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Understanding Suicidal Behavior in the Military: An Evaluation of Joiner's Interpersonal-Psychological Theory of Suicidal Behavior in Two Case Studies of Active Duty Post-Deployers

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Suicide in the military is a growing concern. We reviewed empirical studies and used two case studies to illustrate the potential explanatory role of Joiner's (2005) interpersonal-psychological theory of suicidal behavior. The theory posits that three variables—perceived burdensomeness, thwarted belongingness, and acquired capability for suicide—determine the risk of an individual engaging in a lethal suicide attempt. In our case studies, we illustrate how these variables might be affected in an active duty population post-deployment. Although methodological limitations preclude conclusive determinations, the case studies provide a framework within which to understand the phenomenon of suicide in the military. Future work that examines these findings empirically will be invaluable to both researchers and mental health counselors.

INTRODUCTION

Suicide is a massive public health problem (National Institute for Mental Health [NIMH], 2008), but there are relatively few comprehensive and rigorous theories for better understanding and diminishing the phenomenon. Although suicide occurs in a wide variety of populations,

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suicide in the military has sparked an understandable and particularly strong surge of recent interest (Lorge, 2008). The need for an empirically supported, well-tested theory of suicidal behavior that might be applied to this population is readily apparent.

Joiner (2005) proposed an interpersonal-psychological theory of suicidal behavior that indicates three variables must be present for an individual to die by suicide. The first of these, a sense of thwarted belongingness, involves a sense on the part of the individual that he or she lacks meaningful connections to others and that previously solid relationships have become strained or lost. The second, perceived burdensomeness, involves a sense on the part of the individual that he or she is a burden to the world, someone who not only fails to make meaningful contributions but is also a liability. Taken together, the theory says, these two perceptions produce the desire for suicide.

The third variable, acquired capability for suicide, involves the degree to which an individual is able to enact a lethal suicide attempt. Joiner (2005) posited that, because a lethal or near-lethal suicide attempt is fearsome and often pain-inducing, habituation to the fear and pain is a prerequisite for serious suicidal behavior. The theory suggests that repeated exposure to painful and provocative events habituates individuals to stimuli that previously would have been highly aversive, with respect to both fear and physiological responses. Thus behaviors like self-injury (painful) and experiences like witnessing or engaging in violence (provocative) may increase an individual's acquired capability for suicide.

In this paper we seek to examine how this theory might apply to two active-duty post-deployers. A clearer understanding of which individuals in this population are at risk for suicide attempts and death may allow for improved prevention and treatment efforts. An understanding of the mechanisms behind suicidal behavior may also allow for more efficient and empirically based risk assessments, potentially stimulating more accurate and earlier responses. Brenner et al. (2008), in examining Joiner's (2005) theory in a military population, identified consistent themes of perceived burdensomeness, thwarted belongingness, and an acquired capability for suicide that may have been influenced by combat experiences. We build upon this work by examining events in the lives of two individuals that may have represented or influenced the three components of Joiner's theory and perhaps affected their suicide risk.

Joiner's (2005) theory implies that not all individuals who desire suicide are capable of completing the act, and similarly not all who are capable desire to engage in suicidal behavior. The acquired capability for suicide is thus a necessary but not sufficient risk factor for suicide completion. How individuals acquire this risk factor may vary, but the path universally

involves repeated exposure to or experiencing of painful and provocative events. Consistent with Solomon's opponent-process theory (1980), Joiner proposed that such repeated exposures habituate an individual to fear and physical pain and therefore dampen his or her initial aversive response (a-process) and amplify potential reinforcement (b-process).

Consistent with the idea of habituation from repeated exposure to painful and provocative events, Nock and Prinstein (2005) reported that some individuals who repeatedly self-injure report little or no pain during self-injury. Pain analgesia in response to repeated self-inflicted injuries is consistent with the idea that over time individuals develop the ability to engage in more serious suicide attempts that would otherwise involve too much discomfort. Along these lines, Orbach, Mikulincer, King, Cohen, and Stein (1997) demonstrated that adolescents with multiple suicide attempts exhibit higher thermal pain thresholds and greater pain tolerance in general than do individuals with one or no suicide attempts. Here again, repeated self-inflicted injuries predicted a greater ability to withstand physical pain, corroborating the construct of the acquired capability for suicide.

Orbach, Stein, Palgi, Asherov, Har-Even, and Elizur (1996) compared individuals who reported to an emergency room after a suicide attempt with others who reported to an emergency room due to accidental injuries. Participants were approached after their condition was stabilized by medical personnel. The experiment was described as an examination of physical pain and personality characteristics, and participants were told that the procedure would involve mild electric shocks. Those who had attempted suicide showed higher pain tolerance than their nonsuicidal counterparts. Here, it appears that intentionally self-inflicted injuries have more potential for increasing pain tolerance than do painful but unintentional injuries. Given that suicide attempts theoretically require practice and a diminished pain response, these findings are consistent with Joiner's (2005) theory: individuals who intentionally injured themselves appeared able to withstand more physical discomfort.

Nock, Joiner, Gordon, Lloyd-Richardson, and Prinstein (2006) studied an inpatient sample of individuals who reported a history of repeated nonsuicidal self-injury (NSSI) in the previous 12 months to explore the relationship of repeated self-injury to suicidal behavior. Participants were adolescents (23 males, 66 females), 87.6% of whom met criteria for an Axis I personality disorder and 67.3% of whom met criteria for an Axis II disorder. The authors reported that the number of self-injury episodes, the severity of the self-injury, and the self-reported lack of physical pain during self-injury episodes predicted suicide attempts.

Even within a sample comprised entirely of individuals who have

experienced some degree of pain and provocation, the severity of the pain appears to predict suicidal behavior. For instance, Joiner et al. (2007) reported that childhood physical abuse and violent sexual abuse predicted number of suicide attempts better than did verbal abuse and molestation. In other words, the greater the pain and violence involved, the more predictive the experience was of later suicide attempts. The covariates utilized in this study, which included participant psychiatric history, family psychiatric history, and family suicide attempts, emphasized the strength of the relation between the experience of physical pain and later suicide attempts. By utilizing stringent controls, the authors demonstrated the importance of the experience of pain, above and beyond several other robust predictors of suicidal behavior.

Recently, Bender, Gordon, and Joiner (2007) have developed a scale to directly measure the acquired capability for suicide (Acquired Capability for Suicide Scale). The scale is a questionnaire that asks participants to what degree a series of statements relevant to the acquired capability for suicide applies to them (e.g., "Things that scare most people don't scare me," "I can tolerate more pain than most people"). The measure itself does not assess the degree to which individuals have been exposed to painful and provocative events, thus diminishing the potential for spurious results. Using this scale as an outcome variable, Van Orden, Witte, Gordon, Bender, and Joiner (2008) found that the number of past suicide attempts predicted the acquired capability construct, as did a higher number of self-reported painful and provocative experiences. These findings represent the first direct measurement of the acquired capability for suicide and provide support for this component of Joiner's (2005) theory.

Although data directly measuring acquired capability in the military are minimal, several studies have reported findings consistent with the construct (e.g., Brenner et al., 2008). For instance, Kaplan, Huguét, McFarland, and Newson (2007) reported that male veterans in the general population are twice as likely to die by suicide as male nonveterans in the general population and that this segment of the general population is 58% more likely to utilize firearms in their attempt. Although only a subsection of veterans experience combat, the military as a whole is theoretically exposed to more pain and provocation through universal experiences like basic training and training in the use of firearms. Such experiences, even without combat, may increase acquired capability, although direct measurement is necessary to conclusively determine whether this is the case.

These are important considerations for a variety of reasons. First, the elevated rate of death by suicide in veterans reported in the Kaplan et al. (2007) study indicates a significant problem that requires conceptual and

empirical attention. Second, these numbers imply that a population that has potentially been exposed to significant pain and provocation (combat) exhibits elevated rates of suicidal behavior. Third, the findings indicate that a population that may have been exposed to significant pain and provocation is substantially more likely to utilize a method of attempt that has a high probability of resulting in death. There is thus a distinct opportunity to test Joiner's (2005) theory of suicidal behavior among individuals who, at least in theory, will be more frequently exposed to painful and provocative events. Although a significant number of military personnel never experience combat, an opportunity to acquire capability nonetheless may exist because they receive extensive exposure to the use of firearms and partake in physically demanding experiences like basic training.

Some evidence from military samples suggests that exposure to pain and provocation may be associated with higher suicidal ideation. In a sample of Vietnam War veterans, Nye and Bell (2007) found that re-experiencing symptoms of posttraumatic stress disorder (PTSD) is more highly predictive of suicidal ideation than are other symptoms of the disorder. Re-experiencing symptoms of PTSD has also been shown to be associated with the degree to which individuals have been exposed to war atrocities and heavy violence—more exposure results in more symptoms (Hendin & Haas, 1991; Hartl, Rosen, Descher, Lee, & Gusman, 2005). Additionally, greater suicidal ideation has been shown to be associated with more exposure to war zone violence and atrocities (Yehuda, Southwick, & Giller, 1992; Beckham, Feldman, & Kirby, 1998). Suicidal ideation itself is not synonymous with the acquired capability for suicide; however, given the relative dearth of relevant data on this population, even indirect evidence that increased symptoms of suicidality are predicted by exposure to pain and provocation provides a rationale to investigate the phenomenon further.

In this analysis, we discuss case studies of two active-duty United States Air Force personnel who had been deployed in Operation Iraqi Freedom (OIF). Our primary aim will be to demonstrate how all three components of Joiner's (2005) theory may be associated with suicidal ideation in a sample of military veterans. We anticipate that the acquired capability for suicide will become progressively more prominent as the individuals are exposed to more painful and provocative events.

CASE STUDY #1

The patient ("John") was a married, active-duty, Caucasian officer in his 30s. John was a medical professional with several years of clinical

experience as a civilian before he entered the military. His first assignment was at a hospital on a small military base. John enjoyed this assignment because it was a tight-knit community in a relatively isolated area offering a variety of outdoor activities (e.g., camping, hiking, and white-water kayaking). The community also reminded him of the small town in which he was raised. In the year before he began treatment, he was reassigned to a large military installation in a metropolitan area, which was the site of the clinic where he was treated. Within a few months of his reassignment, John volunteered, after long discussions with his wife, for deployment in support of OIF for a number of reasons. First, his wife had just become pregnant, so his return from deployment would coincide with the birth of their first child. Second, because his career field was experiencing considerable resource strain due to understaffing, his volunteering and participation would have a positive impact on his career. Finally, John felt a strong desire to medically support military personnel who were being severely injured during military action in OIF.

John was deployed for four months to an in-theater hospital in direct support of OIF military operations. The hospital, a central point for early medical care, is a primary trauma center in Iraq. Treatment is provided according to medical need, not national or political alliance. The hospital routinely provides care to US and coalition military personnel, civilian contractors, Iraqi civilians, Iraqi military and security forces, and insurgents and enemy combatants. In light of this treatment approach, it is not uncommon for military medical providers to find themselves treating US soldiers, Iraqi civilians, and enemy combatants at the same time, all having been injured in the same firefight or explosion.

In Iraq John was frequently exposed to trauma in which others were routinely dying or suffering from severe injuries. Although he was not himself injured, the frequent exposure to severe injuries may have increased his acquired capability for suicide, because witnessing severe injuries theoretically constitutes a provocative event. Worries about his own death lurked constantly in the back of his mind, since the base where he was deployed was typically mortared numerous times a day, which may also have increased his acquired capability for suicide. John described feeling trapped and emotionally overwhelmed by these experiences. He was haunted by intrusive memories and dreams about specific patients and about events he experienced while deployed. Guilt was the primary emotion associated with these memories.

John's sense of guilt is consistent with previous findings that soldiers returning from combat experience guilt about aspects of their experience. Kubany and Manke (1995) formulated an influential three-factor model of combat guilt that centers on guilt about things both done or not done

(e.g., hurting others, trying to prevent harm to others); things both felt or not felt (e.g., hatred toward others); and thoughts or beliefs that were later proven untrue (e.g., rationale for killing battlefield enemies).

After his return from Iraq, John found it emotionally distressing to work in a hospital trauma center because exposure to the sights, sounds, and smells of severely injured patients elicited memories of his deployment. Much as re-experiencing symptoms of PTSD has been shown to increase suicidal behavior (Nye & Bell, 2007), salient memories of wounded soldiers may have increased John's acquired capability for suicide. It certainly interfered with his ability to concentrate adequately on injured patients. John started to avoid the emergency room and would find excuses to send other medical personnel to do his work in his stead. Such professional difficulties may have also increased the degree to which John perceived himself as a burden to others.

John found it difficult to talk about his deployment experiences with coworkers and family and would often withdraw when the topic came up. Such emotional detachment from others diminished his ability to feel connected to a network of peers and thus may have increased his sense of thwarted belongingness. John described a sense of emotional confusion—as if he were not feeling the “right” emotions. His concentration and sleep were severely impaired, and he found himself unable to control his temper, which had never been a problem for him before. When intensely distressed he would pull his hair and hit himself in the head, which terrified his wife, straining their relationship. These self-inflicted injuries may have increased John's acquired capability, and the strain on his marriage likely increased his sense of thwarted belongingness.

John reported a high level of distress that had been mounting over the three months since his return from OIF. Contributing to his distress besides his transitional struggles were the recent birth of his first child, living in a new and much larger city, and starting a new job in a large medical center known for being regularly understaffed due to high operational demands. John described feeling overwhelmed with all the changes in his life, particularly the occupational stress. He reported an inability to concentrate when assisting with complex medical procedures, and a constant feeling that he was not doing his job well enough. John said his mind was constantly racing with thoughts about what he “should” be doing or how he could be doing things better. Although he was working extra hours to “catch up,” he could not seem to finish all his duties. John expressed certainty that his coworkers and colleagues were frustrated with his incompetence, and he was exasperated because he could not get the training he believed he needed. All of these factors together seem to have left John with a perception of himself as a burden to others.

John reported increased insomnia and agitation over the previous few months; he was regularly feeling exhausted and restless during the day. He was not socially active at the time of the initial evaluation because he did not yet know many people in the area. Social isolation could have increased his sense of thwarted belongingness, particularly if it was motivated by a sense that not only were meaningful connections absent in his new environment, but new connections were not imminent or likely. He found it very difficult to enjoy life and had stopped engaging in many of his previous activities (e.g., working out, camping, hiking, and kayaking). John experienced an extremely high level of guilt secondary to his deployment experience, explaining that the reality of war and his identity as a medical professional often came into direct conflict and created moral crises that he could not resolve. John recalled one instance in particular in which he was treating an Iraqi insurgent whose jaw was shot off by the American sniper on the pallet right next to him. The American sniper's leg had been shot off by the insurgent and, because of this injury, the sniper's shot was slightly off target, resulting in the wound to the Iraqi insurgent. Because of his duties as a medical professional, his responsibility was to treat the more grave injury regardless of nationality or the side a particular individual for which is fighting. As a result, John gave priority to the insurgent rather than his fellow countryman. Thus, John's duties not only resulted in exposure to extremely graphic injuries, but forced him to act in direct conflict with his sense of loyalty toward fellow American soldiers.

John reported that he first thought about suicide while in Iraq, when the mounting stress of caring for the horrifically wounded troops and enemy combatants, in combination with the "chaos of war," became more than he could reasonably manage. Surrounded daily by pain and suffering, and separated from his family and social support network, he noticed himself increasingly thinking about death without suicidal intent (e.g., "I'd be better off dead," "The only way I'll get out of here is to die"). As the stress of deployment continued, these thoughts about death evolved into thoughts about self-inflicted death. He reported that his thoughts included images of himself holding a gun to his head and pulling the trigger. This mental rehearsal of self-inflicted injury may have further increased his acquired capability for suicide.

In light of the many simultaneous major life changes occurring during his transition back from OIF, John's stress naturally heightened. He began thinking about shooting himself in the head with a firearm and found it difficult to control these thoughts when highly distressed. The stress began to negatively impact his marriage, as his increasingly severe agitation resulted in limited emotional intimacy, which in turn further

heightened his distress. John eventually found himself in a feedback loop of increasing emotional distress and suicidal thinking.

John denied previous psychiatric problems or treatment, although he reported a family history of mental illness marked by bipolar disorder. He denied any previous suicide attempts or a history of suicidal ideation previous to the current episode, and any history of physical, sexual, or emotional abuse. There was no evidence of reckless behaviors or impulsivity, and John indicated that he generally felt in control of his behaviors and actions, although recently he had been “losing his cool” more often. Of considerable concern to his wife was his emotional lability while driving; he would occasionally become so emotionally overwhelmed that he would hit the steering wheel and even swerve his car toward the median, then jerk it back at the last minute. Given that no prior history of violence or aggression was reported, such behaviors represented a distinct change. John expressed moderate hopelessness marked by ambivalence: he hoped that his condition and situation would improve but was not yet convinced it would be possible. John reported access to lethal means (firearms in the house) that was consistent with the content of his suicidal thinking, but he denied that he had engaged in any preparatory or rehearsal behaviors.

Protective factors identified included his marriage, the presence of a child in his house, and a desire to engage in treatment. Although John’s marriage was strained due at least in part to decreased intimacy and his chronic agitation, he recognized that his wife was truly supportive and that there was no reason to believe the relationship was in danger of ending. These protective factors, particularly his marriage and child, represented potential paths toward improving his sense of belongingness. Because Joiner’s (2005) theory suggests that all three risk factors need to be present for serious suicidal behavior to occur, relationships perceived by the client as positive may mitigate suicide risk, though they are unlikely to clearly offset it. Additionally, because John was exhibiting many of the vegetative symptoms of depression, it is important to consider the potential impact of psychopathology on his suicide risk. In an empirical study these symptoms would need to serve as covariates in order to ascertain the degree to which the three components of Joiner’s theory account for variability in suicide risk beyond the influence of depression.

In addition to the many protective factors in his life, John’s strengths included high intelligence and considerable education. Through cognitive restructuring, he came to see that he was, in direct contrast to his previously reported fears, highly regarded by his colleagues and was well-liked because of his humility and concern for others. Most important, John demonstrated a courage that he did not initially recognize; by

overcoming his fear that seeking treatment would have a negative impact on his career, he was able to reach out and establish the relationships he needed to eventually recover.

CASE STUDY #2

The patient (“Jane”) was a married, active-duty, Hispanic female who was in her thirties when she enlisted. Jane worked in personnel; administrative office duties predominated in her job description. She was deployed in support of OIF and assigned to convoy duty with a primary mission of transporting goods and resources across southern Iraq. Because of the nature of this mission, Jane had to undergo considerable training, including use of various weapons, vehicle operation and maintenance, and combat operations, all of which were well outside the scope of her typical work or experience. Jane was deployed in southern Iraq for six months, during which she participated in daily convoy operations, which are particularly dangerous due to frequent exposure to hostile individuals and the constant threat of improvised explosive devices (IEDs). Jane’s struggles began after one convoy mission (“the index event”) that resulted in the deaths of several of her peers.

On the day of the index event, Jane was assigned to the lead truck in her convoy, a common placement for her. As a major planner for an upcoming mission, Jane hoped to start working on the details of this future operation by coordinating with a colleague while en route; because this colleague was positioned several trucks back, Jane negotiated to switch places with someone so she could be in the same vehicle as her colleague. This change was approved with no difficulty. This particular convoy was delivering supplies between two towns on a well-established route that was chosen due to relatively little hostile activity and no indication of enemy movements in the area. In fact, the convoy had driven to its current point on the same road earlier in the day. From her new position several vehicles back, Jane watched as an IED detonated underneath the lead vehicle, killing all five US personnel within. A firefight ensued with no further loss of life for US personnel, and the convoy sped to its follow-on destination to complete the mission. Although Jane was not injured, she witnessed the violent death of several fellow officers, which could theoretically impact her acquired capability for suicide.

Jane presented to a primary care clinic several months later after she returned from OIF, complaining of irritability, insomnia, jumpiness, temper outbursts, and sudden startle responses. Intrusive memories of the index event interfered with her ability to concentrate during the day and woke her repeatedly at night. As reported by Nye and Bell (2007),

re-experiencing symptoms of PTSD significantly predicts suicidality and may therefore constitute a provocative event capable of increasing an individual's acquired capability. In other words, even though the individual is not actually in the presence of the original event, by re-experiencing it to the extent exhibited in PTSD, an individual may in fact experience a habituation similar to the fear of death and physical pain.

During her initial evaluation, Jane presented with extreme agitation, being unable to sit down in a chair for longer than a few minutes. She paced around the exam room and pleaded for assistance to "make these thoughts go away." She reported an extremely high level of guilt, blaming herself for the loss of at least one life: "If I hadn't switched spots with that person, he'd be alive and his family wouldn't be grieving." She ruminated constantly about the family of her deceased colleague, imagining endless destruction and catastrophe that she insisted must be occurring because of her choice. Such thoughts could have had a significant impact upon her perceived burdensomeness: she felt that her decisions and actions resulted in highly negative outcomes for others and she was incapable of doing anything to remedy the situation.

Her failed attempts to suppress thoughts and memories of the index event only increased her distress. She found herself increasingly unable to sleep and increasingly agitated. She withdrew from family and friends out of shame, expressing that "I can't face them; they know what I did." By withdrawing from her support system, Jane thus may have increased her sense of thwarted belongingness, again increasing her risk for a lethal suicide attempt. Although her withdrawal from others was voluntary, she chose to do this because she felt others could no longer feel for her what they once did because of what had happened. As is almost always the case, thwarted belongingness here was an incorrect perception, but Jane did not realize that, and it influenced her behavior, as evidenced by self-reported suicidal ideation. She thus appeared to be at heightened risk for suicide because she exhibited potential elevations in all three risk factors of Joiner's (2005) theory of suicidal behavior.

As she also began to withdraw from activities she had previously enjoyed, Jane noticed that she started wishing she were dead. "It's the only way to make this stop," she would explain. "I can't live with this ... I should be the one who's dead." Jane's work performance declined as she withdrew from others until finally her coworkers approached her and suggested she get help. Initially, Jane denied that she needed assistance and interpreted her coworkers' concern as further evidence of her failure in the workplace: "If I had been doing my job well, they never would have said anything." Her condition continued to spiral down, and she found herself starting to think about suicide, though she had not yet formulated

a plan: "I should just kill myself and get this all over with."

Jane's willingness to seek treatment and the efforts on the part of her colleagues to encourage her to take that step were probably invaluable protective factors. The support of her colleagues in the midst of her struggles had the potential to reduce both her sense of thwarted belongingness and her perception of burdensomeness. By engaging in treatment, Jane managed to enhance her ability to challenge thoughts and perceptions about her role in the deaths of her fellow officers, her ability to make useful contributions professionally, and the degree to which she serves as a valued member of society, within both her family and her professional community.

DISCUSSION

In reviewing the literature related to Joiner's (2005) theory of suicidal behavior and using two case studies to illustrate the theory's potential relevance to active-duty post-deployers, our purpose was to articulate a theoretical perspective capable of elucidating the mechanisms behind a troubling phenomenon (Lorge, 2008; NIMH, 2008). Our hope in presenting the case studies is to encourage future empirical studies of this population and to offer a method for evaluating suicide risk in active-duty post-deployers.

Joiner's (2005) theory indicates that it is the interaction of three variables—perceived burdensomeness, thwarted belongingness, and the acquired capability for suicide—that determines an individual's risk of suicidal behavior. Merely enlisting in the military or being deployed into combat does not alone suggest that an individual is at severe risk for suicidal behavior. A sense of detachment from others, either during deployment or after returning home, may directly affect the degree to which individuals exhibit elevation in thwarted belongingness. Perceived burdensomeness may be directly affected by the degree to which individuals believe they have caused problems for others and are incapable of making valuable contributions to the world. The degree to which such individuals are exposed to painful and provocative events during the course of their deployment may directly affect the degree to which they will exhibit elevation in the acquired capability for suicide (Van Orden et al., 2008). If these variables do not elevate, suicidal behavior would not be expected, regardless of military status.

Risk Assessment and Treatment Recommendations

Although a central aim of this paper was to encourage future researchers to empirically test Joiner's (2005) theory in a sample of

individuals exposed to various levels of combat, an equally important purpose was to provide specific recommendations for mental health clinicians treating clients who may present with similar symptoms and risk levels.

Addressing perceived burdensomeness and thwarted belongingness, which together represent desire for suicide rather than ability to enact a lethal attempt, could involve a variety of approaches. The experience of combat obviously serves as a risk factor for encountering painful and provocative experiences, which suggests that active-duty post-deployers may be at greater risk for suicidal behavior than most civilians; however, perceived burdensomeness and thwarted belongingness may not be experienced uniformly by soldiers, so risk assessment must involve evaluation of all three variables. Because the acquired capability for suicide is not particularly malleable, directly addressing the other two variables—perceived burdensomeness and thwarted belongingness—seems to be the most viable method by which to ameliorate suicide risk. In both the case studies, willingness to seek treatment, particularly at the encouragement of colleagues and family, was probably invaluable in diminishing the desire for suicide.

Encouraging clients to engage in activities that enhance their belief that they are making valuable contributions should help decrease perceptions of burdensomeness. As a soldier returns to civilian life after deployment, a mental health clinician should therefore consider encouraging the client to seek employment or further education. Depending on the client's previous occupational training, education, and financial situation, however, the number of options the client will have may be limited. A potentially useful approach that does not hinge on such variables is volunteer work. In an effort to increase a client's sense of making valuable contributions to the community and being an asset to others, the clinician should encourage the client to volunteer to help individuals in need, particularly in situations that match the client's passion (e.g., feeding the homeless, volunteer fire department, coaching children's athletic teams).

To address a client's sense of thwarted belongingness, there are also several options. First, through cognitive restructuring techniques, the mental health counselor can teach clients to counter maladaptive cognitions that erroneously lead to the conclusion that others do not care about them and would not miss them if they were gone. Because the perception of thwarted belongingness may at times be faulty, cognitive restructuring may be an effective approach. To further address previously strong relationships that have become strained, the clinician can suggest family or couples therapy, with the aim of improving communication so that each member of the relationship can begin to better understand

experiences of the other that may have contributed to conflict. The counselor might also encourage the client to utilize behavioral activation by seeking out positive, healthy, reinforcing activities that involve social interaction (e.g., joining a city sports league, taking a job that uses skills acquired in the armed forces in a group setting).

Although it is unlikely that the acquired capability for suicide can be reversed, there is ample reason to believe that a clinician can help to reduce further increases in it. One pivotal component of treatment might involve the amelioration of PTSD symptoms, particularly re-experiencing symptoms. Cognitive behavioral therapy (CBT; Rothbaum, Meadows, Resick, & Foy, 2000) might be used to teach clients to counter maladaptive thoughts and expose them to feared stimuli gradually until they habituate. Doing so in theory would diminish their fear response and decrease the likelihood of their re-experiencing symptoms that have been linked to increased suicidality (Nye & Bell, 2007). Clients should also be taught alternative coping methods to decrease the frequency of painful and provocative events prompted by affective distress. For example, dialectical behavior therapy (DBT; Linehan & Heard, 1992) teaches clients to focus on the present and use effective, healthy means of coping with distress. By providing clients with a variety of alternative approaches, a mental health counselor could stem further increases in acquired capability and thus diminish the likelihood of a client engaging in a fatal suicide attempt.

Limitations

There are limitations in this text that are worth noting. First, the use of case studies in place of empirical data necessitates subjective evaluation of both the relationship between the variables of interest and the generalizability of the findings. Future studies that directly measure the variables involved in Joiner's (2005) theory of suicidal behavior would have substantial utility, both with respect to understanding the phenomenon of suicide in the military and with respect to the best targets for therapeutic interventions. Additionally, because neither client in these case studies actually attempted suicide, it is impossible to definitively evaluate the degree to which the presence or absence of elevations in the variables of interest was related to suicidal behavior. Future studies that include a sample of active-duty post-deployers with a history of post-deployment suicide attempts would lead to a better understanding of these effects.

Despite these limitations, this study serves an important purpose by offering one of the first examinations of how Joiner's (2005) theory explains suicides in a population of active-duty post-deployers (Brenner et al., 2008; Cornette, deRoon, & Joiner, 2008.; Cornette, et al., 2007;

Cornette, Cukrowicz, & Joiner, 2007; Cornette, deRoon-Cassini, Joiner, & Proescher, 2006). Given the status of the war in Iraq and the increasing number of suicides in the military, it is beholden upon researchers to provide a theoretical framework within which to evaluate risks and analyze empirically the degree to which particular variables are involved in suicidal behavior. These case studies, while not empirical, do illustrate how Joiner's (2005) theory can contribute to risk evaluation and how shifts in the variables in the theory may increase or diminish the perception of risk. By setting the stage for empirical research on this topic, this article will hopefully encourage others to systematically evaluate which military personnel are at greatest risk for suicidal behavior and why their risk levels are elevated.

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