1.16 (0.26, 5.19)	2.05 (0.63, 6.64)
College Degree[g]	3.26 (0.99, 10.67)	2.57 (0.87, 7.62)	4.85 (1.22, 19.28)*	2.96 (0.91, 9.58)
R^{2h}	.326	.185	.203	.102
X^{2i}	3.44, p = .904	6.96, p = .541	5.11, p = .746	3.30, p = .914

[a] *AOR: Adjusted Odds Ratio.*
[b] *CI: Confidence Interval.*
[c] *n = 109 due to data missing from two participants.*
[d] *ISEL-12: Interpersonal Support Evaluation List-12; the ISEL-12 is a continuous scale.*
[e] *Hispanic; Asian, Native Hawaiian, or Pacific Islander; Mixed Race; and Other Race/Ethnicity.*
[f] *Includes High School Diploma or Equivalent.*
[g] *Associate's Degree or Higher.*
[h] *Nagelkerke R^2 for logistic regression.*
[i] *Hosmer and Lemeshow Test.*
** $p < .05$; ** $p < .01$; *** $p < .001$*

Table 6 (Continued). Association Between Perceived Social Support and Type of Helping Resource Utilized (N = 111)

	Type of Helping Resource: AOR[a] (95% CI[b])			
Variable	Behavioral Health Professional n = 111	Chaplain n = 111	Unit Command n = 111	No Help Sought n = 111
ISEL-12[d]	0.96 (0.91, 1.01)	1.03 (0.97, 1.09)	0.98 (.093, 1.03)	1.01 (0.93, 1.09)
Gender				
Female	1.00	1.00	1.00	1.00
Male	0.42 (0.16, 1.13)	1.27 (0.45, 3.62)	1.16 (0.47, 2.84)	4.72 (0.52, 42.49)
Race/Ethnicity				
White	1.00	1.00	1.00	1.00
Black/African American	1.82 (0.46, 7.15)	1.33 (0.34, 5.24)	1.99 (0.58, 6.89)	--
All Others[e]	0.83 (0.32, 2.12)	1.11 (0.38, 3.23)	1.38 (0.55, 3.47)	1.60 (0.34, 7.52)
Marital Status				
Not Married/Cohabitating	1.00	1.00	1.00	1.00
Married	1.36 (0.53, 3.51)	0.73 (0.25, 2.10)	0.48 (0.19, 1.21)	4.76 (0.88, 25.87)
Separated/Divorced	0.46 (0.13, 1.65)	1.34 (0.34, 5.31)	0.38 (0.10, 1.40)	3.92 (0.24, 65.46)
Education Level				
High School[f]	1.00	1.00	1.00	1.00
Some College	1.04 (0.37, 2.93)	1.96 (0.61, 6.34)	0.98 (0.34, 2.83)	0.05 (0.01, 0.53)*
College Degree[g]	1.70 (0.57, 5.10)	0.90 (0.25, 3.26)	2.17 (0.76, 6.21)	0.16 (0.03, 0.96)*
R^{2h}	.121	.061	.095	.311
X^{2i}	7.92, p = .442	4.30, p = .829	7.33, p = .502	3.77, p = .877

[a] *AOR: Adjusted Odds Ratio.*
[b] *CI: Confidence Interval.*
[c] *n = 109 due to data missing from two participants.*
[d] *ISEL-12: Interpersonal Support Evaluation List-12; the ISEL-12 is a continuous scale.*
[e] *Hispanic; Asian, Native Hawaiian, or Pacific Islander; Mixed Race; and Other Race/Ethnicity.*
[f] *Includes High School Diploma or Equivalent.*
[g] *Associate's Degree or Higher.*
[h] *Nagelkerke R^2 for logistic regression.*
[i] *Hosmer and Lemeshow Test.*
** $p < .05$; ** $p < .01$; *** $p < .001$*

Table 7. Associations Among Mental Health Treatment Stigma, Perceived Social Support, and Type of Helping Resource Utilized (N = 111)

	Type of Helping Resource: AOR[a] (95% CI[b])			
	Intimate Partner[c]	Friend	Parent	Other Unit Member(s)
Variable	n = 109	n = 111	n = 111	n = 111
PBTC[d] Stigma[e]	1.01 (0.91, 1.12)	0.95 (0.86, 1.04)	1.10 (0.96, 1.26)	0.99 (0.90, 1.10)
ISEL-12[e,f]	1.02 (0.96, 1.08)	1.08 (1.02, 1.14)*	1.06 (0.99, 1.13)	1.00 (0.95, 1.06)
Gender				
Female	1.00	1.00	1.00	1.00
Male	0.38 (0.13, 1.06)	0.73 (0.28, 1.87)	0.83 (0.27, 2.53)	1.53 (0.54, 4.33)
Race/Ethnicity				
White	1.00	1.00	1.00	1.00
Black/African American	0.89 (0.22, 3.58)	3.13 (0.75, 13.02)	1.42 (0.32, 6.25)	0.80 (0.18, 3.58)
All Others[g]	0.85 (0.28, 2.59)	0.80 (0.30, 2.13)	0.33 (0.09, 1.25)	0.54 (0.18, 1.57)
Marital Status				
Not Married/Cohabitating	1.00	1.00	1.00	1.00
Married	6.47 (2.32, 18.02)***	0.35 (0.13, .94)*	0.38 (0.10, 1.40)	0.72 (0.27, 1.92)
Separated/Divorced	6.62 (1.56, 28.11)*	0.32 (0.08, 1.28)	0.89 (0.21, 3.89)	0.19 (0.04, 1.04)
Education Level				
High School[h]	1.00	1.00	1.00	1.00
Some College	2.45 (0.74, 8.10)	2.20 (0.72, 6.75)	1.19 (0.25, 5.60)	1.98 (0.60, 6.61)
College Degree[i]	2.84 (0.84, 9.59)	2.48 (0.78, 7.84)	3.64 (0.87, 15.20)	2.91 (0.86, 9.83)
PBTC Organizational[e]	1.04 (0.90, 1.21)	1.18 (1.02, 1.37)*	1.02 (0.88, 1.19)	0.99 (0.86, 1.14)
PBTC Individual[e]	0.89 (0.70, 1.13)	1.00 (0.80, 1.24)	0.79 (0.59, 1.05)	0.98 (0.77, 1.25)
R^{2}[j]	.336	.240	.245	.105
X^{2}[k]	10.24, p = .248	7.01, p = .535	6.58, p = .583	6.11, p = .635

[a] *AOR: Adjusted Odds Ratio.*
[b] *CI: Confidence Interval.*
[c] *n = 109 due to data missing from two participants.*
[d] *PBTC: Perceived Barriers to Care.*
[e] *PBTC Stigma, ISEL-12, PBTC Organizational, and PBTC Individual are continuous scales.*
[f] *ISEL-12: Interpersonal Support Evaluation List-12.*
[g] *Hispanic; Asian, Native Hawaiian, or Pacific Islander; Mixed Race; and Other Race/Ethnicity.*
[h] *Includes High School Diploma or Equivalent.*
[i] *Associate's Degree or Higher.*
[j] *Nagelkerke R^2 for logistic regression.*
[k] *Hosmer and Lemeshow Test.*
*$p < .05$; ** $p < .01$; *** $p < .001$*

Table 7 (Continued). Associations Among Mental Health Treatment Stigma, Perceived Social Support, and Type of Helping Resource Utilized (N = 111)

	Type of Helping Resource: AOR[a] (95% CI[b])			
Variable	Behavioral Health Professional n = 111	Chaplain n = 111	Unit Command n = 111	No Help Sought n = 111
PBTC[d] Stigma[e]	0.98 (0.89, 1.09)	1.05 (0.93, 1.19)	0.97 (0.88, 1.07)	0.93 (0.79, 1.10)
ISEL-12[e,f]	0.96 (0.91, 1.02)	1.05 (0.98, 1.11)	0.98 (0.93, 1.03)	1.02 (0.94, 1.11)
Gender				
Female	1.00	1.00	1.00	1.00
Male	0.44 (0.16, 1.19)	1.22 (0.41, 3.59)	1.26 (0.50, 3.21)	4.78 (0.51, 45.18)
Race/Ethnicity				
White	1.00	1.00	1.00	1.00
Black/African American	1.78 (0.44, 7.15)	1.62 (0.39, 6.77)	1.85 (0.52, 6.67)	--
All Others[g]	0.86 (0.32, 2.28)	1.30 (0.42, 3.98)	1.39 (0.53, 3.64)	2.07 (0.39, 10.94)
Marital Status				
Not Married/Cohabitating	1.00	1.00	1.00	1.00
Married	1.48 (0.55, 3.98)	0.62 (0.20, 1.92)	0.54 (0.21, 1.40)	6.35 (1.00, 40.27)*
Separated/Divorced	0.47 (0.13, 1.69)	1.20 (0.30, 4.90)	0.40 (0.10, 1.54)	4.56 (0.24, 86.18)
Education Level				
High School[h]	1.00	1.00	1.00	1.00
Some College	1.00 (0.34, 2.95)	2.44 (0.71, 8.41)	0.86 (0.28, 2.61)	0.05 (0.00, 0.51)*
College Degree[i]	1.63 (0.52, 5.11)	0.91 (0.23, 3.58)	1.94 (0.64, 5.86)	0.15 (0.02, 1.04)
PBTC Organizational	1.08 (0.94, 1.24)	1.01 (0.87, 1.18)	1.11 (0.97, 1.28)	1.08 (0.85, 1.37)
PBTC Individual	1.00 (0.80, 1.25)	1.04 (0.81, 1.35)	0.96 (0.77, 1.19)	1.17 (0.82, 1.65)
R^{2}[j]	.135	.095	.123	.333
X^{2}[k]	9.08, p = .336	9.36, p = .313	7.53, p = .480	4.20, p = .839

[a] *AOR: Adjusted Odds Ratio.*
[b] *CI: Confidence Interval.*
[c] *n = 109 due to data missing from two participants.*
[d] *PBTC: Perceived Barriers to Care.*
[e] *PBTC Stigma, ISEL-12, PBTC Organizational, and PBTC Individual are continuous scales.*
[f] *ISEL-12: Interpersonal Support Evaluation List-12.*
[g] *Hispanic; Asian, Native Hawaiian, or Pacific Islander; Mixed Race; and Other Race/Ethnicity.*
[h] *Includes High School Diploma or Equivalent.*
[i] *Associate's Degree or Higher.*
[j] *Nagelkerke R^2 for logistic regression.*
[k] *Hosmer and Lemeshow Test.*
*$p < .05$; ** $p < .01$; *** $p < .001$*

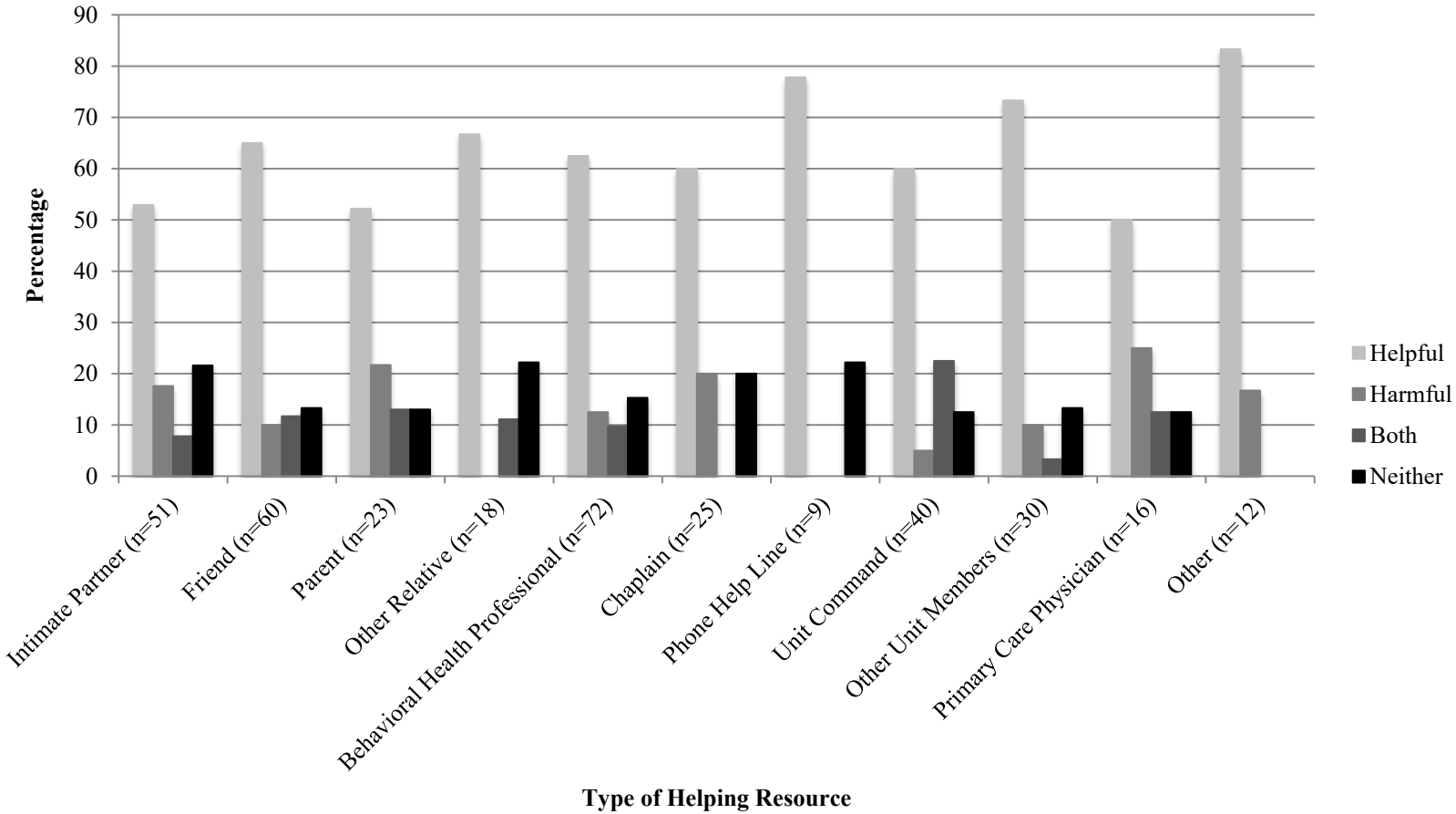

Figure 1. Perceived helpfulness/harmfulness of each helping resource utilized.

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