EFFECT OF INFORMED CONSENT ON VETERAN DISCLOSURE OF SUICIDALITY AND RISK FACTORS

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Abstract

Veteran mental healthcare patients have been known to conceal suicidal ideation and/or delay disclosure until they have developed trust and rapport with providers. The concealment of suicidal ideation (SI) constitutes a significant barrier to reducing veteran deaths by suicide and is associated with fear of negative consequences (e.g., involuntary hospitalization, prohibition of firearms). Standard informed consent procedures may prime patient uncertainty about the relatively low probability of anticipated negative consequences and increase hesitancy to disclose. This study examined if augmenting informed consent with psychoeducation, aimed to help patients achieve a more realistic risk appraisal of consequences associated with disclosure of SI, decreased hesitancy to disclose SI and related risk behaviors among U.S. veterans. Participants ($N = 133$) were recruited from combat veteran social media groups and were randomly assigned to a video simulated treatment-as-usual informed consent (*control*) or to one of two psychoeducation enhanced informed consent conditions (*psychoed, psychoed/trust*). Compared with the control group, participants in both psychoeducation enhanced informed consent conditions reported lower hesitancy to disclose SI, and problems with drugs/thoughts of harming others as well as greater trust and respect for the simulated clinician. Participants in the psychoeducation/trust condition reported lower hesitancy to disclose firearms access than the control condition but no other differences were found between these groups. These findings suggest that brief psychoeducation regarding common factors that affect hesitancy to disclose SI may be beneficial for increasing trust in providers during the informed consent process and decreasing concealment of SI and associated risk factors among veterans.

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Introduction

Suicide

General Population Suicide Rates

Suicide, the taking of one's own life, is a leading cause of death globally with approximately 800,000 deaths by suicide in 2016 (World Health Organization [WHO], 2021). Due to the time and effort required for local, regional, national, and global organizations tasked with tracking suicide these WHO gathered data are the most current global suicide statistics. The global age and sex adjusted suicide rate for 2016 was 10.5 deaths per 100,000 people (WHO, 2021). The age and sex adjusted suicide rate for the U.S. in 2018 surpassed the global rate with 14.2 suicides per 100,000 (Centers for Disease and Prevention [CDC], 2021). To the alarm of public health officials, U.S. suicide rates dramatically increased by 33% from 1999 to 2019, becoming the 10th leading cause of death, and resulting in 47,500 deaths in the U.S. in 2019 (CDC, 2021).

Veteran Suicide Rates

The title of veteran applies to a person who served in the U.S Armed Forces as active military, naval, or air service, and who was discharged or released under conditions other than dishonorable (Veterans Benefits 38 U.S.C. § 101, 2020). For the purposes of this study, adults aged 18 and older who served in the U.S. Armed Forces will be considered to meet the definition of veteran regardless of discharge status. Veterans are a population at increased risk of suicide (Veterans Affairs [VA], 2020). According to the Veteran's Affairs Office of Suicide Prevention Annual Report (2020), the age and sex adjusted suicide rate of veterans in 2018 was 27.5 per 100,000; nearly double the U.S. population rate of 14.2 per 100,000 (CDC, 2021). Despite constituting less than 8% of the U.S. adult population, veterans accounted for 13.8% of all

suicides in the U.S. in 2018 (VA, 2020). From 2005 to 2018, veteran suicide rates varied in annual prevalence with the lowest rate in 2006 (*N* = 5,968) and highest in 2014 (*N* =6,587) (VA, 2020). During the same time frame, the average number of daily, completed veteran suicides was fairly stable at 17 to 18 per day despite significant decreases in the veteran population due to large numbers of elder veterans passing from natural causes associated with old age (VA, 2020).

From 2005 to 2018, sex adjusted suicide rates of veterans in the 18 to 34 age range were the highest of all veteran age groups at 45.9 per 100,000 (VA, 2020). In comparison, the suicide rate of the U.S. population for the same age group, over the same time range was 14.12 per 100,000 (CDC, 2021; VA, 2020). Total suicides were highest for veterans aged 55 to 74 because it is the largest group of veterans by age range, accounting for 40% of the total veteran suicides with 30.4 suicides per 100,000 (VA, 2020). Veterans aged 75 and older had the lowest rate of suicide at 27.4 per 100,000, compared to the same age range in the total population at the of rate of 17.4 per 100,00 (VA, 2020; CDC, 2021). In the general population, the suicide rate in men is four times higher than in women (Stone et al., 2021), thus it is important to also consider gender specific comparisons when examining the suicide rate in veterans. In 2018, the age-adjusted suicide rate of female veterans was 15.9, which was double the female U.S. population rate of 6.8 (CDC, 2021; VA, 2020). Similarly, the male veteran suicide rate in 2018 was 39.6 compared to the male U.S. population rate of 23.5 (CDC, 2021; VA, 2020). Consistent with suicide trends in the general population, White veterans had the highest suicide rates while Black veterans had the lowest rates (Stone et al., 2021; VA, 2020). The high rates of veteran suicide indicate an extreme disparity in mortality from suicide for this group.

Risk Factors for Veteran Suicide

Mental Disorders

Mental illness is one of the mostly widely researched risk factors of suicide in the civilian population (Mishara & Chagnon, 2016). A meta-analysis examining the association between mental disorders and suicides in civilians found individuals with a mental disorder diagnosis had a nearly eight-fold increased risk of suicide compared to individuals without a diagnosis (San Too et al., 2019). The association of mental illness and suicide has also been observed in the veteran population (Trivedi et al., 2015; VA, 2020). Among veterans who died by suicide in 2018 and had received VA primary care in the two years prior, 59.6% had received a mental disorder diagnosis (VA, 2020).

Research on mental illness prevalence among veterans found a quarter of VA primary care patients had one or more mental disorder diagnoses (Trivedi et al., 2015). The prevalence of major depressive disorder (MDD), post-traumatic stress disorder (PTSD), substance use disorders (SUD), anxiety disorders, and serious mental illness (SMI; i.e., schizophrenia or bipolar disorder) of veterans receiving VA care all exceed the corresponding estimated prevalence in the civilian population (Kessler & Wang, 2008; Trivedi et al., 2015). In addition to an overall higher rate of mental illness, comorbid combinations of PTSD with MDD, and/or a SUD contribute to additive suicide risks resulting in greater likelihood of suicidal ideation, attempts, and deaths in the veteran population (Carter et al., 2011; Nichter et al., 2019; Norman et al., 2018; Rojas et al., 2014). This is especially concerning given that half of veterans experiencing PTSD are also estimated to also meet criteria for MDD (Nichter et al., 2020; Rytwinski et al., 2013).

Veterans experiencing comorbid PTSD and MDD have been observed to be worse off in domains such as emotional well-being, cognition function, and quality of life (Nichter et al., 2019). A comorbid diagnosis of PTSD and MDD is linked to 11 times greater probability of suicidal ideation (SI) and 2.5 times greater probability of attempts compared to PTSD alone (Nichter et al., 2019). Approximately two thirds of veterans experiencing PTSD, including those with comorbid MDD, are estimated to have had a lifetime alcohol use disorder (AUD) with severe AUDs resulting in a 9 times greater probability of suicidal ideation (Na et al., 2021; Nichter et al., 2019). The individual increased suicide risk from PTSD, MDD, and SUDs are discussed below.

Post-Traumatic Stress Disorder. Many service members develop PTSD as a result of service-related trauma and the estimated prevalence of PTSD among veterans has ranged between 10% to 15% in recent years compared to the adult, general population lifetime prevalence of 6.8% for PTSD (Booth-Kewley et al., 2010; Fortney et al., 2016; Hoge et al., 2004; Kessler et al., 2005; Kulka et al., 1990; Seal et al., 2007). Further, service members likely experience more severe PTSD, given that combat related PTSD symptoms have been observed to be more severe than non-combat related PTSD (Carter et al., 2011).

PTSD has well-documented associations with SI, attempts, and deaths in the general population and PTSD is one of the most widely researched mental illnesses associated with veteran suicide (LeBouthillier et al., 2015; McKinney et al., 2017). Veterans with PTSD are four times as likely to experience SI than veterans without PTSD (Jakupcak et al., 2009). Deployed service members often experience multiple traumatic incidents such as observing and participating in lethal combat violence, combat injuries, witnessing the combat injuries/deaths of fellow service members, observing and handling corpses, and military sexual trauma (Bryan et

al., 2013, 2015; Hoge, et al., 2004, 2006; Kimerling et al., 2016; Monteith et al., 2019; Sareen et al., 2007). A nationally representative survey of civilians with PTSD found multiple trauma experiences increased the probability of SI, with each additional trauma increasing the probability of ideation by approximately 20% (LeBouthillier et al., 2015). The higher probability of Veterans experiencing multiple traumas may explain their higher rates of suicide. Traumatic experiences of killing in combat are the trauma type with the greatest association with suicidal ideation among combat veterans with PTSD (Maguen et al., 2012).

Major Depressive Disorder. MDD has also been observed to individually contribute to suicidality among the general population and in veterans (Harris & Barraclough, 1997; Hasin et al., 2018). The low mood, hopeless cognitions, and negative appraisal common with MDD are a major risk factor for suicide and can result in decreased help-seeking behavior, suicidal ideation, attempts, and death (Wilson & Deane, 2010). In a large national survey among civilians who had experienced MDD, 46.7% of respondents reported that during their worst depressive episode they experienced SI with a desire to die, and 39.3% seriously contemplated acting on their suicidal thoughts (Hasin et al., 2018). Approximately 14% of respondents reported a previous suicide attempt with 4.8% reporting an attempt in the year prior to being surveyed (Hasin et al., 2018). Among veteran respondents to a national survey that screened positive for MDD, 55.3% reported experiencing SI and 23.3% reported a previous suicide attempt (Nichter et al., 2019). These findings indicate Veterans experiencing MDD may experience more severe SI and behavior than their civilian peers.

Substance Use Disorders. The strong association of SUDs with increased risk of suicide is well documented in the general population (Bohnert et al., 2017; Cavanagh et al., 2003; Harris & Barraclough, 1997; Wilcox et al., 2004; Yuodelis-Flores & Ries, 2015) and the veteran

population (Ashrafioun et al., 2020; Teeters et al., 2017; VA, 2020; Zivin et al., 2007). The estimated lifetime prevalence of AUDs among veterans is 32% which is only slightly greater than the civilian lifetime prevalence of 29% (Lan et al., 2016). Substance use has been linked to veteran experiences of SI (Bohn et al., 1995; Na et al., 2021), as well as suicidal behavior and completed suicides (Kaplan et al., 2013).

Recent research has shown that symptom severity on commonly used AUD and drug screening tests are associated with probability of experiencing SI in veterans (Na et al., 2021). For example, veterans scoring in the moderate to severe range for an AUD on the Alcohol Use Disorders Identification Test (AUDIT) also have a high probability of experiencing SI (Bohn et al., 1995; Na et al., 2021). Similarly, veteran scores indicating nonprescription drug use on more than seven days out of the year on the Screen of Drug Use (SDU), a drug use disorder screener, are highly associated with SI (Na et al., 2021; Tiet et al., 2015). Substance use is also linked to veterans' suicidal behavior (Kaplan et al., 2013). The literature suggests about a third of veteran suicide decedents and about a quarter of civilian suicide decedents from 2003 to 2009 were intoxicated during fatal attempts (Kaplan et al., 2013). This suggests substance use might have a greater association with suicide in veterans compared with civilians. Intoxication during suicide attempts is also associated with use of more violent means for attempts which increases the probability of death (Kaplan et al., 2013).

Suicide Exposure

Exposure to suicide of family members and close friends has been linked to increases in SI, attempts, and deaths in the general population (Haw et al., 2013; Maple et al., 2017; Nanayakkara et al., 2013; Pitman, et al., 2014). Suicide is the most common type of traumatic death in entry-level military training and the literature suggests nearly half of veterans sampled

have a life-time exposure to a suicide (Cerel et al., 2015; Scoville, et al., 2004). Veterans exposed to suicide have been observed to be nearly twice as likely to have a depression diagnosis, more than twice as likely to have an anxiety and/or PTSD diagnosis, and experience higher rates of SI than veterans who have not been exposed to suicide (Cerel et al., 2015).

Firearm Accessibility

The lethality of means employed for a suicide attempt greatly impact the probability of death (Gradus, 2010). The majority of people who attempt suicide do not die due to their use of less lethal means, which either do not directly result in death or allow opportunity for medical intervention (e.g., nonlethal pill overdose; Spicer & Miller, 2000). Recent estimates of attempts vs deaths in the U.S. suggest that 25 people survive a suicide attempt for every death by suicide (Drapeau & McIntosh, 2020). According to the CDC (2021), firearms were the means for about 50% of U.S. suicide deaths in recent years. Accessibility of firearms and ammunition, and how quickly they may be ready to fire increases risk of death by suicide due to quick access during times of suicidal crises (Anglemyer et al., 2014; Miller et al., 2013; Siegel & Rothman, 2016). The presence of a firearm in the home has been observed to increase the risk of suicide by four to five times even when controlling for age (Kellermann et al., 1992; Shah et al., 2000).

The high rate of veteran suicide has been suggested to be in part due to greater ownership, accessibility, and familiarity with firearms which are in turn used more often in suicide attempts than compared to attempts in the general population (Conwell et al., 2002; Dempsey et al., 2019; Siegel & Rothman, 2016). Approximately 46% of veterans report ownership of a firearm or multiple firearms (Cleveland et al., 2017) and about a third report keeping a firearm unsecured and loaded in the home (Simonetti et al., 2019). Among veteran suicides in 2018, firearms were used in 69.4% of male deaths and 41.9% of female deaths (VA,

2020). Male veterans have been shown to be 1.3 times more likely to use firearm in a suicide attempt than civilians while female veterans are 1.6 times more likely to use a firearm in an attempt (Kaplan et al., 2009). In a study of combat veterans admitted to a PTSD rehabilitation unit, over half of the patients reported keeping a loaded firearm bedside, and 59% of those patients reported contemplating suicide with that firearm (Freeman et al., 1994).

Research indicates that in most veteran firearm suicides, veterans did not receive any prevention or intervention effort targeting reducing the risk of suicide by firearm (Ammerman & Reger, 2020). Reducing access to lethal means such as firearms is one of the few evidence-based suicide prevention strategies (Bagley et al., 2010; Mann, et al., 2005). Addressing gun safety through collaborative approaches with firearm advocate groups who already endorse traditional gun safety practices is a growing movement of suicide prevention (Barber et al., 2017).

Veteran Help-Seeking and Treatment Utilization

Trends in Veteran Help-Seeking

Reducing the risk of death by suicide for veterans experiencing SI requires specific clinical attention to address the underlying disorder(s) and ideation (Cox et al., 2016). Cognitive therapy for suicide prevention (Brown et al., 2005), cognitive-behavioral therapy (Slee et al., 2008), dialectical behavior therapy (Linehan et al., 2006), problem solving therapy (Hatcher et al., 2011), and psychodynamic interpersonal therapy (Guthrie et al., 2001) are all available psychotherapy interventions that demonstrated reductions in SI and suicide attempts in clinical trials. However, rates of help-seeking and mental health service use are far below the estimated prevalence of veterans experiencing mental health disorders and SI (VA, 2020). A large analysis of VA primary care patients who by died by suicide found nearly half of the approximately 30,000 cases had no prior mental health or substance misuse diagnoses, suggesting many of the

decedents had undiagnosed disorders (Simonetti et al., 2020b). Extremely low rates of mental health help-seeking in the context of SI are not unique to veterans. A nationally representative study of people who had contemplated suicide in the previous year found less than half had participated in mental health service use that year (Piscopo et al., 2016).

Most veterans have access to medical and mental health services through the VA, private insurance, and/or Medicare, thus a lack of access to care does not explain the decreased mental help seeking as it might in other populations (Boscarino et al., 2015; Carey et al., 2008; Elbogen et al., 2013). Most veterans seek general healthcare outside of VA (Boscarino et al., 2015; Carey et al., 2008; Elbogen et al., 2013; Miller & Intrator, 2012) and rates of veteran mental health treatment seeking outside of the VA appear similar to the rates of non-veteran adults (Kessler & Wang, 2008; Kessler et al., 1999). Veterans who seek help within the VA health care system have higher rates of mental disorders and associated impairment than those who seek non-VA mental health treatment (Elbogen et al., 2013; Hermes et al., 2014; Hynes et al., 2007)

Hesitancy to Disclose Suicidal Ideation

Most veterans experiencing SI have access to treatment and choose not to utilize it. Understanding their decision-making process is an important step in increasing mental health care for veterans and reducing suicide risk. The phenomenon of patient lack of disclosure regarding experiences they find shameful or deeply distressing is well documented (Baumann & Hill 2016; Blanchard & Farber 2016). Lack of disclosure of suicidality results in missed opportunities for clinical intervention (Nagdimon et al., 2021). In a large survey of college students (N = 2,600), 1,321 participants acknowledged they had seriously considered suicide within the past year and of these 46% decided not to tell anyone (Drum et al., 2009). Further, in a study of psychotherapy patients, 31% of participants reported having lied to their therapist in the

past regarding the presence of suicidal thoughts (Blanchard & Farber, 2016). A literature review on studies of denial of SI among suicide ideators, attempters, and decedents since the year 2000 found that approximately half of patients experiencing ideation had denied it in previous interviews (Obegi, 2021). Furthermore, half of suicide decedents had denied ideation in the previous month (Obegi, 2021). Evidence suggests that denial of SI is even greater among veterans (Denneson et al., 2010). A study of veteran decedents of suicide found approximately three quarters of decedents had denied SI at their last health care visit (Denneson et al., 2010).

In studies of patients who chose not to disclose thoughts of suicide, the majority of patients noted fears of pragmatic consequences such as involuntary hospitalization with forced medication while hospitalized, and approximately half of patients cited a general opposition to psychiatric medication (Blanchard & Farber, 2020; Hom et al., 2017; Sheehan et al., 2019). Fear of occupational consequences is also a major motivating factor of concealed suicidality, trauma, and substance misuse for professionals (e.g., pilots fear being grounded, police fear being fired, and medical professionals fear losing licensure; Dyrbye et al., 2017; Parker et al., 2001; Stuart, 2017). A recent sample of Army National Guard soldiers returning home from war illustrated these trends when they reported higher rates of SI on a confidential research survey vs a military mental health screening which would have resulted in referral for military mental health treatment and their commander being informed (Anestis & Green, 2015).

The rationale for choosing not to disclose may also be highly contextual (Nagdimon et al., 2021). Veteran subculture emphasizes traditional masculine gender norms which are associated with decreased disclosure of suicidality among both men and women due to stigma (McDermott et al., 2018; Rasmussen, et al., 2018). In military settings, the presence of any psychopathology is typically viewed by other service members as shameful and a sign the

afflicted is unable to meet the rigor of service (Vogt, 2011). Disclosures may result in service members being ostracized or persecuted by peers (Vogt, 2011). Service members returning from combat deployments to Iraq and Afghanistan often concealed symptoms of psychopathology due to stigma when doing mandatory PTSD, MDD, and SI screenings (Hoge et al., 2004). Research indicates service members experience hesitancy to disclose psychopathology because it would endorse negative beliefs about themselves and because of the anticipated response from other service members (Vogt et al., 2014).

Patient Trust in Provider

Trust in physicians and medical institutions has long been recognized as a crucial part of optimal medical care (Hall et al., 2001). Trust can be defined as the positive acceptance of a vulnerable state in which one places faith in another to care for their interests (Hall et al., 2001). Patient trust in mental health professionals has mostly been studied in the form of mutual trust, a subconstruct of therapeutic alliance (Bordin, 1979; Horvath & Greenberg, 1989). Mutual trust is presumably reached through cumulative positive experiences and natural attachment processes over the course of multiple sessions (Bordin, 1979; Horvath & Greenberg, 1989). Mutual trust has significant overlap with the patient/professional bond subconstruct of therapeutic alliance (Crits-Christoph et al., 2019). Measures of therapeutic alliance likely provide little utility for examining hesitancy to disclose suicidality at the start of treatment because there has been no basis to establish a therapeutic alliance. Individual patient trust and respect of mental health professionals has been recently examined as a patient-provider relationship metric independent of therapeutic alliance (Crits-Christoph et al., 2019). Researchers found patient trust and respect for providers was significantly associated with patient willingness to disclose private information like social media posts with their providers where therapeutic alliance was not (Crits-Christoph

et al., 2019). Similarly, research on hesitancy to disclose SI found that before they would disclose SI patients wanted to know how the clinician would respond to SI of varying severity (Blanchard & Farber, 2020). Patients indicated an unwillingness to disclose unless the clinician could establish trust by sharing this information (Blanchard & Farber, 2020) This indicates that measures of trust and respect may be useful in the context of evaluating brief interventions addressing hesitancy to disclose suicidality at the start of treatment.

For veteran patients, trust in providers has been directly linked to hesitancy to disclose SI (Ganzini et al., 2013). Qualitative research on veteran hesitancy to disclose SI found that although veterans indicate they accept the need for universal screening of suicide, many veterans find brief suicide screenings like self-report measures and verbal questionnaires from strangers such as and hospital/clinic staff, offensive and disrespectful (Ganzini et al., 2013). Veterans stated they preferred direct and concise language in questions about suicidality and a distaste of ambiguous or indirect language (Ganzini et al., 2013). Veterans elaborated that because of the deeply personal nature of the topic they often falsely denied ideation on impersonal screening measures and only disclosed their SI to a clinician they had established a relationship with and trusted (Ganzini et al., 2013). This is problematic because it suggests that with current professional practices veterans are unlikely to disclose suicidality at the beginning of services due to lack of trust, potentially delaying the possibility for intervention of suicidality.

Fortunately, research with veterans receiving medical treatment found patient trust in providers can be enhanced in several ways (Dang et al., 2017). Providers can improve trust by reassuring patients, which presumably demonstrated an interest in their well-being and positive outcomes for them. Avoiding judgmental behavior and normalizing the need for treatment is also associated with increased trust in providers. Finally, providers can acknowledge patient agency

in treatment by including patients in treatment planning, explaining it is okay to ask questions, and actively including patients in decision-making (Dang et al., 2017). Applying these lessons with new mental health care patients may increase trust and decrease hesitancy to disclose SI. In the context of suicidality, this would require better explanations of informed consent and hospitalization, the nature and frequency of treatment options, and the likelihood of positive and negative consequences of treatment. These topics are explored in more detail below.

Hesitancy to Disclose Firearm Accessibility

The extreme lethality of firearms dramatically increases risk of death when they are used in suicide attempts (Gradus et al., 2010). Approximately 46% percent of veterans and 22% of civilians are estimated to own firearms (Azrael et al., 2017; Cleveland et al., 2017). U.S. firearm owners report many reasons for owning them, including occupational use (e.g., police, security), recreational shooting sports, subsistence and trophy hunting, and self-defense (Wertz et al., 2018). The majority of veterans report the primary reason for firearm ownership is the ability to protect themselves or immediate family (Azrael et al., 2017; Cleveland et al., 2017). Qualitative research with male veterans indicated exposure, practical experience, and favorable attitudes to firearm ownership typically occurred at early ages through adult male family members and increased with exposure and training during military service (Simonetti et al., 2020a). Qualitative research on female veterans' firearms experiences and perspectives indicated similar early exposure to firearms by male family members with increased practical exposure and competency with firearms attained later in military service (Monteith et al., 2020). Notably, female veterans expressed a strong preference for firearm ownership for self-defense developed while serving in male-dominated military settings where the threat of sexual assault was perceived as high (Monteith et al., 2020).

Hesitancy to disclose firearm ownership is a major impediment to addressing suicide risk in treatment (Mann et al., 2005). However, many at-risk veterans do not appear to recognize the personal risk of firearm ownership in the context of suicide (Simonetti et al., 2019). It has been suggested culture and worldview heavily reduce the salience of risk of death by suicide for firearm owners compared to risk of death from an aggressor such as a violent criminal (Kahan & Braman, 2003). Research on gun culture and strongly identifying as a gun owner has found individuals embracing this lifestyle often have increased risk of death by suicide due to cultural emphasis on rapid accessibility of firearms for self-defense scenarios (e.g., carried regularly, loaded with ammunition, unlocked in the home; Anestis & Houtsma, 2019). Despite the evidence for firearm accessibility contributing to suicide risk, research suggests only 6% of civilians (Conner et al., 2018) and 6% of veterans (Simonetti et al., 2019) agreed having firearms in the household increased risk of suicide in surveys. Researchers have suggested suicide prevention should include culturally competent discussions that work with firearm owners to increase the salience of suicide risk (Anestis & Houtsma, 2019). This may be difficult in clinical settings because in a nationally representative survey half of respondents who were also firearm owners thought it was never appropriate for medical professionals to ask about firearm ownership while the other half reported there were situations where it was okay to ask about firearms (e.g., children in the home; Betz et al., 2016).

Hesitancy to disclose firearm ownership in mental health settings may have multiple causes. Media portrayals of mental illness often unrealistically exaggerate the association of mental illness and violence leading to stigma of people experiencing mental illness (Swanson et al., 2015). Patients seeking mental health treatment may conceal firearm ownership out of concern of being perceived as dangerous, which may prime commonly reported concerns of

hospitalization and/or forced medication associated with concealed SI (Blanchard & Farber, 2020). Another possible motivation for hesitancy to disclose firearm ownership is fear of confiscation of firearms and/or being prohibited from purchasing firearms in the future.

Although the national right to civil firearm ownership was ratified in 1791 (U.S. Const. amend. II), in recent years it has become a deeply divisive political issue (Steidley & Colen, 2017; Wozniak, 2017). Federal law prohibits certain individuals who have been hospitalized for mental illness or who engage in illegal substance use from firearm ownership (Malcolm & Swearer, 2019). These legal prohibitions are well known to firearm owners because they are addressed during the mandatory background check required by federal law for all firearms purchased from federally licensed firearms dealers (DeFrances & Smith, 1994). Purchasers are required to fill out the Bureau of Alcohol Tobacco and Firearms and Explosives (BATF) Form 4473 to determine if they are prohibited from purchasing a firearm under Gun Control Act, 18 U.S.C. 921 (DeFrances & Smith, 1994). Two items on the form directly address prohibition of firearm ownership by certain people experiencing mental illness (BATF, 2021). The first question asks the purchaser, “Are you an unlawful user of, or addicted to, marijuana or any depressant, stimulant, narcotic drug, or any other controlled substance?” (BATF, 2021). The second question asks if they have ever been “adjudicated as a mental defective OR have you ever been committed to a mental institution?” (BATF, 2021). A warning for purchasers is located at the top of the form indicating “violations of the Gun Control Act, 18 U.S.C. 921 et. seq., are punishable by up to 10 years imprisonment and/or up to a $250,000 fine” (BATF, 2021). Given that fears of hospitalization are a commonly reported reason for not disclosing SI, it is logical to assume people who value firearm access may be motivated not to disclose SI to avoid the negative outcome of firearm prohibition.

Perceived Economy of Treatment

Risk and Treatment

Treatment seeking behavior in the context of suicidality exposes prospective patients to both perceived and real risks as well as benefits (Sheehan et al., 2019). Perception of risk has long been understood to heavily impact health behavior (Rosenstock, 1974). The risk presented to patients for seeking mental health services in the context of suicidality is infrequently discussed in the help-seeking literature (Sheehan et al., 2019). Several studies on hesitancy to disclose suicide found many patients, even those with low-risk ideation, concealed all suicidality because they feared hospitalization and were uncertain what threshold of ideation would get them hospitalized (Blanchard & Farber, 2020; Hom et al., 2015).

Prospect Theory

Prospect theory is a behavioral-economic model of decision-making in the context of potential gains, losses, and perceived risk (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). This model of decision-making has been applied to health care decisions in recent years to understand patient decision making in the context of chronic and life-threatening disease (Attema et al., 2013, 2016; Ferrer et al., 2017; Rouyard et al., 2018). Prospect theory may offer insight into what factors can be influenced to improve veteran disclosure of SI and related risk factors. Prospect theory is a behavioral economics theory that quantitatively explains consumer decision making based on three cognitive biases: 1) loss aversion, 2) a reference point, and 3) risk aversion or risk seeking (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992).

Loss aversion is the bias to perceive loss as more unpleasant or salient than the pleasure of equivalent gains (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). In financial decision making, losses and the prospect of further losses have been observed to be twice as

powerful influencing choices than gains (Tversky & Kahneman, 1992). Loss aversion may partially explain why patients suffering from extreme distress and suicidal thoughts conceal suicidality even though there are available treatments with strong evidence bases. Theoretically, loss aversion bias may result in patients appraising any distress or potential negative consequences from treatment as much greater than positive treatment outcomes while deciding whether to disclose SI and related risk factors. Patient context may enhance loss aversion bias in the context of hesitancy to disclose SI. There are many examples in the literature of medical professionals, pilots, and law enforcement officers who concealed SI citing concerns of losing their job or professional licenses (Dyrbye et al., 2017; Parker et al., 2001; Stuart, 2017). Similarly, firearm owners may be concerned over loss of firearm rights.

The reference point bias of prospect theory observes that decision making is dependent on a reference point or status quo, which frames decision making in the context of recent consequences or context (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). In the financial decision-making context, this typically includes the decision-maker's learning history of gains and losses, cognitive certainty of risk, and emotional state (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). Theoretically, reference point bias may affect hesitancy to disclose suicidal thoughts in multiple ways depending on current level of distress, the events that precipitated seeking treatment, and patient knowledge of how a provider would respond to disclosures of SI. A reference point bias may cause patients to be more focused on immediate negative consequences of disclosing suicidality than the greater long term possible consequence of death by suicide.

Risk aversion is the decision-making bias toward outcomes with less uncertainty over outcomes with greater uncertainty, even in cases where the average gain from the less certain

option is equal to or exceeds the more certain option (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992.). In financial decision-making, when a situation forces people to decide between less certain and more certain investments involving loss, the risk aversion bias changes to risk seeking (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992.) However, in health care studies using prospect theory to examine how risk impacted treatment decision-making in the context of quality of life and managing chronic conditions, participants responded with high risk aversion in both gain and loss scenarios even when the potential gains were years added to life expectancy (Attema et al., 2013, 2016; Rouyard et al., 2018).

In the context of hesitancy to disclose SI, the risk aversion bias is supported by evidence that patients often concealed both lower risk, fleeting SI as well as higher risk, urgent suicidal thoughts and behavior because they were not sure what the consequences of disclosure would be for their particular presentation (i.e., fear of hospitalization and forced medication; Blanchard & Farber, 2020). Risk aversion may be even more pronounced given that the domain of gains is much more nebulous concerning disclosures of ideation than in other healthcare decisions. It is unknown how patients with SI conceptualize the potential gains of treatment for SI. Patients may conceptualize gains in terms of the years they have left to live if they do not die by suicide or relief of current emotional distress. The long-standing medical model of psychopathology has traditionally defined mental wellness as the absence of a psychological disorder and the associated suffering and dysfunction (Seligman & Csikszentmihalyi, 2000). If this conceptualization of psychopathology and wellness is also the norm among patients then it is possible the gains patients envision with successful treatment are simply a return to the theoretical, neutral axis separating the loss and gain domains. If that is the case, then gains may be very uncertain or nonexistent in patient risk analyses and theoretically lead to decreased

disclosures of ideation.

The cognitive biases discussed in prospect theory may provide insight into how current and prospective mental health care patients experiencing SI decide whether to disclose suicidal thoughts and behavior. The biases indicate that patients may be particularly sensitive to the possibility of negative consequences of disclosing. Uncertainty regarding how a professional may respond to disclosures may exacerbate risk aversion and patient concealment of suicidal thoughts and behavior. A possible approach to addressing patient sensitivity to negative consequences and uncertainty may be to educate patients about how the professional would respond to presence of low and high-risk SI and the likelihood of feared negative consequences (Blanchard & Farber, 2020).

Mental Health Literacy

Mental health literacy (MHL) has been defined as a person's knowledge and beliefs of how to prevent mental disorders, recognize symptoms of mental disorders, effective treatments, where to go for treatment, and how to effectively help others experiencing mental disorders get professional help (Jorm, 2012; Jorm et al., 1997). MHL was derived from medical health literacy, which was found to be positively associated with medical treatment utilization (DeWalt et al., 2004). Much of the public has poor mental health literacy and is unable to recognize the presentation of specific mental disorders or symptoms of psychopathology as experiences requiring treatment by mental health professionals (Jorm, 2000). Beliefs concerning the etiology and effective treatment of psychopathology often sharply contrast with beliefs and recommendations of mental health professionals (Jorm, 2000). It is also common for people to have attitudes that prevent them from recognizing psychopathology and seeking help (Jorm, 2000). This may be in part because most people have been exposed to countless inaccurate

depictions of mental health treatment in popular culture (Jorm, 2000; Nairn, 2007). Portrayals of mental illness on television are often rooted in lay conceptions of madness, which reinforce stigma, offer little hope or knowledge of effective treatment options, and may prime fears of hospitalization (Corrigan & Rüsch, 2002; Nairn, 2007). The beliefs, attitudes, and help-seeking behaviors associated with MHL literacy disconnect people experiencing mental illness from professionals that provide effective treatment (Jorm, 2000).

Public awareness campaigns are a widely used example of community and national level MHL interventions designed to increase self-efficacy to recognize psychopathology and pursue treatment (Jorm, 2012). Although it can be difficult to evaluate the reach of awareness campaigns and their impact on beliefs, attitudes, and behaviors, the literature contains hundreds of examples of campaigns focused on increasing MHL for depression and suicide as a strategy to reduce suicide deaths (Dumesnil & Verger, 2009). In an attempt to increase MHL about the danger of suicide among veterans, the VA partnered with the Ad Council (2022) to conduct an awareness campaign titled “Don’t Wait, Reach Out” which uses advertisements directing veterans to go to a VA treatment resource website before they are overwhelmed by their symptoms of psychopathology. Other MHL interventions are more focused and seek to train specific community members to recognize symptoms of mental illness in others and refer them to professional helpers (Burnette et al., 2015). Many of these trainings, such as Mental Health First Aid (Story et al., 2016) have focused specifically on suicide prevention (Burnette et al., 2015). Gatekeeper programs focus on enhancing intervention capacity by training individuals to recognize signs of SI and enhancing self-efficacy to intervene (Burnette et al., 2015). Outcomes for gatekeeper trainings are mixed and suggest that enhanced self-efficacy to intervene may deteriorate over time requiring semi-annual refresher trainings (Burnette et al., 2015).

While the above examples of MHL interventions are at the national and community level, mental health professionals regularly use psychoeducation, also known as psychoed, as a MHL intervention to support treatment at the individual patient level (Goldman, 1988; Magill et al., 2021). In their qualitative study attempting to operationalize key elements of psychoed Magill and colleagues (2021) defined it as "brief process of therapy focused on the communication of varied aspects of disease- and/or treatment-related information" (p. 5). Psychoed is often necessary for patients to better understand treatment options and have the information necessary to provide informed consent and maintain autonomy in selection of available treatments (Magill et al., 2021). In mental healthcare, psychoed regarding the treatment options for suicidal thoughts and behavior may directly address fear and uncertainty of negative consequences of disclosing suicidality (Blanchard & Farber, 2020). Information specific to SI such as effective treatments for suicidal thoughts and underlying conditions, how clinicians work with patients disclosing SI, safety planning, and harm reduction in the context of substance use and firearms may address patient uncertainty as well as their risk appraisal of negative consequences of treatment (e.g., hospitalization, prohibition of firearms). A psychoed intervention focused on patients achieving more realistic appraisals of the relatively low risk of negative consequences of treatment may lead to greater disclosure of SI and risk factors such as substance use and firearm ownership.

Accurate appraisal of possible negative consequences is especially important in the case of veterans who often have a social learning history of military responding very aggressively to suicidal service members (Vogt, 2011). Many veterans have observed fellow service members with mild to severe ideation be involuntarily hospitalized, assigned an around the clock guard, be stripped of shoelaces and belts, and/or be forced to wear reflective vests signaling to others they are suicidal (Vogt, 2011). These memories are salient examples of negative consequences of

disclosing SI and it is unclear how well veterans understand how military policy differs substantially from how civilian mental health settings evaluate and treat SI. For veterans who are unaware of the differences, acknowledging the military's habit of extreme responses to servicemembers experiencing ideation and explaining how civilian treatment settings differ significantly may alter their perceived probability of negative consequences during risk analysis.

The very act of the provider sharing the information may also be done in a way that helps establish trust with the patient and increase disclosures. Normalizing the need for treatment and providing explanations of treatment options to let include patients in decision making has been observed to increase Veterans' trust in their providers (Dang et al., 2017). A lack of trust has also been observed to be a primary factor in Veterans' concealing suicidality from providers (Ganzini et al., 2013). Sharing information with Veterans that emphasizes their autonomy in the treatment of suicidality may be crucial to establishing the trust necessary for Veterans to overcome high hesitancy to disclose and be open about their ideation.

Addressing Suicidality in Informed Consent

Assuming that the fear of negative consequences and uncertainty of their probability are key motivators of hesitancy to disclose SI and related risk factors, opportunities for reducing hesitancy may rely on improving clinical practices that prime these fears and patients' corresponding risk calculations. In clinical settings, suicidality is typically addressed in two types of interactions: when professionals are obtaining informed consent for treatment and when professionals are engaging in treatment activities such as screening, assessment, and psychotherapy. Informed consent discussions may be an excellent opportunity to address hesitancy to disclose SI because they occur at the beginning of treatment, providing the earliest opportunity to address patient hesitancy to disclose and provide clinical interventions to reduce

the risk of death by suicide. Additionally, informed consent discussions may innately involve key factors involved in patient hesitancy to disclose, which are discussed below.

The duty to acquire informed consent for treatment is an ethical and legal obligation for health professionals prior to providing routine treatment (American Psychological Association [APA], 2017. The APA's (2017) ethical code of conduct advises that when engaging in therapy psychologists should as early as possible inform patients of "the nature and anticipated course of therapy, fees, involvement of third parties, and limits of confidentiality and provide sufficient opportunity for the client/patient to ask questions and receive answer" (p. 14). Prospective patients with the capacity to understand this information are then able to consent to treatment, reasonably informed of potential negative consequences (APA, 2017). A primary function of informed consent to treatment is protecting patient autonomy (APA, 2017). Barnett and colleagues (2007) succinctly defined informed consent as "a shared decision-making process in which the professional communicates sufficient information to the other individual so that she or he may make an informed decision about participation in the professional relationship" (p. 179).

Informing patients of the limits of confidentiality and the potential for disclosure without their permission is particularly relevant to patients' risk calculations of potential consequences of disclosing suicidal thoughts and behavior. The APA (2017) ethical code of conduct states that disclosures of protected client information may only take place as required/permitted by law for the purpose of providing necessary professional services, obtaining appropriate professional consultation, protecting the patient or others from harm, or obtaining patient payment for services. In the context of suicidality, the ethical duty to protect patients from harm requires professionals to break confidentiality and seek a higher level of care when patients present imminent harm to themselves (APA, 2017). Communicating the duty to protect patients from

imminent danger to themselves and others, may increase patient hesitancy to disclose SI and related risk factors because involuntary hospitalization and negative secondary consequences (e.g., stigma, job loss, firearm prohibition) are the most commonly cited rationale of patients who have reported concealing suicidality from professionals (Blanchard & Farber, 2020; Hom et al., 2017a; Sheehan et al., 2019).

The quantity and quality of information used to communicate the limits of confidentiality related to patient safety may greatly impact hesitancy to disclose SI. Standard verbal delivery of the limits of confidentiality may provide just enough information to prime fears of negative consequences, while providing no basis for patients to reliably estimate the probability of said consequences in relation to disclosing their specific presentation of SI. For example, a professional may communicate very succinctly with a phrase such as "I am ethically and legally obligated to break confidentiality to get appropriate help for patients when they pose an imminent threat to themselves or others." The minimal information conveyed may prime the prospect of negative consequences and the ambiguity of the language provides no information about what patient thoughts, emotions, or behavior constitute an imminent threat. A statement like this also provides no explanation of the vague term *imminent harm* which may lead to increased uncertainty about the probability of negative consequences. This is very problematic because uncertainty of the negative consequences of disclosing SI is associated with concealing suicidality (Blanchard & Farber, 2020)

Heightened salience of potential short-term negative consequences and high uncertainty of their probability are associated with increased risk aversion in the decision-making literature (Rouyard et al., 2018). This may indicate that commonly used brief statements used to describe the limits of confidentiality specific to patient safety increase hesitancy to disclose SI and related

risk factors (e.g., substance use, firearm accessibility). Providing an opportunity for patients to ask clarifying questions may not be sufficient because patients wary of hospitalization may perceive asking questions as a tacit endorsement of some level of SI. A comprehensive understanding of the limits of confidentiality regarding patient safety relies almost entirely on the information shared by clinicians. These circumstances make informed consent a possible mechanism for addressing hesitancy to disclose suicidality with patients (Blanchard & Farber, 2020).

Augmenting informed consent discussions with psychoed targeting common patient perceived risks of disclosing suicidality may result in decreased hesitancy to disclose (Blanchard & Farber, 2020). The major theories of suicide model a continuum of suicidal thought progression from the emergence low risk fleeting thoughts of suicide to high-risk intense ideation with planning and imminent intent to attempt suicide (Joiner, 2005; Klonsky & May, 2015; Klonsky et al., 2018; O'Connor & Kirtley, 2018; Van Orden et al., 2010). Theoretically, the further along the progression a patient has become, the higher the risk of attempts and death by suicide (Joiner, 2005; Klonsky & May, 2015; Klonsky et al., 2018; O'Connor & Kirtley, 2018; Van Orden et al., 2010). Lower risk patients are those experiencing fleeting thoughts of suicide, but lack plan, means, and imminent intent (Chu et al., 2015). Low-risk patients often receive outpatient treatment from mental health professionals who focus on treating the underlying mental disorders contributing to the distress (e.g., PTSD, MDD) and addressing irrational suicidal thoughts with cognitive-behavioral therapy (Brown & Jager-Hyman, 2014; Méndez-Bustos et al., 2019). Clinicians often engage in additional safety planning interventions by helping the client make a plan listing possible affect enhancing activities and support resources to rely on in times of low mood and/or distress (Stanley & Brown, 2012). Low-risk

patients may also receive pharmacotherapy from an outpatient medical professional to treat the symptoms of underlying mental disorders (e.g., antidepressants, anxiolytics, sleep-aids; McHugh et al., 2013; Otto et al., 2006). Intermediate-risk patients are those who disclose serious ideation and planning but are willing to work with professionals to ensure their safety. These patients typically require more frequent and intensive outpatient treatment with frequent check-ins with their clinician (Chu et al., 2015). The increased risk often requires more extensive safety planning focused on managing crises of suicidal intent and reducing personal risk factors like substance use and access to lethal means (Chu et al., 2015). Higher risk patients posing imminent harm to themselves are typically admitted to an inpatient setting for observation and treatment via brief psychotherapy and/or pharmacotherapy (Jacobs & Brewer, 2006). The rationale for inpatient treatment is to provide a controlled setting to allow time for the distress of the suicidal crisis to diminish both naturally and with treatment. These treatment settings often take precautions to limit means for suicide attempts (Jacobs & Brewer, 2006).

Educating patients about the risk continuum and the treatment options for lower risk presentations of suicidality (e.g., psychotherapy, referral for medication, safety planning) may address patient uncertainty concerning the probability of negative consequences of disclosing suicidality and may balance patients' assessment of risk with opportunities for improvement via treatment. Explaining hospitalization is a very rare, last resort utilized only in cases where patients are presenting with imminent intent or communicate an inability to keep themselves safe (e.g., not able or unwilling to engage in safety planning, suicidal intent) may allow lower risk patients to make more accurate risk calculations about disclosure and decrease hesitancy to disclose. Emphasizing an interest in positive outcomes for patients, normalizing the need for treatment, and acknowledging patient autonomy in treatment planning have been associated with

increased trust for Veterans in their medical providers (Dang et al., 2017) and may apply to informed consent conversations about suicidality.

Study Rationale

Veterans experience disproportionately higher deaths by suicide compared to the general population (CDC, 2021; VA, 2020). Higher rates of mental illness, trauma exposure, substance misuse, lifetime exposure to suicide, and firearm accessibility in the veteran population have been identified as contributing factors to disparities in suicide rates (Cerel et al., 2015; Dempsey et al., 2019; LeBouthillier et al., 2015; Teeters et al., 2017; Trivedi et al., 2015; VA, 2020). Evidence-based clinical interventions exist to directly address suicidal thought processes, underlying mental illness, and access to lethal means (Brown & Jager-Hyman, 2014; Project MATCH, 1998; Sale et al., 2018; Watkins et al., 2018). However, estimates suggest as many as half of patients experiencing SI conceal it from helping professionals, resulting in missed opportunity for intervention (Nagdimon et al., 2021; Obegi, 2021).

Clients engage in risk analysis calculations during interactions with helping professionals and many reported they believe disclosing suicidality poses a high risk of negative consequences (Blanchard & Farber, 2020). The most commonly reported patient motivations for concealing suicidality are unwanted practical impacts, with fear of hospitalization and forced medication cited most (Blanchard & Farber, 2020; Hom et al., 2017; Sheehan et al., 2019). Other commonly reported unwanted practical impacts include loss of privacy, negative impact on career/school, and negative impact on children (Blanchard & Farber, 2020). Uncertainty in hospitalization criteria is associated with both lower and higher-risk patients concealing suicidality (Blanchard & Farber, 2020; Hom et al., 2015). For firearm owners, fear of hospitalization may also be associated with the secondary consequence of the federal prohibition of firearms for people who

have undergone psychiatric hospitalization. Veterans are a group with high firearm ownership (Cleveland et al., 2017) and low rates of disclosing suicidality to mental health professionals (Denneson et al., 2010). Establishing trust with their provider was reported by VA patients to be necessary before disclosing SI (Ganzini et al., 2013).

The legal and ethical obligation of obtaining informed consent for treatment requires providing patients with a priori knowledge of possible negative consequences of treatment and the duty to protect patients who pose an imminent danger to themselves (APA, 2017). For patients experiencing SI, informed consent conversations may inherently prime patient fears of involuntary hospitalization and other negative sequelae. The ambiguous nature of the hospitalization criteria mentioned during informed consent explanations and the often terse delivery of the explanation may be particularly prone to priming cognitive biases in decision-making, such as risk aversion and loss aversion (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). This makes informed consent discussions the appropriate and ideal mechanism to address inaccuracies in patient perceptions of the risk of hospitalization and forced medication (Blanchard & Farber, 2020).

Using an experimental design, this study examined if enhancing informed consent dialogue to address commonly cited concerns of veteran and civilian patients regarding disclosure of suicidality to professionals reduced participants' hesitancy to disclose SI and related risk factors. The experiment included three conditions. A treatment as usual standard informed consent procedure was used as a control condition. A psychoed condition addressed commonly reported patient concerns such as risk of hospitalization, patients' right to refuse medication, as well as explained common outpatient treatment approaches to managing the risk of suicide. A combined psychoed/trust condition included the content of the psychoed condition

with the potential additive benefit of a personal commitment of mutual interest and trust.

Hypotheses

1. Hesitancy to disclose SI and risk factors.
    a. It was hypothesized that participants who received informed consent enhanced by psychoed concerning SI in clinical contexts (i.e., psychoed condition) would have lower hesitancy to disclose SI, problematic post-traumatic stress, problematic alcohol use, problematic drug use, firearm accessibility, and thoughts of harming others than participants who received standard informed consent (i.e., control condition).
    b. It was hypothesized that participants who received informed consent enhanced by psychoed specific to SI in clinical contexts and a personal testament of mutual interest and trust (i.e., psychoed/trust condition) would have lower hesitancy to disclose SI, problematic post-traumatic stress, problematic alcohol use, problematic drug use, firearm accessibility, and thoughts of harming others than participants in other conditions (i.e., control and psychoed conditions).
2. Trust/Respect. It was hypothesized that participants that received informed consent enhanced by a personal testament of mutual interest and trust (i.e., psychoed/trust condition) would have higher ratings of trust and respect for the simulated clinician than participants in other conditions (i.e., control condition and psychoed condition).

Method

Participants

The sample was comprised of 133 United States Armed Forces Veterans. Participants ranged in age from 19 to 70 years (M = 35.80 years, SD = 8.78). The sample was 12% female (n

= 16) and 88% male (n = 117). The self-identified race/ethnicity in the sample was 2.3% American Indian or Alaska Native, 5.3% Asian American, 7.5% Black or African American, 12.0% Hispanic or Latino, 1.5% Native Hawaiian or Pacific Islander, 69.2% White or European American, and 2.3% multiracial or other. Participants' marital status was 18.8% single (never married), 54.1% married or living as married, 20.3% divorced, 5.3% separated, and 1.5% widowed. The service branch representation of veterans sampled was 4.6% Airforce/Air Force Reserve, 80.5% Army/Army Reserve/Army National Guard, 11.3% Marine Corps, 1.5% Navy, and 2.3% reported having served in multiple branches. The sample's deployment/combat experiences was 8.3% never deployed outside of the U.S.; 5.3% deployed only to non-combat zones; 4.5% deployed to combat zones, but never experienced combat; 20.3% deployed to combat zones and experienced indirect combat (e.g., mortar strikes landing inside operating base or outpost, firing artillery at distant enemy positions); and 61.7% deployed to combat zones and experienced direct combat (e.g., receiving and returning fire, patrol element attacked by IEDs, or engaging combatants in close combat).

Design

This study used quantitative measurement of variables in an online experimental, between-groups, patient analogue research design. Experimental research designs provide a methodology for making causal inferences by introducing an independent treatment variable to treatment groups and observing differences between groups (Campbell & Stanley, 2015). Random assignment to conditions is critical in establishing equivalent groups and protecting the integrity of causal inferences (Bloom, 2008). Patient analogue studies allow for experimental manipulation of clinical protocol that is otherwise not possible or practical in actual clinical patient populations (Van Vliet et al., 2012). This study examined if enhancing informed consent

dialogue reduces patient hesitancy to disclose: suicidality, problematic post-traumatic stress, problematic alcohol and drug use, and firearm accessibility, in addition to improving patient trust in clinical professionals. The independent variable had three informed consent conditions. In each, participants were randomly assigned to a video monologue simulating a psychologist discussing limits of confidentiality required to obtain informed consent for treatment. The control condition was a treatment-as-usual condition based on typical explanations of the limits of confidentiality. The psychoed condition discussed limits of confidentiality augmented by psychoed that explained in detail how professionals typically respond to patient suicidality. The psychoed/trust condition consisted of the same psychoed as the second condition as well as a personal commitment of mutual interest and trust by the simulated professional. The dependent variables were measured via online self-report survey measures immediately after participant exposure to informed consent videos. The dependent variables included: hesitancy to disclose suicidality, hesitancy to disclose problematic post-traumatic stress, hesitancy to disclose problematic alcohol and drug use, hesitancy to disclose firearm accessibility, and trust/respect for the simulated clinician. Quantitative analyses were conducted to determine if the experimental manipulations resulted in the hypothesized effects. This study was approved by the Institutional Review Board of the University of Alaska Anchorage.

Procedure

Participants were recruited using online advertisements (see Appendix A) on combat veteran social groups. The combat veteran groups were selected because of their internal protocol for verifying veteran status of their members, which reduced the likelihood of nonveterans accessing the study. Membership in these private groups is based on existing members referring fellow veterans for membership. A referral must include testimony from the

sponsoring member of their first-hand knowledge of proof of the prospective member's veteran status (e.g., dates of service, service branch, military occupation). This provides reasonable assurance participants sampled from these groups were actual U.S. veterans. Online purposive sampling via social media is a low-cost method of achieving externally valid samples of hard to reach populations by targeting their online social networks (Dusek et al., 2015; Groves et al., 2011).

Clicking the link to the study provided in the advertising directed potential participants to the University of Alaska Anchorage Qualtrics site where they completed a brief screening questionnaire (see Appendix B) that verified eligibility criteria (i.e., adult, veteran of any U.S. Armed Forces branch). Next, eligible participants were directed to an informed consent page (see Appendix C). After providing informed consent, participants were asked to complete a demographic survey (see Appendix D) that solicited information such as age, race and ethnicity, sex, marital status, service branch(s), years of military service, and deployment/combat experiences. Next, participants viewed an on-screen prompt (see Appendix E) asking them to imagine they were referred to an appointment with a psychologist by their primary care doctor. Participants were randomly assigned to experience one of three conditions of video simulated informed consent to treatment. A Qualtrics feature was used to delay participants' ability to advance until enough time had passed for them to have watched the entire video. Essentially a countdown was used in each condition matching the respective video lengths. The clickable button to proceed only appeared at the end of the countdown to prevent participants from skipping the video. After watching the randomly assigned informed consent briefing, participants answered attention check questions asking if they watched the entirety of the video stimulus and if they were able to hear the video clearly. Then participants completed survey measures of the

dependent variables and potential covariates. Participants were provided with an opportunity to provide a contact email address to enter a drawing for a participation prize. Information for getting help with suicidal thoughts as well as other mental health resources (see Appendix F) was displayed on this page before and after participants were redirected to enter the drawing. At the conclusion of data collection, 10 participants from the drawing were randomly selected for prizes and contacted via email for the opportunity to collect a $100 electronic Visa gift card. Captcha protocols were used on the entry to the screening questionnaire and the prize drawing consent page to deter bots from participating in the study. The Qualtrics setting to deny repeated administrations to the same IP address was used to prevent the possibility of repeat human or bot that accessed the survey. Time to completion was examined to identify bots with abnormally quick completion times.

The study methods were piloted with ten veterans prior to data collection. All three conditions were pilot tested. The pilot testing confirmed that condition videos were randomly presenting and functioned on a variety of devices (e.g., phone, PC, laptop) and different internet browsers. The pilot participants reported the study instructions and prompts were understandable and that they did not encounter any technical difficulties.

Materials

Informed Consent Videos

Control Condition Monologue. The control condition consisted of a minimal informed consent briefing conveying the confidentiality information that practicing clinicians are professionally and legally obligated to provide, without elaboration. The control condition monologue was intended to function as a stimulus that briefly communicated the limits of confidentiality in the manner that a typical professional might relay the information in an

outpatient mental healthcare setting. The video began with the simulated psychologist introducing himself as a mental health professional capable of helping with the referral problem and looking forward to working together. Next, the psychologist stated that he would like to review some content from the informed consent paperwork to ensure the client is aware. Then the psychologist briefly stated the limits of confidentiality related to court orders, child/elder abuse, and patient presenting with imminent harm to self or others. Finally, the psychologist thanked the listener for their patience, transitioned to ask about the presenting problem, and the video ended where the listener would be expected to start speaking (see Appendix G).

Psychoed Condition Monologue. The psychoed condition monologue included the standard informed consent information from the control condition and was augmented by a more detailed discussion of how the psychologist typically responds to patient suicidality. The psychoed condition was intended to reduce hesitancy to disclose SI and related risk factors by addressing potentially exaggerated perceptions of hospitalization risk and/or risk of forced medication from disclosing SI. After the same introduction and discussion of limits of confidentiality from the control condition, the psychologist stated that patients commonly worry about being hospitalized or forced to take medication for disclosing thoughts of suicide. The psychologist elaborated that these circumstances are very rare and described how hospitalization can happen when patients present with imminent harm to self or others. Next, the psychologist discussed how he typically reacts to patient disclosure of suicidality (i.e., risk assessment, collaborative safety plan, treatment of underlying disorders or suicidality with talk therapy). The psychologist emphasized that hospitalization is only as a last resort in cases of imminent danger of patient suicide and highlighted the patient's right to refuse medication in outpatient and inpatient settings. Finally, the psychologist thanked the listener for their patience, transitioned to

ask about the presenting problem, and the video ended where the listener would be expected to start speaking (see Appendix G).

Psychoed/Trust Enhancement Condition Monologue. The psychoed/trust enhancement condition included the content from the previous two conditions with additional content focused on building participant trust with the professional. After discussing all of the content from the control and psychoed conditions, the simulated psychologist stated that he has had people in his life that struggle with thoughts of suicide and he has lost good friends to suicide. The psychologist then made a normalizing statement about how many people struggle with thoughts of suicide. Next, the psychologist briefly summarized how a recent patient just disclosed having thoughts of suicide and explained how he responded with a risk assessment, coping plan, and scheduled weekly sessions of talk therapy for treatment. Then the psychologist explained his personal values as a professional working with suicide (e.g., respecting patient autonomy, commitment to helping, and not doing harm). Next, the psychologist committed to being as flexible as possible and stated that the listener can trust him to help them get what they want out of treatment. Finally, the psychologist thanked the listener for their patience, transitioned to ask about the presenting problem, and the video ended where the listener would be expected to start speaking (see Appendix G).

Measures

Hesitancy to Disclose Suicidal Ideation and Related Risk Factors (HDSI). The HDSI was created for the present study to measure hesitancy to disclose SI, and related risk factors for death by suicide (i.e., problematic post-traumatic stress, problematic drug use, problematic alcohol use, firearm accessibility, thoughts of harming others, and pragmatic concerns about negative consequences of disclosures (i.e., involuntary hospitalization, forced medication,

prohibition of gun rights, loss of employment, loss of child custody) in response to the video simulated psychologist from the experimental conditions (see Appendix H). The measure was used after the experimental video conditions to determine if the intervention resulted in mean differences of hesitancy to disclose between groups. The HDSI is a 23-item self-report questionnaire. Participants rated each item on a 6-point Likert scale to indicate how strongly they agreed/disagreed with item statements (1 = *strongly disagree*, 2 = *disagree*, 3 = *mildly disagree*, 4 = *mildly agree*, 5 = *agree*, and 6 = *strongly agree*).

The HDSI included items attempted to measure SI, problematic post-traumatic stress, problematic drinking, problematic drug use, problematic alcohol use, firearm accessibility, and thoughts of harming others. Each construct had three items regarding participant hesitancy to disclose. Two items per construct addressed whether participants would disclose the risk factor to the simulated psychologist, with one item was positively phrased and another negatively phrased. For example, the SI items were, "I would tell the psychologist if I was having thoughts of killing myself," and "I would deny any thoughts of killing myself I was having if the psychologist asked about them." A third item for each construct addressed participants' perception of risk for disclosing the risk factor to the simulated clinician. Such as, "If I was having thoughts of killing myself, I do not think it would be risky to talk to the psychologist about it."

The post-traumatic stress items queried respondents' hesitancy to disclose problems with difficult or traumatic memories. For example, "I would tell the psychologist if I was having problems with difficult or traumatic experiences," and "If I was having problems from past difficult or traumatic experiences, it would be risky to tell the psychologist." The problematic drinking items asked about hesitancy to disclose problems from alcohol consumption and

contained items such as "I would deny any problems I was having with drinking if the psychologist asked," and "If I was having problems with alcohol, talking about it with the psychologist would be too risky." Similarly, the problematic drug use items queried hesitancy to disclose problems from drug use. For example, two of the items were "I would tell the psychologist if I was having problems with drugs," and "I would deny any problems I was having with drugs if that psychologist asked." The firearm accessibility items measured hesitancy to disclose access to firearms with items such as "I would tell that psychologist if I was a gun owner or had access to a gun," and "If I owned guns, I would deny it if the psychologist asked." The thoughts of harming others items queried participant hesitancy to disclose thoughts of harming someone else. Two example items are "I would tell the psychologist if I was having thoughts about harming someone," and "I would deny any thoughts I was having about harming someone if that psychologist asked about them."

Pragmatic concerns were measured with four items asking about participant concern of negative consequences from disclosure of SI. Items were derived from most commonly cited patient concerns in the hesitancy to disclose literature (Blanchard & Farber, 2020; Hom et al., 2017). Each negative consequence had one item measuring participant agreement with the concern that disclosing SI to the simulated psychologist would result in the undesired outcome. Fear of involuntary hospitalization was queried with the item "I would be concerned that talking to the psychologist about thoughts of suicide would end up with me being hospitalized against my wishes." Concern of receiving forced/unwanted medication was measured with the item "I would be concerned talking to the psychologist about thoughts of suicide would end up with me being forced to take medications I do not want." Concern of prohibition of firearm ownership/access was queried with the item "I would be concerned talking about thoughts of

suicide with the psychologist would endanger my right to own/buy gun." Participants were asked about occupational consequences with the item, "I would be concerned talking about thoughts of suicide with the psychologist would endanger my job." Finally, custody consequences were measured with the item, "I would be concerned talking about thoughts of suicide with the psychologist would affect custody over my children."

The items respective to the construct they were created to measure are SI: items 1 - 3; post-traumatic stress: items 4 - 6; problematic alcohol use: items 7 - 9; problematic drug use: items 10 - 12; firearm accessibility: items 13 - 15; thoughts of harming others: 16 – 18; and pragmatic concerns: items 19 - 21. Eight items are reverse coded (items: 1, 3, 4, 7, 10, 13, 16, and 18). Since this measure was created for the present study, no prior data exists for reliability and validity. See hesitancy to disclose SI measure under results section for a detailed discussion of item correlation and factor analysis.

Trust Respect Scale. The Trust Respect Scale (TRS) was created by Crits-Christoph and colleagues (2019) as a brief measure of a client's trust and respect for their mental health provider, independent of therapeutic alliance (see Appendix I). It was included in the present study to measure differences in mean participant trust of the simulated professional between the control condition, psychoed, and psychoed/trust condition. The TRS is an eight-item self-report questionnaire. Items are rated using a 7-point Likert scale that allows participants to indicate how strongly they agree/disagree with item statements (1 = *strongly disagree*, 2 = *disagree*, 3 = *mildly disagree*, 4 = *neutral*, 5 = *mildly agree*, 6 = *agree*, and 7 = *strongly agree*). Item scores are summed to produce a scale total. The TRS demonstrates convergent validity by correlating moderately with measures of therapeutic alliance and correlating modestly with patient willingness to disclose information to mental health providers not typically disclosed (Crits-

Christoph et al., 2019). The TRS also demonstrated high internal consistency (α = .91) in research with a population of university counseling center patients (Crits-Christoph et al., 2019).

Slight adaptations were made to the TRS items to fit the context of the present study. The scale items were all slightly altered to reference the simulated clinician from the experimental clinicians. For example, the item "I trust my doctor/therapist" was adapted to "I trust that psychologist." The instructions were also adapted to cue participants to respond to items in the context of the video simulated clinician.

Data Preparation and Analyses

Data Preparation

The raw data were screened by condition for univariate and multivariate outliers, non-normal response distributions, and missing responses following the procedures described by Tabachnick and Fidell (2007). Participants were excluded from analyses if they exited the study without completing the primary measures (n = 33) or for had invariant responses (n = 1). Outliers were defined as z scores equal to or greater than 3.29. Univariate outliers were identified and changed to be within one unit greater or smaller than the next nonoutlier score within the respective distributions (n = 6). Univariate normality was assessed with skewness and kurtosis values and found to be within acceptable limits (a z score of plus or minus 2).

In order to assess if a self-selection bias occurred with the participants that did not complete the study (n = 33) the demographic variables were examined in the context of the rest of the sample (n = 133). Chi-square tests of independence were conducted to determine if there was a relationship between completion status (attrition vs completion) and race, sex, service branch, marital status, and deployment experiences and no significant relationships were observed (Table 1). Independent samples t-tests were conducted to determine if the attrition

group differed from the completion group in age or years of service and no significant differences were observed (Table 1). Examination of the attrition group showed a small number of participants left the study site prior to exposure to the video conditions (n = 3). Of the remaining 30 participants that did not complete the study, five were in the control group, 10 were in the psychoed group, and 15 were in the psychoed/trust group. The consistent gradient of increasing attrition across the conditions may be due participants becoming bored with the different conditions' video lengths (control = 1.5 minutes, psychoed = 4.5 minutes, and psychoed/trust = 6.5 minutes). It appeared that the longer the video the higher the attrition from the study.

Table 1

Independence of Demographic Variables By Attrition and Completion Groups (N = 184)

	Attrition (n = 33)		Completion (n = 133)		Test
	M	*SD*	*M*	*SD*	
Age	35.33	8.20	35.80	8.74	$t(164) = -0.28, p = .784$
Years of service	8.66	6.47	11.21	7.58	$t(163) = -1.79, p = .076$
	n	%	*n*	%	
Sex					$\chi^2(1) = 0.87, p = .351$
Female	6	18.2	16	11.9	
Male	27	81.8	117	88.1	
Race/ethnicity					$\chi^2(6) = 8.45, p = .207$
AI/AK Native	0	0.0	3	2.3	
Asian American	6	18.2	7	5.3	
Black	1	3.0	10	7.5	

	Attrition (n = 33)		Completion (n = 133)		Test
	M	*SD*	*M*	*SD*	
Hawaiian/PI	0	0.0	2	1.5	
White	22	66.7	92	69.2	
Hispanic/Latino	4	12.1	16	12.0	
Service branches					$\chi^2(6) = 5.20, p = .518$
Air Force	4	12.1	5	3.8	
Air Force Reserve	0	0.0	1	0.8	
Army	21	63.6	104	78.2	
Army Res/NG	1	3.0	3	2.3	
Marine Corp	5	15.2	15	11.3	
Navy	1	3.0	2	1.5	
Multiple	1	3.0	3	2.3	
Combat/deployments					$\chi^2(4) = 4.84, p = .304$
Never	7	21.2	11	8.3	
Not to war zones	2	6.1	7	5.3	
War zones	1	3.0	6	4.5	
Indirect combat	5	15.2	27	20.3	
Direct combat	18	54.5	82	61.7	
Marital status					$\chi^2(4) = 3.91, p = .418$
Single	5	15.2	25	18.8	
Married/living as	23	69.7	72	54.1	
Divorced	5	15.2	27	20.3	
Separated	0	0.0	7	5.3	
Widowed	0	0.0	2	1.5	

Confirming successful random assignment of participants to experiment groups is critical for being able to attribute causality experimental manipulations (Shadish et al., 2008). After filtering out the attrition participants the sample was examined for independence of observations between experimental conditions and found no relationships between condition and demographics and no significant differences in age or number of years served. No significant relationships were observed among demographic variables by condition, and no significant differences were observed between condition in age or years served (Table 2).

Table 2

Demographic Characteristics of Participants by Condition (N = 133)

	Control (n = 42)		Psychoed (n = 50)		Psychoed/Trust (n = 41)		Test
	M	*SD*	*M*	*SD*	*M*	*SD*	
Age	36.02	8.03	36.36	9.48	34.88	8.76	$F(2, 130) = 0.34, p = .714$
Years served	12.10	7.46	11.21	8.44	10.46	6.68	$F(2, 130) = 0.48., p = .622$
	n	%	*n*	%	*n*	%	
Sex							$X^2(2) = 4.81, p = .090$
Female	3	7.1	10	20.0	3	7.3	
Male	39	92.9	40	80.0	38	92.7	
Race/ethnicity							$X^2(12) = 10.16, p = .602$
AI/AK Native	1	2.4	1	2.0	1	2.4	
Asian American	2	4.8	4	8.0	1	2.4	
African American	6	14.3	2	4.0	2	4.9	
Hawaiian/PI	1	2.4	1	2.0	0	0.0	
White	24	57.1	35	70.0	33	80.5	
Hispanic/Latino	6	14.3	6	12.0	4	9.8	

	Control (n = 42)		Psychoed (n = 50)		Psychoed/Trust (n = 41)		Test
	n	%	n	%	n	%	
Service branches							$X^2(12) = 15.54, p = .213$
Air Force	0	0.0	4	8.0	1	2.4	
Air Reserve	0	0.0	1	2.0	0	0.0	
Army	36	85.7%	34	68.0%	34	82.9%	
Army Res/NG	1	2.4%	1	2.0%	1	2.4%	
Marine Corp	5	11.9%	8	16.0%	2	4.9%	
Navy	0	0.0%	0	0.0%	2	4.9%	
Multiple	0	0.0%	2	4.0%	1	2.4%	
Combat/deployments							$X^2(8) = 7.71, p = .462$
Never	2	4.8%	7	14.0%	2	4.9%	
Not to war zones	1	2.4%	2	4.0%	4	9.8%	
War zones	1	2.4%	3	6.0%	2	4.9%	
Indirect combat	8	19.0%	9	18.0%	10	24.4%	
Direct combat	30	71.4%	29	58.0%	23	56.1%	
Marital status							$X^2(8) = 10.28, p = .246$
Single	6	14.3%	8	16.0%	11	26.8%	
Married/living as	23	54.8%	30	60.0%	9	46.3%	
Divorced	11	26.2%	6	12.0%	10	24.4%	
Separated	2	4.8%	4	8.0%	1	2.4%	
Widowed	0	0.0%	2	4.0%	0	0.0%	

Analyses

Since the HDSI measure was created for this study, analyses were performed to examine its psychometrics. An exploratory factor analysis (EFA) was conducted to examine the factor

structure of the HDSI. Correlation analyses of the resulting factors and other study variables were conducted and the assumptions of the MANCOVA were examined prior to running the analysis.

A MANCOVA was used as the primary analysis to test the study hypotheses. MANCOVAs are commonly used in psychology experiments to test the effects of categorical variables and covariates on multiple dependent variables (Tabachnick & Fidell, 2007). The independent variable was informed consent experiment condition (i.e., control, psychoed, and psychoed/trust). The dependent variables were truth/respect score, and four HDSI factors determined by the factor analysis, which were SI, post-traumatic stress problems/alcohol problems, drug problems/thoughts of harming others, and firearm accessibility. Sex (male = 0, female = 1) was included as a covariate due to known sex differences in help-seeking attitudes (Mackenzie et al., 2006). Percentage of health-care received from the VA was included as a covariate due to evidence of increased healthcare mistrust of military and VA providers by veterans (Anestis & Green, 2015; Ganzini et al., 2013). Prior experience reporting suicidality to a health care provider (no = 0, yes = 1) was included as a covariate due to the possibility of an exposure effect diminishing fears of negative consequences of disclosure. Perceived occupational vulnerability to employer knowledge of suicidality (no = 0, yes = 1) was included as a covariate due to the literature demonstrating many professionals with high levels of responsibility for others (e.g., physicians, pilots) are disproportionately vulnerable to negative consequences of being discovered to experience SI (Dyrbye et al., 2017; Parker et al., 2001; Stuart, 2017; see Appendix J). The analysis of covariance (ANCOVA) tests generated by the MANCOVA were examined to determine if the experimental videos resulted in independent effects on hesitancy to disclose.

Sample Size Considerations

Adequate sample size is necessary to properly power hypothesis tests and maintain a desirable probability of correctly rejecting the null hypothesis (Brysbaert, 2019; Cohen, 2013). Power analyses estimate the minimum required sample size needed for a statistical hypothesis test based on test parameters (i.e., assumed effect size, alpha, power, degrees of freedom, number of groups, number of covariates; Brysbaert, 2019). The assumed effect size used in a power analysis is usually decided by researchers based on observed effect sizes in similar studies or by choosing the value that is generally agreed upon to match the desired strength for a specific effect (Brysbaert, 2019; Cohen, 2013). To the best of the author's knowledge, there were no comparable studies in the literature. For the present study, a power analysis was conducted with what is conventionally thought to be a medium effect size (Cohen, 2013). A medium effect size was chosen because the study is examining a possible intervention and smaller effect sizes with less clinical utility may not warrant implementation.

A priori power analyses for this study were conducted in G*Power 3.1.9.7 software. Since there is no default option for multivariate analysis of covariance (MANCOVA) in G*Power a power analysis was conducted for a multivariate analysis of variance MANOVA and adjusted for covariates using Dattalo's (2013) guidelines. The MANOVA power analysis was run with a medium effect size of $f^2 = .25$, an alpha of .05, a power of .80, 24 groups (to account for covariates). The power analysis indicated a required minimum sample size of 96 participants (see Appendix K).

Results

Hesitancy to Disclose Suicidal Ideation Measure

The factor structure of the HDSI was examined using EFA with principal axis factor

extraction and promax (oblique) rotation. The scree plot for the EFA suggested a four-factor solution, which also provided the most interpretable results and best simple structure.

An examination of the pattern coefficients for the rotated four-factor solution revealed that six items loaded highly on the first factor. This factor included all items pertaining to hesitancy to disclose problems with post-traumatic stress and alcohol use (see Table 3). This factor had a Cronbach's alpha of .93 and was named Post-Traumatic Stress/Alcohol. The second factor (5 items) was comprised of all items concerning problems from drug use and two of the three items on thoughts of harming others. One item (item 16) had a cross-loading (loading above .32 on more than one factor) with Factor 4 but was retain on Factor 2 as the item content was more conceptually similar to other Factor 2 items. It had a Cronbach's alpha of .89 and was named Drugs/Thoughts of Harming Others. The third factor, Firearm Accessibility, included the three items that asked about hesitancy to disclose access to firearms and the pragmatic concern item discussing fear of losing firearm rights for disclosing thoughts of suicide (4 items, alpha = .92). The fourth factor, Suicidal Ideation, included the three hesitancy to disclose SI items and two pragmatic concern items addressing fear of hospitalization and forced medication associated with disclosing SI (alpha = .92. Three of these items (2, 19, and 20) had cross-loadings with Factor 1 but were retained on Factor 4 as all related to SI. Finally, items were dropped for low factor loadings on all factors (item 22) or because they did not align with the factor constructs represented by the other items on a given factor (items 18 and 23).

Table 3

Item-Factor Loading for Exploratory Factor Analysis of HSDI

	Item	Factor loading			
		1	2	3	4
Factor 1: Post Traumatic Stress/Alcohol					
4	I would tell the psychologist if I was having problems with difficult or traumatic experiences. [a]	.66	-.12	-.04	.21
5	I would deny any problems I was having from traumatic experiences if the psychologist asked.	.80	.14	-.01	-.09
6	If I was having problems from past difficult or traumatic experiences, it would be risky to tell the psychologist.	.85	.08	.04	-.07
7	I would tell the psychologist if I was having problems with drinking. [a]	.62	.10	-.10	.16
8	I would deny any problems I was having with drinking if the psychologist asked.	.85	.13	-.01	-.10
9	If I was having problems with alcohol, talking about it with the psychologist would be too risky.	.93	.07	-.02	-.22
Factor 2: Drugs/Thoughts of Harming Others					
10	I would tell the psychologist if I was having problems with drugs. [a]	.03	.80	-.13	.15
11	I would deny any problems I was having with drugs if the psychologist asked.	.16	.84	.02	-.01
12	If I was having problems with drugs, talking about it with the psychologist would be too risky	.17	.77	.05	-.14
16	I would tell the psychologist if I was having thoughts about harming someone. [a]	-.25	.49	.03	.49
17	I would deny any thoughts I was having about harming someone if the psychologist asked about them.	-.08	.46	.18	.29
13	I would tell the psychologist if I was a gun owner or had access to a gun.[a]	-.21	.09	.72	.18
14	If I owned guns, I would deny it if the psychologist asked.	-.04	.11	.93	-.08

	Item	Factor loading			
		1	2	3	4
15	Disclosing gun ownership and/or access to guns to the psychologist is too risky.	.05	.03	.97	-.10
21	I would be concerned talking about thoughts of killing myself with the psychologist would endanger my right to own/buy guns.	.17	-.15	.83	-.04
Factor 4: Suicidal Ideation					
1	I would tell the psychologist if I was having thoughts of killing myself. [a]	.20	.10	-.03	.74
2	I would deny any thoughts of killing myself I was having if the psychologist asked about them.	.36	.08	.01	.60
3	If I was having thoughts of ending my life, I do not think it would be risky to talk to the psychologist about it. [a]	.00	-.02	-.07	.87
19	I would be concerned that talking to the psychologist about thoughts of killing myself would end up with me being hospitalized against my wishes.	.38	-.09	-.06	.54
20	I would be concerned talking to the psychologist about thoughts of killing myself would end up with me being forced to take medications I do not want.	.53	-.17	.09	.37
Dropped items					
18	If I was having thoughts about harming someone, I do not think it would be risky to talk to the psychologist about it.[a]	-.20	.24	.05	.55
22	I would be concerned talking about thoughts of killing myself with the psychologist would endanger my job.	.29	.29	.06	.26
23	I would be concerned talking about thoughts of killing myself with the psychologist would affect custody over my children.	.44	-.25	.29	.18

[a] Reverse scored item.

Intercorrelations of study variables

Means, standard deviations, and intercorrelations of the primary study variables are presented in Table 4. The four hesitancy to disclose factors derived from the EFA of the HSDI

measure had significant, positive relationships with each other. SI strongly correlated with post-traumatic stress/alcohol and drugs/thoughts of harming others. SI was also moderately correlated with firearm accessibility. Weak to moderate correlations were observed between PTSD/alcohol problems, drug problems and thoughts of harming others. Trust/respect of the simulated psychologist had moderate negative correlation with firearm access and strong negative correlation with all of the hesitancy to disclose variables.

Table 4

Means, Standard Deviations and Intercorrelations of Study Variables ($N = 133$)

Study variables	*M*	*SD*	1	2	3	4
1. Suicidal ideation	15.90	6.93	—			
2. PTS/alcohol	13.37	6.09	.67***	—		
3. Drugs/harm	19.41	6.52	.64***	.49***	—	
4. Firearm access	17.66	5.29	.35***	.24**	.41***	—
5. Trust/respect	37.62	8.34	-.57***	-.55***	-.50***	-.40***

* $p < .05$. ** $p < .01$. *** $p < .001$.

Group Differences in Hesitancy to Disclose and Trust/Respect

The MANCOVA comparing the control, psychoed, and psychoed/trust conditions' hesitancy to disclose factors (suicidal ideation, post-traumatic stress/alcohol, drug/thoughts of harming others, firearm accessibility) and trust/respect revealed that overall significant differences were present among the groups with a large effect size (see Table 5). The covariates sex, history of disclosing SI to a professional, and perceived occupational vulnerability to disclosing SI were significant in the overall model, but percentage of VA healthcare used was not significant. Results for univariate tests for each dependent variable, associations with covariates, pairwise comparisons by condition are discussed below. Group means are presented in Figure 1.

Table 5

*MANCOVA of HSDI Factors and Trust/Respect by Experiment Condition (*N = *133)*

Variable	Wilk's λ	Test	η^2
Condition	.51	$F(10, 244) = 9.82, p < .001$	.29
Sex	.90	$F(5, 122) = 2.60, p = .028$	.10
History of SI disclosure	.85	$F(5, 122) = 4.32, p = .001$	.15
Occupational vulnerability	.84	$F(5, 122) = 4.66, p < .001$	.16
VA use	.94	$F(5, 122) = 1.47, p = .204$	.06

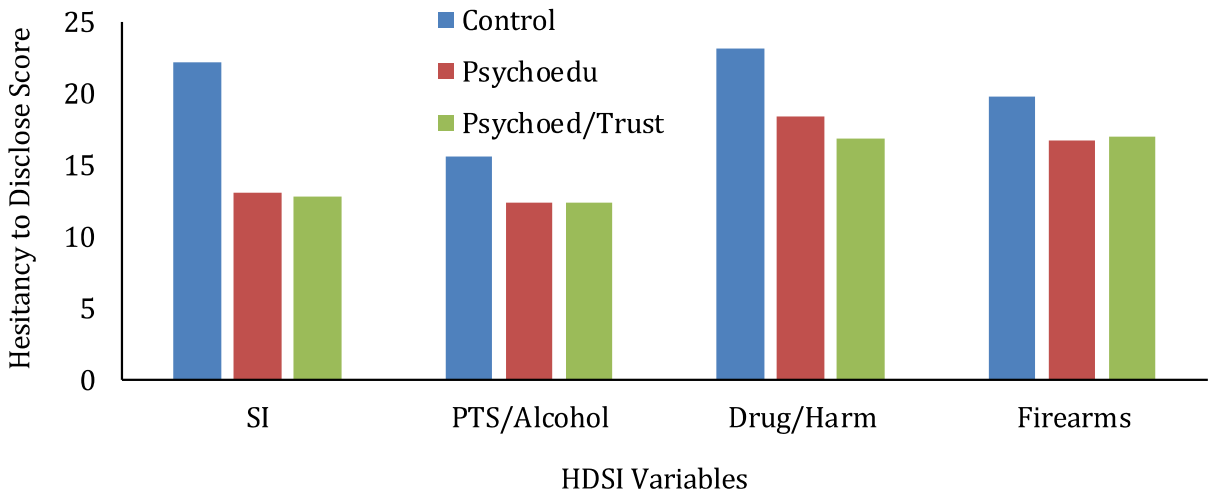
Note: SI = suicidal ideation.

Suicidal Ideation

Hesitancy to disclose suicidal ideation ranged from 5 to 30 at the sample level with a mean of 15.90 and a standard deviation of 6.93. The univariate ANCOVA indicated significant and large differences in hesitancy to disclose suicidal ideation by experiment condition, $F(2, 126) = 41.99$, $p < .001$, $\eta^2 = .40$. Having previously disclosed suicidal ideation to a professional was associated with lower hesitancy to disclose suicidal ideation with a moderate effect size, $p = .002$, $\eta^2 = .074$. Conversely, perceived occupational vulnerability to employers learning about participants' suicidal ideation was associated with higher hesitancy to disclose suicidal ideation with a moderate effect size, $p = .003$, $\eta^2 = .069$. Sex and percentage of VA health-care use were not associated with hesitancy to disclose suicidal ideation and effect sizes were small (Sex: $p = .381$, $\eta^2 = .01$; VA use: $p = .075$, $\eta^2 = .03$). Pairwise comparisons of hesitancy to disclose suicidal ideation by group, with Bonferroni corrections for multiple comparisons, revealed that the psychoed ($M = 13.14$, $SD = 5.43$) and psychoed/trust ($M = 12.85$, $SD = 5.47$) groups had significantly lower hesitation to disclose suicidal ideation than the control group ($M = 22.17$, $SD = 5.60$). A significant difference between the psychoed and psychoed/trust groups was not found (Table 6).

Figure 1

HDSI Variables by Experiment Condition



Post-Traumatic Stress/Alcohol

Hesitancy to disclose post-traumatic stress/alcohol ranged from 6 to 32 at the sample level with a mean of 13.37 and a standard deviation of 6.09. The univariate ANCOVA indicated significant differences were not present in post-traumatic stress/alcohol by experiment condition and a small effect size, $F(2, 126) = 2.93$, $p = .057$, $\eta^2 = .04$. Perception of occupational vulnerability from employers finding out about SI was associated with higher hesitancy to disclose post-traumatic stress/alcohol with a moderate effect size, $p = < .001$, $\eta^2 = .10$. Sex, VA use, and a history of SI disclosure did not significantly covary with hesitancy to disclose these issues with trivial to small effect sizes (Sex: $p = .066$, $\eta^2 = .03$; VA use: $p = .773$, $\eta^2 = .001$; History of SI disclosure: $p = .517$, $\eta^2 = .003$).

Drugs/Thoughts of Harming Others

Hesitancy to disclose drugs/thoughts of harming others ranged from 5 to 30 at the sample level with a mean of 19.41 and a standard deviation of 6.52. The univariate ANCOVA indicated

significant differences in drugs/thoughts of harming others by experiment condition with a large effect size, $F(2, 126) = 14.61$, $p < .001$, $\eta^2 = .19$. A history of SI disclosure was associated with lower hesitancy to disclose drugs/thoughts of harming others, $p < .001$, $\eta^2 = .09$, and perceived occupational vulnerability was associated with higher hesitancy to disclose, $p = < .001$, $\eta^2 = .09$, both with moderate effect sizes. However, sex and VA use were not associated with hesitancy to disclose drug problems or thoughts of harming others (Sex: $p = .203$, $\eta^2 = .01$; VA use: $p = .500$, $\eta^2 = .004$). The control group ($M = 23.19$, $SD = 5.63$) differed significantly from both the psychoed group ($M = 18.34$, $SD = 6.29$) and the psychoed/trust group ($M = 16.85$, $SD = 6.02$) which both had comparatively lower hesitancy to disclose. However, there was no difference between the psychoed and psychoed/trust groups (Table 6).

Firearm Accessibility

Hesitancy to disclose firearm accessibility ranged from 4 to 24 at the sample level with a mean of 17.76 and a standard deviation of 5.16. The univariate ANCOVA indicated significant differences in firearm accessibility by experiment condition with a moderate effect size, $F(2, 126) = 3.73$, $p = .027$, $\eta^2 = .056$. Occupational vulnerability was associated with higher hesitancy to disclose firearms accessibility with a moderate effect size, $p = .004$, $\eta^2 = .063$. Sex, VA use, and a history of SI disclosure were not associated with hesitancy to disclose access to firearms (sex: $p = .063$, $\eta^2 = .027$; VA use: $p = .549$, $\eta^2 = .003$; history of SI disclosure: $p = .508$, $\eta^2 = .003$). The control group ($M = 19.81$, $SD = 3.32$) differed significantly from the psychoed/trust group ($M = 16.98$, $SD = 5.22$) which had lower hesitancy to disclose firearm accessibility. However, the control group did not differ from the psychoed group ($M = 16.70$, $SD = 5.90$) and the psychoed and psychoed/trust groups did not differ from each other (Table 6).

Trust/Respect

At the sample level, trust/respect ratings of the psychologist that delivered the simulated informed consent ranged from 12 to 56 at the sample level with a mean of 37.62 and a standard deviation of 8.34. The univariate ANCOVA indicated significant differences in trust/respect by experiment condition with a large effect size, $F(2, 126) = 9.90$, $p < .001$, $\eta^2 = .136$. Being male and perceiving occupational vulnerability were associated with lower trust/respect for the simulated psychologist (sex: $p = .001$, $\eta^2 = .080$; job vulnerability: $p = .032$, $\eta^2 = .036$). Percentage of VA use and SI disclosure history did not significantly covary with trust/respect (VA use: $p = .989$, $\eta^2 = .000$; history of SI disclosure: $p = .953$, $\eta^2 = .000$). Group comparisons of trust/respect showed participants in the psychoed ($M = 38.78$, $SD = 8.44$) and psychoed/trust ($M = 40.73$, $SD = 6.46$) conditions reported significantly higher trust/respect for the clinician than the control group ($M = 33.21$, $SD = 8.19$). The two experimental groups did not significantly differ from each other in trust/respect (Table 6).

Figure 2

Trust/Respect Variables by Experiment Condition

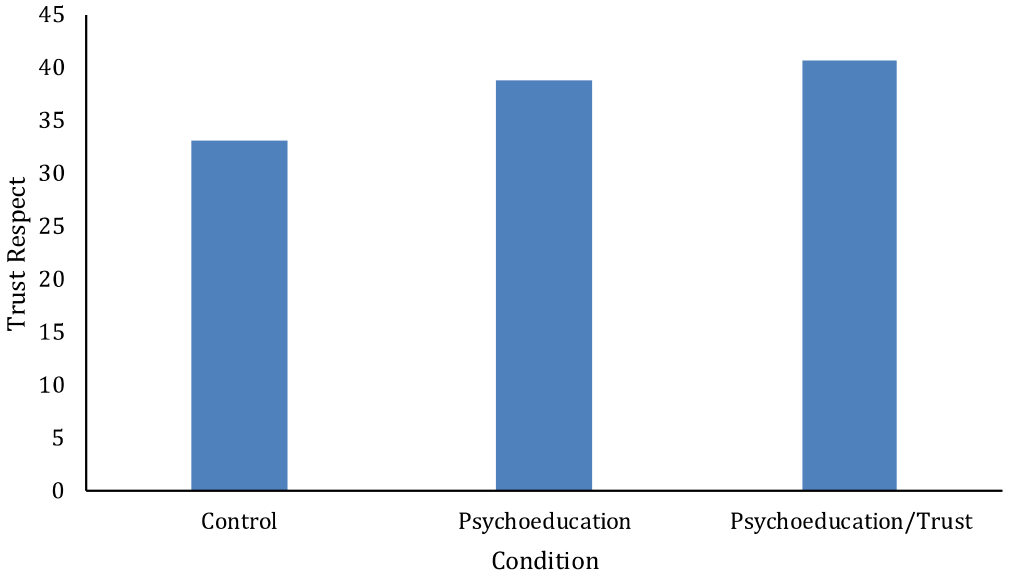


Table 6

Pairwise Comparisons of HSDI Variables and Trust/Respect by Experiment Condition (N = *133)*

DV	Condition pair		*MD*	*SE*	*p*	95% CI
Suicidal ideation	Control	Psychoed	8.53	1.09	< .001	5.87, 11.18
		Psychoed/trust	9.09	1.12	< .001	6.38, 11.80
	Psychoed	Psychoed/trust	0.57	1.09	1.00	-2.08, 3.21
PTS/alcohol	Control	Psychoed	2.15	1.21	.234	-0.79, 5.08
		Psychoed/trust	2.87	1.23	.065	-0.126, 5.86
	Psychoed	Psychoed/trust	0.72	1.21	1.00	-2.20, 3.64
Drugs/harm	Control	Psychoed	4.12	1.14	.001	1.36, 6.88
		Psychoed/trust	6.15	1.16	< .001	3.34, 8.97
	Psychoed	Psychoed/trust	2.03	1.13	.227	-0.72, 4.78
Firearms access	Control	Psychoed	2.35	1.04	.075	-0.17, 4.87
		Psychoed/trust	2.61	1.06	.045	0.04[b], 5.18
	Psychoed	Psychoed/trust	0.26	1.03	1.00	-2.25, 2.77
Trust/R=respect	Control	Psychoed	-4.14	1.60	.0333	-8.03, -0.242
		Psychoed/trust	-7.26	1.64	< .001	-11.23, --3.29
	Psychoed	Psychoed/trust	-3.13	1.60	.159	-7.01, 0.76

Note. MD = mean difference. *SE* = standard error. Bonferroni's corrections for multiple comparisons were used.

Discussion

In recent decades, U.S. Veteran suicide rates have become disproportionately higher than the civilian population (CDC, 2021; VA, 2020). Researchers have linked this disparity to higher rates of mental illness (Trivedi et al., 2015), trauma exposure (LeBouthillier et al., 2015; McKinney et al., 2017), substance misuse (Teeters et al., 2017), lifetime exposure to suicide (Cerel et al., 2015), and firearm accessibility (Dempsey et al., 2019) among veterans. The majority of these issues can be treated via evidence based clinical interventions (Brown & Jager-Hyman, 2014; Project MATCH, 1998; Sale et al., 2018; Watkins et al., 2018). For their part, Veterans Affairs (2020) has adopted universal screening protocols to identify SI, PTSD, and SUDs, and discuss lethal means restriction when indicated. However, it has been observed as many as three quarters of veteran suicide decedents denied SI at their last health care visit (Denneson et al., 2010). Every time a patient conceals SI from a professional it constitutes a critical missed opportunity for potentially life-saving intervention. Veterans in particular have high firearm ownership (Cleveland et al., 2017) and may be particularly concerned about the risk of hospitalization which may qualify a person as prohibited from owning firearms (BATF, 2021). This study was an important step forward in examining if veteran participants' hesitancy to disclose could be influenced by addressing uncertainty and trust during informed consent discussion.

Consistent with the hypotheses, participants in both the psychoed and psychoed/trust conditions reported lower hesitancy to disclose suicidal ideation, problems with drug use, and thoughts of harming others than participants in the control condition. However, participants in the psychoed/trust condition did not have lower hesitancy to disclose SI than participants in the psychoed condition as hypothesized. The findings appear to support Blanchard and Farber's

(2020) suggestions that we may be able to help with patient's concerns about SI disclosure by addressing their fears and uncertainty through augmented informed consent procedures, such as how informed consent was enhanced in the present study. For example, by directly addressing common patient concerns like involuntary hospitalization and forced medication by providing psychoed on how collaborative approaches like safety planning and talk therapy are typical clinical responses to patients presenting with lower risk SI.

Given that participants in both enhanced informed consent conditions demonstrated lower hesitancy to disclose than participants in the control condition for SI and the majority of the SI risk factors, but did not significantly differ from each other, it would appear that the identical psychoed component in both conditions was primarily responsible for lower hesitancy. The psychoed content included in these conditions was selected to address uncertainty in participants' appraisal of disclosure risks, and it is likely that this was primary mechanism for participants' decreased hesitancy to disclose in the experimental conditions. This is congruent with observations that uncertainty in the probability of negative consequences from disclosure, such as involuntary hospitalization and forced medication, were associated with concealing SI among civilian psychotherapy patients (Blanchard & Farber, 2020). Variation in individual context of potential negative consequences was also associated with variation in hesitancy to disclose. For example, participants that reported they believed their job would be at risk if their employer learned they experienced SI also reported higher hesitancy to disclose SI, firearms access, thoughts of harming others and problems with post-traumatic stress, alcohol, and drugs. Additionally, a history of having disclosed SI to a mental health or medical professional was associated with lower hesitancy to disclose SI, problems with drug use, and thoughts of harming others. Presumably because a majority of the participants who had previously disclosed SI

experienced less uncertainty about the probability of negative consequences. It is also possible these participants experienced increased salience of the benefits of treatment from personal experience (e.g., alleviation of SI/psychopathology, supportive treatment environment).

Aligned with hypotheses, participants in the psychoed/trust condition had significantly lower hesitancy to disclose firearms access than participants in the control condition. However, contrary to hypotheses, hesitancy to disclose firearms access did not significantly differ between participants in the psychoed condition and participants in the control condition. There was no difference in hesitancy to disclose firearms access between the participants in the two experimental conditions. Perceived occupational vulnerability to SI was associated with higher hesitancy to disclose firearm access, which may indicate that participants are aware of how firearm access increases risk and the potential for hospitalization. Firearms access was the only risk factor in which the psychoed/trust condition had lower hesitancy to disclose than the control without the psychoed condition also having lower hesitancy to disclose.

An explanation for why participants in the psychoed condition did not differ in hesitancy to disclose firearms access from participants in the control condition may be that the firearm related content was too brief to address uncertainty about negative consequences and participants needed greater trust in the clinician to make up for the remaining uncertainty. Firearms were mentioned once in both experimental conditions in a statement concerning safety planning using the phrase, "[taking] some extra gun safety steps when you are really upset". When designing the informed consent scripts for the experimental conditions, the content addressing firearms was kept minimal to avoid prolonging the length of monologue and to avoid provoking animosity from participants that may hold common beliefs that it is inappropriate for providers to ask about firearm ownership (Mann et al., 2005). It is possible this was not enough information to address

the psychoed condition participants' concerns and that the trust-oriented content of the psychoed/trust condition sufficiently satisfied concerns of its participants.

The additional trust-oriented content of psychoed/trust condition included several personal statements illustrating their values such as, "I've had a lot of people in my life that have struggled with thoughts of suicide and even lost a good friend to death by suicide"; "Thoughts of suicide are something many of us deal with, especially if we've been through really tough experiences"; and "It's important to me as a professional that you know I'm committed to helping you get the treatment you want and respecting your choices. I don't want any negative consequences for you. I take that to heart. So, if thoughts of suicide are something you're going through, it's important to know that you can trust me to work with you on it". The trust-oriented content also included the following statement that illustrated how the clinician treats low severity SI with psychotherapy and safety planning. "Just yesterday, I had a patient let me know he's been having thoughts of suicide when he's really stressed out. We worked on some coping skills and a safety plan for him to stay safe when he's really upset, and we'll work on it long-term in weekly sessions. It's almost always that easy to work on". It is unclear whether the personal statements, the case example, or both in sum contributed to participants in the psychoed/trust condition having lower hesitancy to disclose firearms access than participants in the control condition, but the extra trust-oriented content appears to be responsible for participants' decreased hesitancy to disclose.

It is a very important finding that how clinicians conduct the informed consent process can help to reduce hesitancy to disclose firearms access. The high lethality of firearms as means for suicide accounts for much of the variance between suicide attempts and deaths (Gradus et al., 2010), and reducing access to lethal means such as firearms is one of the few evidence-based

suicide prevention strategies (Bagley et al., 2010; Mann et al., 2005). Further, firearm owners drastically underestimate the risk of suicide from having firearms accessible (Simonetti et al., 2019). Any opportunity to increase disclosure of firearm access in the context of SI is a valuable opportunity for risk management and preventing suicide. These circumstances make it crucial that veterans experiencing SI are open to disclosing firearms access so clinicians can encourage collaborative safety planning and lethal means restriction. Addressing patient concerns about disclosing firearms access may be especially beneficial for veterans considering it has been noted the majority of veterans dying by suicide in recent years did not receive any prevention or intervention effort that focuses specifically on reducing the risk of suicide by firearm (Ammerman & Reger, 2020). The findings indicate informed consent discussions may provide an excellent mechanism for collaborating with gun owners to reduce the risk of suicide presented by firearms access.

Trust/respect ratings for the clinician were higher among participants in both of the experimental conditions than participants in the control condition but did not differ significantly between the experimental conditions. Higher trust/respect for the clinician was not hypothesized for the psychoed condition that did not have the extra trust-oriented content. The findings may indicate that addressing potential concerns about disclosing SI and providing psychoeducation about treatment inherently fostered trust and respect. This may be because people are becoming more accustomed to regular screening for SI and risk factors in healthcare but have likely never received any in-depth explanation of how providers would respond to disclosure of SI. The novelty of hearing about how clinicians respond to SI for the first time may cause attributions about the clinician that result in increased trust. Participants may have perceived the simulated

clinician as a very caring or dedicated professional worthy of their trust and respect for taking the time to provide a robust explanation of how SI is responded to.

The present study's findings are consistent with previous research indicating that trust/respect is associated with disclosing private information psychotherapy patients sometimes conceal from their providers (Crits-Christoph et al., 2019). Overall, trust/respect was negatively correlated with hesitancy to disclose SI, and all of the risk factors. Perceived occupational vulnerability was associated with lower trust/respect ratings for the clinician which indicates risk appraisal of negative consequences did play a role in trust/respect ratings. The concept of trust/respect is different from rapport or alliance and is a relatively new construct in the psychotherapy literature (Crits-Christoph et al., 2019). The present study illustrates the utility of trust/respect as a construct in clinical research, especially the topic of hesitancy to disclose suicidality.

The only suicide risk factor for which neither the psychoed or psychoed/trust conditions differed from the control condition in hesitancy to disclose was the post-traumatic stress/alcohol problems variable. This may be because participants' hesitancy to disclose these experiences were naturally lower. Despite having the most items of any of the composite risk factors, post-traumatic stress/alcohol problems had a lower mean hesitancy to disclose SI than all of the other risk factors at the sample level. It is possible participants considered alcohol problems and post-traumatic stress problems independently from SI as appropriate for help-seeking and disclosure with relatively low likelihood of negative consequences. When considered individually, these issues do not carry the same risks of hospitalization as SI, thoughts of harming others/drug use, or firearm access. However, perceived occupational vulnerability was associated with higher

hesitancy to disclose post-traumatic stress/alcohol problems, indicating participants were engaging in risk appraisal concerning these issues.

Limitations

The nature of this study presents several limitations to consider when interpreting the findings. Although the use of prerecorded videos of simulated providers is an accepted methodology for patient analogue studies (Van Vliet et al., 2012) it is impossible to verify if participants were attentive throughout the entire video and the power to detect small effects was limited. The study relied on participants to self-report that they viewed the entire video and did not experience any technical difficulties that prevented them from viewing or hearing the video. No participants indicated they had technical difficulties or did not attend to the videos. Although a strength of the prerecorded videos is standardized delivery of the experiment conditions, it also did not allow for participants to ask any questions they might have had about the informed consent information. Questions may have contributed to uncertainty and subsequently impacted hesitancy to disclose. Further, the sample is a nontreatment-seeking, non-patient population so it impossible to know for certain if the results generalize to these clinical populations. However, given 82% of the sample reported indirect/direct combat exposure, and the well documented associations between combat experience and psychopathology (Hoge et al., 2004) it is reasonable to assume a large percentage of the sample likely has lifetime experience with one or more of the SI risk factors.

Other aspects of the stimulus videos present limitations. The varying lengths of the stimulus videos may account for variance in participants responses (control = 1.5 minutes, psychoed = 4.5 minutes, and psychoed/trust = 6.5 minutes). The longer lengths of the experimental conditions' videos resulted in more exposure to the clinician which may have

resulted in increased trust and decreased hesitancy to disclose regardless of the information conveyed. Another limitation was that the only simulated clinician providing the informed consent was male, which may have influenced hesitancy to disclose and trust/respect for participants with biases for or against male providers. Having a male and female clinician in each condition with random assignment of participants would have been ideal. The online nature of the study also resulted in an attrition rate of 18.6% (n = 33). Although the participants that did not complete the study did not appear to differ from the participants who did in demographics or condition, there is still a possibility that the remaining sample differed from the attrition group in some way not captured by the study. Approximately 30 of these participants exited the study during or after exposure to the informed consent stimulus. It is possible that participants with high distrust and hesitancy may have discontinued the study in response to the content. The informed consent stimulus may have primed mistrust and suspicion. Notably, several users of the social media groups the study advertisements were posted on left comments warning other users that the study asked questions about firearms. These users implied that the study would be used to support anti-gun legal initiatives or so-called red flag laws. This author responded publicly to these comments by thanking participants for their interest in the study and commented that the study was only concerned with information relevant to improving mental health services for veterans and there were no plans to use the study data to advocate for legal policies.

The present study was conducted with participants self-reported to be U.S. Armed Forces veterans, recruited from combat veteran social media groups that use a referral system requiring existing members to vouch for the veteran status of new members. Despite the selection focus on combat veterans, approximately 18% of participants reported that they were veterans but had not experienced indirect or direct combat. To preserve anonymity and encourage uninhibited

responses to survey items, the study did not additionally verify participants' veteran status making it impossible to confirm all participants were indeed veterans. The study also did not differentiate between veterans currently on active duty, retired, or separated (honorably or otherwise) from service. The decision to not ask about current service status was intentional to avoid priming thoughts of service related negative consequences. Active duty service members may experience disproportionately more severe consequences for disclosure of SI and risk factors than veterans, such as administrative disciplinary actions and prosecution under the Uniform Code of Military Justice which generally has harsher penalties than the civilian justice system. The item measuring perceived occupational vulnerability to disclosing SI was included as a means of accounting for variance introduced by active-duty service members' who may have had higher vigilance of negative consequences and separated veterans with similar situations (e.g., law enforcement, pilots, physicians). Controlling for current service status may yield more insight into hesitancy to disclose SI and risk factors for both active duty and veterans no longer affiliated with the military.

Combat veteran social media groups were in part selected for this study due to the population's higher rates of SI and risk factors (VA, 2020), but there was no entry criteria of current or past SI or psychopathology. Psychopathology was also not assessed within the study and thus it was not controlled for in the analyses. The decision not to ask directly about experiencing past or present SI in the primary measures was intentional to avoid priming stigma that may have influenced report of hesitancy to disclose. The presence of psychopathology such as SI, which is often characterized by intense hopelessness, negative thinking, and altered cognitive states, may have affected the results.

Use of the HDSI as a primary measure of hesitancy to disclose is also a limitation given it

was created for this study due to a lack of existing measures, and thus had no preexisting evidence for validity. However, an EFA was used to identify a factor structure and the HDSI demonstrated concurrent validity with moderate to strong, positive correlations among its factors (hesitancy to disclose SI and risk factors). Convergent validity was also demonstrated via a negative correlation with trust/respect as well as numerous associations between HSDI factors and theoretically aligned covariates such as perceived occupational vulnerability to employers learning of SI and a history of having reported SI to a medical or mental health professional. These observations lend support to the validity of the HDSI in the present study.

Applications and Future Research

To the best of this author's knowledge this was the first study to use a continuous, quantitative measure of hesitancy to disclose SI and risk factors. The findings are promising indications that hesitancy to disclose SI and risk factors may be purposefully reduced by refining clinical protocols to address patients' uncertainty and concern for negative consequences. The findings are particularly applicable to the informed consent process and explanations of limits of confidentiality at the start of treatment to immediately address the risk of SI and risk factors. The findings suggest clinicians should be spending more time meaningfully addressing common patient concerns about SI disclosure during informed consent procedures. This may be difficult given the institutional pressure clinicians often face to treat more patients in less time by speeding up intake procedures, especially in settings like the VA where patients and clinicians are often occupied by many screening measures during initial visits. However, this study illustrated that not taking the time to address veterans' concerns may result in hesitancy to disclose SI. The findings may also be applied throughout the course of treatment as limits of confidentiality are revisited. For example, when SI emerges where it was previously not

disclosed or had not been present, and when it appears risk is increasing due to worsening SI, increased distress, or emergent risk factors for suicide. Over time patients may forget the specifics of the psychoed initially shared and hesitancy to disclose may benefit from hearing the information again.

Future research should examine if these findings replicate with civilian participants and specifically what information during informed consent discussions has the most dramatic reductions in hesitancy to disclose suicidal ideation and risk factors. Isolating what information contributes to decreases in hesitancy to disclose access to firearms would be valuable in accurately assessing suicide risk and effectively intervening to reduce risk. New investigations should also seek to identify what information can be added to be more helpful with specific patient contexts. For example, the current study observed that participants' perceived occupational vulnerability was associated with higher hesitancy to disclose SI, thoughts of harming others, firearms access, and problems from post-traumatic stress, drugs and alcohol. New lines of inquiry could examine how these concerns may be addressed by the clinician.

Future research is also needed to refine the HSDI. The EFA of the HSDI illustrated some of the risk factors for suicide factored together in unexpected ways (alcohol problems and post-traumatic stress problems, drug problems and thoughts of harming others). Presumably because participants found they had similar levels of risk of negative consequences. Further investigation to determine if this factor structure persists with other populations and why or why not may provide valuable insights to improve informed consent dialogues. A valid measure of hesitancy to disclose SI is critical to understanding how to improve patient disclosure and addressing SI clinically.

Conclusion

In this study, enhanced informed consent procedures resulted in decreased hesitancy to disclose SI, thoughts of harming others and drug problems while also resulting in increased trust/respect for the clinician compared to an informed consent control condition which briefly communicated limits of confidentiality in a minimal style typical of standard clinical practices. Participants of the psychoed/trust condition also reported lower hesitancy to disclose firearms access, which is a particularly important finding in the context of being able to engage in safety planning to prevent suicide attempts via firearm. Overall, the findings are an important advancement in efforts to understand and address veterans' historically low rates of disclosing SI (Denneson et al., 2010) and their tendency to wait to disclose SI until they have established trust with their provider (Ganzini et al., 2013). The findings may be useful in the context of improving clinical practices regarding informed consent discussions and future research on addressing concealed suicidality to reduce risk for suicide. Addressing patient concerns of negative consequences of SI disclosure as early as possible in treatment may allow for more opportunities to engage in routine, evidence-based clinical interventions targeting suicidal thought processes, underlying mental illness, substance misuse, and access to lethal means.

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Appendix A

Study Advertisement

Hello! My name is Brock Tucker. I am a U.S. Army combat Veteran and doctoral candidate in clinical-community psychology at the University of Alaska Anchorage. I am conducting a study on ways to improve how mental health professionals can provide services to Veterans. To participate, you need to be a Veteran. The study involves watching a short video about getting help for mental health issues and answering questions about your thoughts and opinions on sharing information with providers. The study takes about 10 - 15 minutes. Your answers will be anonymous. I understand your time is valuable, so by participating you will have the option to enter a raffle to win $100. When enough people have participated, I will randomly draw ten entries, and each of those participants will get a $100 Visa egift-card. To enter the raffle, you need to enter a contact email at the end of the study, but this information will not be associated with your responses to the study questions in any way. To participate, click this link.

Appendix B

Screening Questionnaire

Participation in this study is limited to adult veterans of the U.S. Armed forces (Air Force, Army, Coast Guard, Navy, Marines, or Reserve/National Guard components).

1. Are you 18 years of age or older?
   - ○ Yes
   - ○ No
2. Are you a Veteran of the U.S. Armed Forces?
   - ○ Yes
   - ○ No

Appendix C

Informed Consent Form

Principal Investigator:
Brock Tucker
Ph.D. Candidate
Department of Psychology
University of Alaska Anchorage
Phone: (952) 388-9766
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Research Supervisor:
Dr. Vivian Gonzalez
Professor, Department of Psychology
University of Alaska Anchorage
Phone: (907) 786-6779
Email: vmgonzalez@alaska.edu

Requirements to Participate: You must be at least 18 Years and a Veteran of the U.S. Armed Forces.

Description: This research study is being led by Brock Tucker, an Army combat veteran college student in the Clinical Community Psychology PhD program at the University of Alaska Anchorage. This study will try to learn more about veteran attitudes about sharing information with mental health care providers. This study has a short video simulating a mental health professional followed by questions about your willingness to talk to the simulated mental health professional about mental health problems such as thoughts of suicide, substance use problems, and issues from traumatic experiences. You do not need to have experienced any of these problems to participate and you will not be asked to actually discuss these issues. It will take approximately 30 to 45 minutes to complete.

Participation: Taking this online survey is completely voluntary, meaning the decision to answer the questions on the survey is totally up to you. If you decide you do not want to do the survey, or want to end the survey at any time, nothing bad will happen, there is no penalty.

Confidentiality: Your participation and the information that you provide by filling out the survey is confidential. To protect your confidentiality, your name will not be collected and your responses to the study questionnaires and identifying information (like your email address, where we will send your gift card) will be kept separate at all times. Only the research staff will have access to your responses to the study questionnaires and this information will not be shared with anyone else.

How will data be used: Data from this survey will be used to answer questions about veteran willingness to discuss mental health issues with providers. Your responses will never be identified to you. Research studies will be published based on this data and the results will be

shared with the broader community to help improve mental health care for veterans.

Benefits (and INCENTIVES): Upon completion of the study surveys you will be eligible to enter a prize drawing for a $100 Visa egift-card. When data collection for the study is complete 10 participants will be randomly selected for 100$ gift cards. You may only participate in the study one time and are only eligible to receive a single prize.

Risks: There are no known risks for participating in this study. Given the study has a short video simulating a mental health professional talking about mental health problems, and asks about your willingness to discuss mental health problems, you may or may not have, some questions might make you feel uncomfortable or experience emotional distress. If you become distressed please contact the National Suicide Prevention Life line at 1-800-273-8255.

Contact People: If you have any questions about this research, please do not hesitate to contact the Principal Investigator, Brock Tucker at btucker5@alaska.edu. If you have any questions or concerns about your rights as a research participant, please contact the UAA Office of Research Integrity and Compliance at 907-786-1099 or uaa_oric@alaska.edu.

Are you voluntarily willing to participate in this study?

By clicking the "I agree to participate" button below, you are showing that you know what this online survey is about. You are also showing that you know taking the study is your choice and you can stop at any time. If you have any questions about this study, you can contact the researcher team listed above. You may wish to print or save a copy of this consent form for you to keep (hyperlink to PDF).

___ I agree to participate (if checked directed to survey)
___ I decline to participate (if checked directed to a page thanking them for their time and providing them a copy of the resource list)

Appendix D

Demographic Questionnaire

1. Age
   Enter ##

2. Race and Ethnicity (Select all that apply)
   - American Indian or Alaska Native
   - Asian American
   - Black or African American
   - Native Hawaiian or Pacific Islander
   - White (not Hispanic)
   - Hispanic or Latino
   - Other: Please specify _____

3. Sex
   - Male
   - Female

4. Marital status
   - Single (Never Married)
   - Married, or living as married
   - Widowed
   - Divorced
   - Separated

5. Service branch (If served in multiple branches select all that apply)
   - Air Force
   - Air Force Reserve or Air Force National Guard
   - Army
   - Army Reserve, Army National Guard
   - Marine Corps
   - Marine Corps Reserve
   - Navy
   - Navy Reserve

6. Years of military service
   Select Years

7. Deployment/Combat Experiences
   - Never deployed outside of the U.S.
   - Deployed only to non-combat zones
   - Deployed to combat zones but never experienced indirect or direct combat
   - Deployed to combat zones and experienced indirect combat (e.g., mortar strikes landing inside operating base or outpost, firing artillery at distant enemy

positions)

- Deployed to combat zones and experienced indirect and direct combat (e.g., receiving and returning fire, patrol element attacked by IEDs, or engaging combatants in close combat)

Appendix E

Experiment Prompt

Imagine that you went to see your primary care doctor for a routine annual checkup. Your doctor noticed you seemed to be feeling down. You explained you had been feeling that way for a while and it has been causing issues at home and at work. Your doctor asked if you were willing to talk to a psychologist about it and you agreed to the idea. Your doctor referred you to a psychologist and the following video is the psychologist going over what is called "informed consent for treatment" at the beginning of your first appointment. Before proceeding please be sure to adjust your volume so you can hear the video.

Appendix F

Mental Health Care Resources

If you are experiencing thoughts of suicide here are some resources to help connect you support.

Crisis lines

1 800-273-8255 National Suicide Prevention Lifeline
The National Suicide Prevention Lifeline is a United States-based suicide prevention network of over 160 crisis centers that provides 24/7 service via a toll-free hotline with the number 1-800-273-8255. It is available to anyone in suicidal crisis or emotional distress.

1-800-273-8255 and press 1 **Veterans Crisis Line 24/7**
Or text 838255
Or go to https://www.veteranscrisisline.net/ for webchat
Veterans Crisis Line 24/7, confidential crisis support for Veterans and their loved ones
You don't have to be enrolled in VA benefits or health care to connect.

Mental Health Care

VA Main information line 1-800-698-2411
If you believe you qualify for VA health benefits you can call this information line for helping you access mental health care at the nearest VA care setting. The VA has a policy to not turn away Veterans experiencing thoughts of suicide and may find you qualify for VA healthcare on this basis where you normally would not. Look up the location and contact info for your local VA here https://www.va.gov/find-locations

1-877-927-8387
Vet Center Call Center is an around the clock confidential call center where combat Veterans and their families can call to talk about their military experience or any other issue they are facing in their readjustment to civilian life. The staff is comprised of combat Veterans from several eras as well as family members of combat Veterans. This benefit is prepaid through Veterans military service.

SAMSHA Mental Health Treatment Finder
Look up local mental health care service providers and substance use treatment in your area here https://www.samhsa.gov/find-treatment

Appendix G

Informed Consent Condition Scripts

Control/Minimal Elaboration Condition

Hi, I'm Dr. Smith. It's nice to meet you. Your doctor said that you have been having some troubles with feeling down lately. As a psychologist, these kinds of problems are my specialty and I'm really looking forward to working together with you and seeing if we can improve things. Before we get started, I'd like to go over something I think is really important for you to be aware of. I am legally and ethically required to get informed consent to treatment from you. Part of that means I have to tell you about the rare cases when I could be forced to break doctor-patient confidentiality. The first case is if I am ordered by a court to turn over records or testify. That usually only comes up when people are having legal troubles related to their mental health. The second case is if I learn about the abuse of a child or an elder, I'm a mandated reporter so I'm obligated to report that abuse. Finally, the third case is if you become an imminent threat to yourself or others. If that happens I am legally obligated to get you emergency help to keep you or others safe. Thanks for being patient with me while I explained that. If you don't have any questions we can move on to talking about what brought you in today.

Psychoed Condition

Hi, I'm Dr. Smith. It's nice to meet you. Your doctor said that you have been having some troubles with feeling down lately. As a psychologist, these kinds of problems are my specialty and I'm really looking forward to working together with you and seeing if we can improve things. Before we get started, I'd like to go over something I think is really important for you to be aware of. I am legally and ethically required to get informed consent to treatment from you. Part of that means I have to tell you about the rare cases when I could be forced to

break doctor-patient confidentiality. The first case is if I am ordered by a court to turn over records or testify. That usually only comes up when people are having legal troubles related to their mental health. The second case is if I learn about the abuse of a child or an elder, I'm a mandated reporter so I'm obligated to report that abuse. Finally, the third case is if you become an imminent threat to yourself or others. If that happens I am legally obligated to get you emergency help to keep you or others safe.

Some people are worried about what might happen if they tell me about thoughts they are having about killing themselves or even hurting other people. They worry about being hospitalized or being forced to take medication they don't want; however, both of these things rarely happen. Hospitalization only happens as a last resort and in cases where there is a really serious risk for suicide or danger to others. For example, when a patient says they fully intend to go home and end their life, or that they are hurting so badly they don't think they can keep themselves from attempting suicide. It's not something that happens often, and when it does we try to work with patients to check themselves in voluntarily so they can basically rest for a few days, and if they want, get some medication to sleep and feel better. Even people who end up hospitalized for attempting suicide or for serious danger of suicide have the right to choose whether or not they want medication. The only times people are ever really forced to take medication is if they are hospitalized and become violent towards themselves or others.

I like to explain all of this because a lot of Veterans have seen servicemembers be put on suicide watch or hospitalized for talking about suicidal thoughts while in the military. That's because a lot of time the military takes a really aggressive approach with suicide risk, but it's not like that in the civilian world. The truth is thoughts of suicide are pretty common and lots of people have them and get help for them. When someone tells us they are having thoughts of

killing themselves we do a risk assessment to help pick the right treatment approach. We have a lot of really effective treatments for things like depression and PTSD that can be fueling thoughts of suicide. Those therapies usually involve us meeting regularly for a few months and talking just like this. You can also talk with a psychiatrist here about medications like antidepressants, mood stabilizers, or sleep-aids that might help you feel better. Some people really like the medication and it's helpful for them and others prefer therapy and feel better doing that. But, again it's entirely your choice if you don't want to take medication. When it comes to thoughts of suicide specifically, we can do therapy to help fight hopeless thoughts and do safety planning to help keep you safe if you do have thoughts of suicide. Usually that involves a list of activities and friends that you can rely on in tough times. A lot of suicide deaths are impulsive, at times when people are really upset, and involve drinking and guns – so a good safety plan has steps you could take to address those risks and keep you safe. Things like avoiding excessive drinking and some extra gun safety steps when you are really upset. So, thanks for being patient with me while I explained that. If you don't have any questions we can move on to talking about what brought you in today.

Psychoed/Trust Condition

Hi, I'm Dr. Smith. It's nice to meet you. Your doctor said that you have been having some troubles with feeling down lately. As a psychologist, these kinds of problems are my specialty and I'm really looking forward to working together with you and seeing if we can improve things. Before we get started, I'd like to go over something I think is really important for you to be aware of. I am legally and ethically required to get informed consent to treatment from you. Part of that means I have to tell you about the rare cases when I could be forced to break doctor-patient confidentiality. The first case is if I am ordered by a court to turn over

records or testify. That usually only comes up when people are having legal troubles related to their mental health. The second case is if I learn about the abuse of a child or an elder, I'm a mandated reporter so I'm obligated to report that abuse. Finally, the third case is if you become an imminent threat to yourself or others. If that happens I am legally obligated to get you emergency help to keep you or others safe.

Some people are worried about what might happen if they tell me about thoughts they are having about killing themselves or even hurting other people. They worry about being hospitalized or being forced to take medication they don't want; however, both of these things rarely happen. Hospitalization only happens as a last resort and in cases where there is a really serious risk for suicide or danger to others. For example, when a patient says they fully intend to go home and end their life, or that they are hurting so badly they don't think they can keep themselves from attempting suicide. It's not something that happens often, and when it does we try to work with patients to check themselves in voluntarily so they can basically rest for a few days, and if they want, get some medication to sleep and feel better. Even people who end up hospitalized for attempting suicide or for serious danger of suicide have the right to choose whether or not they want medication. The only times people are ever really forced to take medication is if they are hospitalized and become violent towards themselves or others.

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lot of really effective treatments for things like depression and PTSD that can be fueling thoughts of suicide. Those therapies usually involve us meeting regularly for a few months and talking just like this. You can also talk with a psychiatrist here about medications like antidepressants, mood stabilizers, or sleep-aids that might help you feel better. Some people really like the medication and it's helpful for them and others prefer therapy and feel better doing that. But, again it's entirely your choice if you don't want to take medication. When it comes to thoughts of suicide specifically, we can do therapy to help fight hopeless thoughts and do safety planning to help keep you safe if you do have thoughts of suicide. Usually that involves a list of activities and friends that you can rely on in tough times. A lot of suicide deaths are impulsive, at times when people are really upset, and involve drinking and guns – so a good safety plan has steps you could take to address those risks and keep you safe. Things like avoiding excessive drinking and some extra gun safety steps when you are really upset.

I've had a lot of people in my life that have struggled with thoughts of suicide and even lost a good friend to death by suicide. Thoughts of suicide are something many of us deal with, especially if we've been through really tough experiences. Just yesterday, I had a patient let me know he's been having thoughts of suicide when he's really stressed out. We worked on some coping skills and a safety plan for him to stay safe when he's really upset, and we'll work on it long-term in weekly sessions. It's almost always that easy to work on. It's important to me as a professional that you know I'm committed to helping you get the treatment you want and respecting your choices. I don't want any negative consequences for you. I take that to heart. So, if thoughts of suicide are something you're going through, it's important to know that you can trust me to work with you on it. Thanks for being patient with me while I explained that. If you don't have any questions, we can move on to talking about what brought you in today.

Appendix H

Hesitancy to Disclose Suicidal Ideation and Related Risk Factors (HDSI)

Instructions: Based on what **the psychologist said in the video**, select the response that fits how accurately the statement describes how you believe you would interact with that psychologist if you were experiencing the problems mentioned in the questions. Note that some questions are worded in terms of positive opinions and some in terms of negative opinions.

1	2	3	4	5	6
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree

Hesitancy to disclose suicidal ideation

1. I would tell the psychologist if I was having thoughts of killing myself. *
2. I would deny any thoughts of killing myself I was having if the psychologist asked about them.
3. If I was having thoughts of ending my life, I do not think it would be risky to talk to the psychologist about it. *

Hesitancy to disclose problems with post-traumatic stress

4. I would tell the psychologist if I was having problems with difficult or traumatic experiences. *
5. I would deny any problems I was having from traumatic experiences if the psychologist asked.
6. If I was having problems from past difficult or traumatic experiences, it would be risky to tell the psychologist.

Hesitancy to disclose problematic drinking

7. I would tell the psychologist if I was having problems with drinking. *
8. I would deny any problems I was having with drinking if the psychologist asked.
9. If I was having problems with alcohol, talking about it with the psychologist would be too risky.

Hesitancy to disclose problematic drug use

10. I would tell the psychologist if I was having problems with drugs. *
11. I would deny any problems I was having with drugs if the psychologist asked.
12. If I was having problems with drugs, talking about it with the psychologist would be too risky.

Hesitancy to disclose firearm accessibility

13. I would tell the psychologist if I was a gun owner or had access to a gun. *
14. If I owned guns, I would deny it if the psychologist asked.
15. Disclosing gun ownership and/or access to guns to the psychologist is too risky.

Hesitancy to disclose harming others

16. I would tell the psychologist if I was having thoughts about harming someone. *

17. I would deny any thoughts I was having about harming someone if the psychologist asked about them.
18. If I was having thoughts about harming someone, I do not think it would be risky to talk to the psychologist about it. *

Practical concerns about disclosing suicidal ideation

19. I would be concerned that talking to the psychologist about thoughts of killing myself would end up with me being hospitalized against my wishes.
20. I would be concerned talking to the psychologist about thoughts of killing myself would end up with me being forced to take medications I do not want.
21. I would be concerned talking about thoughts of killing myself with the psychologist would endanger my right to own/buy guns.
22. I would be concerned talking about thoughts of killing myself with the psychologist would endanger my job.
23. I would be concerned talking about thoughts of killing myself with the psychologist would affect custody over my children.

*Items reverse coded for scoring

Appendix I

Trust Respect Scale

Adapted from Crits-Christoph and Colleagues (2019)

Instructions: **Below are a few statements about the psychologist from the video**. Select the response that best describes how much you agree or disagree with the statement about how you feel about working with him. Note that some questions are worded in terms of positive opinions and some in terms of negative opinions.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

1. I respect the psychologist.
2. I am not sure the psychologist is reliable. *
3. I think the psychologist is truthful.
4. I have a high opinion of the psychologist.
5. I do not have confidence in the psychologist. *
6. I do not hold the psychologist in high esteem. *
7. I trust the psychologist.
8. I feel I can count on the psychologist.

*Items reverse coded for scoring

Appendix J

Possible Covariates of Hesitancy to Disclose

1. What proportion of your health care do you receive at the VA?

   [Slider bar from 0% - 100%]

2. In the past have you ever disclosed experiencing thoughts of killing yourself to a medical or mental health professional?

   - Yes
   - No

3. If you were seeking treatment for having thoughts of killing yourself, do you believe you would experience serious, negative consequences like job loss if your current employer found out?

   - Yes
   - No
   - N/A (e.g., retired) *

   *Coded as no

Appendix K

MANCOVA Power Analysis