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Shame, Guilt, and Suicide: A Mixed Methods Study of Psychiatric Inpatients at Risk for Suicide

by

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APPROVAL OF THE DOCTORAL DISSERTATION IN THE MEDICAL & CLINICAL PSYCHOLOGY GRADUATE PROGRAM

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Doctor of Philosophy Degree
July 31, 2019

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DEDICATION

Everything I am and everything I have accomplished I owe to the love and support of my husband and family.

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31 July 2019

ABSTRACT

Title of Dissertation: Shame, Guilt, and Suicide: A Mixed Methods Study of Psychiatric Inpatients at Risk for Suicide

Fernanda Pinheiro De Oliveira, Doctor of Philosophy, 2020

Thesis directed by: Dr. Marjan Ghahramanlou-Holloway, *Suicide Care, Prevention, and Research Initiative*, Department of Medical and Clinical Psychology, USUHS

BACKGROUND: Shame and guilt have been empirically examined in the context of suicide; however, inconsistencies in uniformly defining and measuring these emotions exist and lead to contradictory findings. Advancing our understanding of the role of shame and guilt in the trajectory toward suicidal thoughts/actions has important research and practice implications.

PURPOSE: (1) To qualitatively explore common themes of shame and guilt within suicide narratives shared during psychotherapy; and (2) To quantitatively determine the association among shame, guilt, suicide-related distorted cognitions, dysregulated emotions, and problematic social problem-solving.

METHODS: A cross-sectional, retrospective, mixed methods, and exploratory sequential design was employed. Selected baseline randomized controlled trial (RCT) data from 58 suicidal service members and adult dependents admitted for inpatient psychiatric care and randomized into the treatment arm of the RCT were used. Qualitative analyses focused on patients' transcribed

suicide narratives. Magnitude ratings quantified the intensity and relevance of shame and guilt; the ratings were carried over to answer a series of research questions, using regression models.

RESULTS: Shame (and not guilt) was consistently more likely to be referenced. Shame referenced a tendency toward negative self-appraisal and failure to meet expectations within culturally-ascribed roles, whereas guilt referenced familial functioning difficulties. Shame and guilt were connected to intrapunitive motivations for suicide, burdensomeness, and hopelessness. Avoidance, sensation seeking, rumination, and self-directed injury were notable emotion regulation strategies. Impulsive/careless problem solving was reported in the aftermath of shame and/or guilt. A model with shame, guilt, and age and sex as covariates was significantly associated with limited awareness of emotions, such that lower shame magnitude, greater guilt magnitude, younger age, and male sex were associated with lower awareness of emotions. Second, a model with shame and guilt was significantly associated with lack of emotional clarity, such that greater shame and guilt magnitudes were significantly associated with greater lack of emotional clarity. Notably, shame and guilt were never individually significantly associated with any of the dependent variables in any model.

DISCUSSION: Shame and guilt themes and their interrelatedness support the notion that these two emotions play a meaningful role in the etiology and maintenance of suicidal behaviors. Despite a number of limitations, this study has generated well-informed hypotheses and a series of research and clinical recommendations, based on a grounded theory approach, to guide future investigations.

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CHAPTER 1: Introduction

BRIEF OVERVIEW

Suicide rates in the United States (U.S.) military have steadily increased, resulting in a call for suicide-related research within military populations. Interest in researching self-conscious emotions, such as shame and guilt, and their contributions to suicide have resurged, particularly with respect to understanding trauma symptomatology and suicide risk among military personnel (1; 2). Shame and guilt, as a label for particular emotional reactions, are frequently used interchangeably, colloquially, clinically, and in research (1). Investigations of shame and guilt are confounded by persistent disagreements on how to conceptualize and differentiate these emotions, and measures of shame and guilt often reflect this contention. Consequently, measures of shame and guilt have been criticized over concerns of low validity and reliability and high intercorrelations between subscales (3). However, there is recognition by many researchers of the differential relationship of emotions such as shame and guilt in the development, maintenance, and exacerbation of various psychopathologies, as well as the need to cultivate a unified understanding of how best to distinguish and assess these emotions (3; 4).

A review of the literature on the distinction between shame and guilt suggests that shame, in response to a perceived social infraction, results in internal, stable, and global negative attributions about the self (e.g., “I did this horrible thing, so I am a bad person”) (3). In contrast, guilt has frequently been described as a situation-specific emotion that produces tension and remorse over a perceived social infraction leading to a desire for reparative action (e.g., “I did this horrible thing, I need to make things right”). Shame leads to anger and isolating behaviors

and has been shown to be a risk indicator for suicide among military service members, even after adjusting for active mental health disorders such as posttraumatic stress disorder (PTSD) and depression (4). Shame has also been linked to psychopathology in multiple studies (e.g., 5; 6). However, conflicting definitions and measurement methods have, not surprisingly, led to contradictory results, with some studies showing guilt, over shame, to be more strongly associated with suicidal ideation (1; 4; 7).

Given the clinical significance of emotions such as shame and guilt in understanding suicide risk, additional research is needed, particularly within military samples. To address this gap in the scientific literature, this dissertation study employed a mixed methods approach to investigate the strength of associations among shame, guilt, emotional distress, interpersonal functioning, and suicidality. Specifically, this dissertation study aimed to advance suicide prevention research and clinical practice as follows: (a) qualitatively examining subjective experiences of shame and guilt, in relation to suicide risk, within an inpatient psychiatric sample; and (b) quantitatively determining the association among shame, guilt, emotional distress, and interpersonal difficulties.

In the sections below, an overview of the public health significance of suicide is first provided, followed by a review of the literature on defining, differentiating between, and measuring shame and guilt. A review of the qualitative literature in relation to shame, guilt, and suicide follows. This chapter concludes with a review of shame and guilt in relation to emotional distress and interpersonal functioning deficits, which includes an application of Thomas Joiner's Interpersonal-Psychological Theory of Suicide (IPTS; 8) as a framework for understanding the hypothesized role of shame and guilt in suicide risk. Based on this information and since a

targeted framework on guilt, shame, and suicide risk has not yet been developed, a cognitive-behavioral framework to visually depict the hypothesized associations among shame, guilt, emotional and interpersonal distress, and suicide risk is provided, which also serves as the basis for the proposed aims and hypotheses in this dissertation. The proceeding chapter introduces specific aims and hypotheses of the dissertation with an explanation of supporting rationale. Chapter 3 provides the data analytic strategy, and finally, Chapters 4 and 5 provide the results and discussion of findings, along with clinical and research recommendations.

Public Health Significance of Suicide: Civilians, Military Personnel, and Veterans

Civilians

In 2016, a total of 793,000 individuals died by suicide worldwide, with an estimated annual age-standardized suicide rate of 10.5 per 100,000 (9). In 2017, a total of 47,173 individuals died by suicide in the U.S., with an estimated annual age-standardized suicide rate of 14.0 per 100,000 (10). Globally and nationally, suicide is the second leading cause of death among 15 to 29-year-olds (9; 10).

While suicide surveillance by the World Health Organization and the Centers for Disease Control and Prevention in the U.S. are ongoing, there is a lack of reliable estimates for population-based prevalence of suicide ideation and suicide attempts each year. Accurately estimating suicide ideation and behaviors is complicated due to a number of factors (e.g., underreporting of suicide ideation/intent/planning; variability in assessment methodologies; inconsistencies in the definitions of suicide-related behaviors, including thoughts) (11). While population metrics are not available, estimates of suicide-related behaviors have been made available. Moscicki (12) estimated there are approximately 8 to 25 suicide attempts (within the

U.S.) for each suicide death. The lifetime prevalence of suicide attempts has been estimated at 1.9% to 8.7%; 12-month prevalence has been estimated at 0.2% to 2.0% (13). In 2015, 9.3 million adults in the U.S., or approximately 3.9% of the adult U.S. population, reported having suicide thoughts (10). Notably, the age range with the highest rates of suicide ideation is among persons aged 18 to 25 (7.4%), followed by those aged 26 to 49 (4.0%) (10). The CDC estimates 1.4 million adults attempted suicide in 2017 (10). In 2013, the most recent year for which this data is available, the national cost of fatal and nonfatal suicide-related injuries was estimated at $93.5 billion, or $298 per capita, after adjusting for underreporting (14). This figure stems primarily from the indirect cost of lost productivity associated with suicide-related injuries, as well as medical costs (14).

Military Personnel and Veterans

The issue of determining rates of suicide ideation and planning becomes even more complex when dealing with the military population, since mental health stigma is particularly high for this group (e.g., 15). Among the U.S. armed forces, suicide is now the leading cause of death since 2012, when it surpassed combat deaths (16). Within 2016 alone, 275 active duty service members (suicide rate of 21.1 per 100,000), died by suicide, and 1263 service members made a suicide attempt (17). The CDC estimates that military veterans account for 20% of the suicide rate in the U.S. (10).

Although the increase in suicides have been highest among active duty (AD) Army and Marines, all branches and components have experienced increases in suicide rates since the onset of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). For instance, a retrospective chart review study (18) has found that 30% of deployed soldiers treated for mental

health issues in Iraq had presented with suicide ideation in the past week, 19% had planned for their suicide, and 6% had proceeded with preparatory suicidal behavior(s). A study of 128,950 U.S. Air Force active duty members who completed an anonymous survey found that 3% of men and 5.5% of women reported experiencing suicide ideation in the past year, and among them, 8.7% reported a recent suicide attempt (19).

Using national survey data, another study found that 3.8% of participants with a history of military service reported suicide ideation in the past 12 months (20). Suicide ideation was highest among those who reported a diagnosis of depression, anxiety, or PTSD (17.4%; 20). Notably, those with a more recent history of separation from military service (i.e., separation within 1 to 12 months before survey participation) reported the highest rate of suicide ideation at 5.3%, compared to those who were still in the military (2.0%) and who separated longer than 12 months before taking the survey (3.7%; 20).

SHAME, GUILT, AND SUICIDE RISK

Defining and Differentiating Shame and Guilt

Psychoanalytic Framework

The most often cited conceptualization of shame and guilt originated from a psychoanalytic framework, and was first introduced by H. B. Lewis' 1971 book, *Shame and guilt in neurosis* (21). Lewis described shame, versus guilt, as derived from one's perception of misbehavior being based on global trait-like qualities of the self (i.e., what was described as a conflict between the ego and the ego-ideal) (21). In contrast, guilt is an emotion associated with tension and remorse related to a specific behavior perceived as a social or moral infraction (22). The tension felt when one perceives to have damaged a personal or communal relationship

through this infraction or behavior may lead one to make amends. Thus, guilt is considered a prosocial emotion (22). In this way, guilt is theorized as a controllable psychological state linked to a specific action or behavior for which one feels regret or remorse, but also leads one to engage in reparative action (5). Guilt is an empathetic emotion, as the concern lies with the effect one's behavior may have on others (22).

Psychoanalytic theories have a long tradition of reflecting on the importance of shame and guilt in relation to psychological disorders. Freud, for example, focused on guilt in relation to conflicts between the id or ego and the moral standards of the superego (23). Later theorists elaborated on Freud's concept of the ego-ideal to conceptualize guilt, and later shame, as a reaction between the ego and ego-ideal (e.g., 24). Erikson's 8 stages of psychosocial development, which are still used today by developmental and psychodynamically-oriented psychologists, offered a similar conceptualization to Lewis (21) by describing shame as global, exposed self-doubt, which is in contrast to the health development of autonomy, and guilt as misguided or overly-controlled behavior which stifles the development of initiative (25).

Cognitive Framework

Currently, the most dominant definition of shame uses a cognitive, self-focused, appraisal-based model of perceived emotions (26). This definition suggests the internal, global, and stable attributions tacked onto the behavior associated with the emotion of shame lead to a negative evaluation of the global self (i.e., *I* did a horrible thing, therefore *I am* a bad person), leading to feelings of worthlessness, helplessness, and vulnerability (22). As Farnsworth and colleagues (27) stated, "whereas guilt can promote greater empathy and socially reparative actions, shame typically activates social hiding behaviors and decreases empathy due to

increased preoccupation with one's own distress and emotional discomfort" (p. 251). Shame is therefore conceptualized as an "egocentric" emotion as one's focus on global negative self-evaluations leading to concern over others' evaluations, feeling "exposed" or vulnerable, which in turn promotes isolating behaviors (22).

Therefore, shame is conceptualized as a much more psychologically damaging emotion than guilt (27). In studies where this conceptualization is used, shame is strongly correlated with substance abuse, anger, and aggression (6). In a study conducted with former prisoners of war, PTSD symptoms were associated with shame-proneness, and were inversely correlated with guilt-proneness (28). However, many studies on guilt, particularly associated with military members, have thus far focused on the construct of "moral injury," which seeks to better understand and treat posttraumatic symptoms, especially shame and guilt, that are associated with service members' perceived moral and ethical transgressions in war. This literature argues that our current understanding of posttraumatic stress does not sufficiently address the impact of shame and guilt when service members believe themselves to have behaved in ways that conflict with their moral and ethical values. In the moral injury literature, guilt is often discussed using the term "combat-related guilt," and only a few studies in this body of literature have investigated guilt's relationship to suicidality. These studies have demonstrated that combat-related guilt is a risk indicator for PTSD (29). Combat-related guilt has been associated with symptom severity in both PTSD and depression (30). A study of Vietnam veterans found that guilt also mediated the correlation between abusive violence (e.g., civilian abuse, prisoner torture) with PTSD and depressive symptoms (31). Moreover, suicide ideation has been associated with guilt and killing in combat (32). In another study comparing military personnel

with and without direct combat exposure, guilt was associated with more severe suicide ideation among those with combat exposure (4).

However, investigations of guilt in relation to suicide ideation and behaviors cannot be limited to combat exposure and trauma victims. A study by Bryan and colleagues (1) found that both shame and guilt independently mediate the association between depression and PTSD symptom severity and suicide ideation. Importantly, only guilt remained a significant contributor to suicide ideation when guilt and shame were considered simultaneously (1). It is important to note, however, that a potential confound among studies assessing guilt is measure selection, which may influence the conceptualization of guilt and the degree to which guilt is differentiated from other emotions such as shame or embarrassment (22; 27). Furthermore, Tangney, a strong proponent of Lewis' conceptualization, argues that guilt significantly contributes to psychopathology only when it becomes generalized and context-insensitive, meaning that the experience of guilt is no longer limited to a specific social transgression and has become fused with shame (6).

Additionally, it is important to understand shame and guilt as we differentiate between state versus trait emotions. The majority of the literature discussed in this dissertation study, as well as the literature on shame and guilt in psychopathology more generally, has focused on trait-based shame and guilt. State-based shame and guilt, however, refers to a transitory affective state, i.e., experiencing shame and guilt "in the moment" (6). Shame-proneness (i.e., trait shame) and guilt-proneness (i.e., trait guilt) are believed to have a stronger relationship to the development, maintenance, and exacerbation of various psychopathologies because of the increased psychological distress associated with having a lower triggering thresholds for

experiencing these painful self-conscious emotions (6). While state-shame and state-guilt can be experienced concurrently at any given moment, the tendency to experience shame versus guilt appears to have a significant impact on psychopathology and distress (6).

How Does Shame Differ from Attributional Style?

The conceptualization of shame offered by Lewis (21) and expanded upon by Tangney & Dearing (6) derives strongly from previous research on attributional style (e.g., 33), which found a strong association between depressive symptoms and the tendency toward negative internal, stable, and global attributions about the self. Abramson and colleagues (33) termed this the Hopelessness Theory of Depression, and later extended this theory to suicide risk (i.e., The Hopelessness Theory of Suicide [37]). This negative attributional style has been associated with depression and suicide ideation in several studies (e.g., 34; 35; 36), and, notably, the tendency to assign internal, stable, and global causes to *positive* events predicts resilience to depression and suicide ideation (e.g., 37; 38). It is reasonable, then, to wonder whether the association among shame, suicide ideation, and behaviors can be partially or fully explained by the already established association between a negative attributional style and suicide ideation. It is also reasonable to question whether there is a significant distinction between this conceptualization of shame and a negative attributional style that is worth investigative inquiry.

Shame-proneness has been positively correlated with the tendency to make internal, stable, and global attributions for negative events, and negatively correlated with the tendency toward the same attributional style toward positive events (39). In fact, Tangney and colleagues (39) have reported that shame accounts for 8-15% of the variance in depression scores above and beyond attributional style. Tracy and Robbins (26) conducted four studies assessing the

relationship among shame, guilt, and causal attributions to test their appraisal-based conceptualization. Shame and guilt were both positively associated with internal attributions, while only shame was associated with internal, stable, and uncontrollable attributions for failure (26). Interestingly, shame was also associated with the tendency toward external attributions, which is believed to be due to shame's association with externalized blame (e.g., 21), discussed later in this chapter.

Though this question would benefit from additional research, studies on the association among shame, attributional style, and psychopathology appear to show that shame and attributional style are highly interconnected but meaningfully distinct constructs (26). Attributional style research contributes to our understanding of the cognitive aspects of developing a tendency toward experiencing shame, while shame contributes to our understanding of the affective consequences of certain attributional tendencies. Furthermore, shame appears to denote a particular tendency toward making internal, stable, and global attributions about the self *that violate personal standards and identity goals* (26). That is, while negative attributional style denotes a cognitive tendency toward internal, stable, and global causal attributions regarding negative events generally, shame describes the affective consequence of applying a negative attributional style when important personal standards and ideals are at stake (p. 174, 26). With this understanding in mind, we turn next to a discussion on which precipitating events may be most likely to elicit shame and guilt reactions.

Sociocultural Framework

A common misconception regarding the difference between shame and guilt is that shame is a more "public" emotion, i.e., that shame occurs primarily in situations where one is

publicly exposed and/or when one experiences the disapproval of others (e.g., 40). However, several studies have shown this does not appear to be the case – for example, studies exploring the narrative accounts of shame and guilt experiences have found that both emotions are experienced in public and private settings at equivalent rates (e.g., 41; 42). Studies have similarly found that the awareness of others and of one's wrongdoing did not adequately distinguish between the tendency to experience shame versus guilt (41). Additionally, very few shame- versus guilt-inducing situations have been identified (6). While moral transgressions are equally likely to elicit shame, guilt, or both, there is "some evidence that non-moral failures and shortcomings (e.g., socially inappropriate behavior or dress) may be more likely to elicit shame" (p. 17, 6).

Given this finding regarding shame and *non-moral* failures and shortcomings, understanding how one develops the perception of having violated a norm may contribute to our understanding of events that may be more likely to precipitate shame versus guilt. Does shame arise when events are interpreted as not meeting *personal* standards and expectations, or *social* standards and values? While there remains some debate on this issue, Leary and colleagues (43) offer an interesting explanation. The authors propose that shame, guilt, and other self-conscious emotions all derive from the internalization of social standards and norms, which then become the criterion from which one evaluates their behavior as either meeting or not meeting their personal identity goals and ideals (43).

This explanation also helps to frame how cultural (44; 45), gender-based (46; 47), and religiosity (48) factors can influence the development of a propensity to shame versus guilt. For example, a Latina woman who is raised with the cultural and gendered social role norm of

Marianismo (i.e., the idealized expectation of Latina women as virtuous, humble, submissive, and self-sacrificing for the sake of family) may be most likely to experience shame during circumstances that cause her to perceive herself as having failed to place her family's needs above her own; whereas a European-American man, who grew up with the cultural and gendered social role norm of Individualism, may be most prone to shame during circumstances where his familial interdependence causes him to perceive himself as having failed to meet his now internalized standards regarding self-sufficiency. This view is further supported by research showing an intergenerational component to the development of shame- and guilt-proneness, i.e., that genetic and socialization factors influence how moral affective styles are transmitted across generations (49; 50; 51).

Overall, the research appears to show that specific shame-and guilt-inducing situations function primarily at the individual level, with very few larger, societal precipitating events that induce one versus the other (6). Shame and guilt can both arise when one's personal identity goals and ideals, which were developed in relation to societal norms and standards, are perceived to have been violated, i.e., one has failed to meet personal expectations and standards. Whether shame or guilt is induced depends largely on whether the individual perceives his or her wrongdoing as representative of their actual self (i.e., global or specific) and whether it is changeable (i.e., stable or unstable). Nonetheless, a majority of these studies have used Lewis' (21) conceptualization of shame and guilt, which has been criticized for having an overly adaptive view of guilt and not accounting for potentially adaptive forms of shame. For greater clarity regarding these concerns and their merit, a discussion on potentially maladaptive forms of guilt and adaptive forms of shame is provided next.

Are There Maladaptive Forms of Guilt and Adaptive Forms of Shame?

Several authors have suggested that Lewis' (21) conceptualization does not properly take into account maladaptive forms of guilt and adaptive forms of shame (51). For instance, Lewis' conceptualization does not discuss the potential psychological consequences of guilt when no possibility of reparative action exists, when obsessive rumination occurs, or when people turn to ineffective strategies for alleviating their guilt feelings (51). Moreover, shame has been theorized to have prosocial consequences as well, since it may be a force for increased community cohesion and may spur the desire for change. From an evolutionary standpoint, shame is theorized to have evolved out of a system that regulates psychobiological responses related to social rank and status (e.g., 52; 53), and alerts the individual to the potential for social rejection and decreased status (54; 55; 56; 57). Shame has also been theorized to be prosocial, as it may lead to connecting and supportive behaviors such as consoling or excusing the person experiencing shame (51). However, no research currently exists that corroborates the notion that shame leads to positive behavior change in persons experiencing, causing, or witnessing shame (58).

Shame and guilt are considered to play an important role in the development of moral reasoning (59; 60), and as such, their absence or restriction may provide insight into how shame and guilt promote healthy development. Low guilt-proneness, for example, has been linked to maladaptive narcissistic features (61). Several studies have found a link between primary psychopathy (i.e., psychopathy relating to a deficit of affective processing) and diminished guilt- and shame-proneness (62; 63; 64). However, when those with psychopathy do experience one of these emotions, it is more often shame, which can be experienced especially in relation to social

rank threats and often lead to greater intensity of anger than non-psychopathic individuals (63). Interestingly, difficulty experiencing shame and guilt among those with psychopathy has been linked to difficulty in *inferring* shame and guilt in others (65), suggesting that the experience of shame and guilt may be linked to our ability to recognize these emotions in others, which could serve a prosocial function.

Another potentially adaptive function of shame and guilt may be found in studies of criminal offenders. A longitudinal study of 1,243 juvenile male inmates, for example, found that though guilt was predictive of decreased likelihood of recidivism, both shame and guilt were fairly uncommonly experienced emotions (13.71% felt shame, 48.16% felt guilt), and rates of shame and guilt *decreased* during the course of imprisonment as the inmates adapted to normative attitudes of prisoner culture (66). This study suggests shame and guilt may play an important role in the rehabilitation of criminal offenders, and that, unfortunately, the current structure of the criminal justice system discourages the adaptive social and moral functions of these emotions.

From an early developmental perspective, low levels of both shame and guilt have been found to predict bullying behavior in children (67; 59; 68), which is believed to be due to a lack of attribution of responsibility for the harm caused and a tendency to view the act through a self-focused lens (69; 59). Similarly, children who are bystanders to the bullying of peers have been found to experience lower levels of shame and guilt than children who intervene (59). It should be noted, however, that a majority of studies where shame and guilt are examined independently in relation to criminal, bullying, and other aggressive or socially delinquent behaviors support

the notion that guilt serves the more adaptive, prosocial function, while shame may lead to higher rates of maladaptive behaviors (6).

Several studies have linked guilt to psychopathology (e.g., anxiety disorders, 70; bipolar disorder, 71; body-focused repetitive behaviors, 72; depressive disorders, 73; dissociative symptoms, 74; hypoactive sexual desire in women, 75; insomnia, 76; PTSD, 77; somatic symptoms, 78; substance-related disorders, 79). However, some studies have shown guilt-proneness to be associated with *less* psychopathology (e.g., 80; 81; 28; 82), and some studies found no relationship of guilt to psychiatric symptoms after controlling for shame (e.g., 83; 84; 85). To account for this discrepancy, some have argued that guilt may lead to psychological maladjustment when it is inappropriately experienced in relation to events over which one had no control or personal responsibility (86). In fact, one of the criteria for major depressive disorder in the DSM-5 (87) includes guilt involving an "excessive or inappropriate" quality, meaning guilt that is situationally inappropriate and bears an irrational belief about one's perceived responsibility (86). This form of guilt can even take on a delusional or psychotic quality, as in major depressive disorder with psychotic features (87). The guilt description provided by Lewis (21) and studied in depth by Tangney and colleagues (e.g., 88) bears little resemblance to this form of guilt; Tangney and colleagues' conceptualization of guilt is characterized by accurate attributions of responsibility, whereas maladaptive guilt described in many studies of depression is characterized by situationally inappropriate attributions of responsibility (86).

Tilghman-Osborne and colleagues' (89) review of guilt and its relationship to psychopathology found that studies using Lewis' (21) conceptualization of guilt largely revealed negative correlations between guilt and depression (90; 91; 92; 93), whereas those studies which

focused on *maladaptive* guilt showed a largely positive correlation between guilt and depression (94; 95). Some may criticize in that the correlation between Lewis' conceptualization of shame and depression may be better accounted for by attributional style. After all, the internal, specific, and stable style outlined for shame bears strong resemblance to attributional theories of depression (e.g., 96), as previously discussed. In a study by Tangney, Wagner, and Gramzow (39), shame was found to explain substantial incremental variance in depressive symptoms even after controlling for attributional style. However, this pattern of results was also true of a non-clinical population (42; 97), suggesting a lack of specificity for clinical depression as opposed to mild depressive symptoms below that typically considered clinically significant (98). However, recent studies have provided increasing evidence that shame-proneness is clinically relevant to depression. Shame-proneness in everyday social dilemmas has been linked to current major depression and increased risk of recurrence of depressive episodes in two studies (99; 100). Additionally, patients with recurrent major depression have significantly higher levels of shame than patients with a single episode of depression (101).

However, researchers who advocate for Lewis' conceptualization of shame tend to use measures which were developed based on this conceptualization, and have argued that many studies finding a relationship between guilt and psychopathology used measures that do not adequately differentiate guilt from shame (e.g., 6). Neuroimaging studies do not exhibit the same methodological concerns, and may therefore offer insight into commonalities and differences between these two emotions without conformity to the theoretical approach of a selected self-report measure. A brief summary of the literature on neuroimaging studies of shame and guilt is

provided to offer greater clarity with regard to conceptualizing and differentiating shame and guilt.

Neurobiological Framework

There is evidence that shame and guilt have neurobiological underpinnings. Bastin and colleagues (102) conducted a meta-analysis examining specific neural pathways associated with shame and guilt. Both shame and guilt were found to be associated with activation of the anterior insula cortex, which has been implicated in prior studies as a critical region in experiences such as interoceptive awareness, empathy, disgust, and the processing of subjective feelings (102; 103; 104). Both emotions were also associated with activation of the dorsal anterior cingulate cortex, which is involved in interoceptive awareness as well as the experience of negative affect and social pain (102; 105). Both of these findings are in line with well-established conceptualizations that shame and guilt are painful, negatively-valenced, self-conscious, social emotions which may spur empathy or disgust.

Determination of where these emotions differ in their neural circuitry can offer valuable insights into their conceptualization. Guilt, for instance, was found to be exclusively associated with activation of the ventral anterior cingulate cortex (supported by prior studies, e.g., 106). This region has been implicated in emotion regulation, and may be associated with the inhibition of fear and planning of adaptive response (107). Guilt was also associated with activation of the temporoparietal junction and the superior temporal sulcus, which have been implicated in social processing and theory of mind.

In contrast, shame was associated with activation of the dorsolateral prefrontal cortex, thought to be involved in cognitive and emotion regulation (102). This region also shows greater

activation in studies of depressed patients (e.g., 108), and this response is believed to denote greater cognitive resources are needed to down-regulate negative emotions (102). Bastin and colleagues (102) also found shame to be linked to greater activation of the posterior cingulate cortex, which has been shown in prior studies to be involved in self-representation (109). This finding suggests shame may activate thoughts centered on evaluation of self (102).

Two studies on the neural circuitry of shame and guilt within a psychiatric population are also relevant to conceptualizing shame and guilt. Pulcu and colleagues (108) found greater amygdala and posterior insula cortex activation for feelings of shame in depressed patients, while a similar study by Green and colleagues (110) found reduced guilt-related activity in the posterior insula cortex and parietal-occipital junction. The authors of these studies hypothesized shame may entail mental imagery of imagined external observers and may therefore activate regions associated with sensory experiences (108; 110). This finding may also demonstrate the connection between feeling shame and the sensation of shrinking, wanting to hide, and feeling small (6).

Overall, Bastin and colleagues' (102) review on the neural correlates of shame and guilt found general support for Lewis' (21) conceptualization of shame and guilt. Specifically, the association of guilt to the ventral anterior cingulate cortex and posterior temporal regions suggest guilt may lead people to consider the thoughts and feelings of others and plan an adaptive response to their perceived social transgression. The activation of the dorsolateral prefrontal cortex and posterior cingulate cortex during feelings of shame suggest shame focuses the mind on self-evaluation centered on perceived social transgression, and is a harder emotion to down-regulate than guilt. These activations may help explain why shame is perceived as more

distressing. Of note, embarrassment was also included in Bastin and colleagues' (102) meta-analysis, and was found to activate some, though not all, of the same brain regions as shame, though to a lesser degree.

Nonetheless, Bastin and colleagues' (102) findings do not entirely negate the possibility of adaptive forms of shame and adaptive forms of guilt. It is not known, for example, whether the focus on self-representation suggested by posterior cingulate cortex activation could spur a desire for change, as suggested by critics of Lewis' conceptualization. Furthermore, activation of the ventral anterior cingulate cortex seen in guilt suggests the *planning* of an adaptive response, but does not provide answers regarding the potential emotional impact of not being able to carry out this response. Nevertheless, Bastin and colleagues' (102) review provides support for key assumptions based on differentiation of these two emotions, which is helpful to understanding the current debate on how to measure and distinguish shame and guilt.

Problematic Measurement of Shame and Guilt

Psychological measures used to assess shame and guilt have often been inconsistent and contradictory in how they conceptualize and differentiate these two emotions. Currently, no measures of shame and guilt exist that are free from this debate, which only adds to the inconsistent and contradictory findings observed within this literature. Many existing measures of shame and guilt fail to distinguish these constructs adequately, leading to high intercorrelations between subscales, as well as issues of low validity and reliability (3; 111). Given the methodological issues with measuring shame and guilt, qualitative methods offer a number of advantages in contributing to the literature on shame, guilt, and suicidality. Qualitative methods eliminate the concern regarding measure selection bias, as has been the case

in much of the literature on shame and guilt thus far. Furthermore, the qualitative data coded and analyzed in this dissertation study adds to the literature on shame and guilt by exploring how suicidal individuals themselves describe their emotions of shame and guilt while sharing their suicide narratives – i.e., the circumstances, thoughts, images, emotions, bodily sensations, and behaviors that contributed to their trajectory toward suicide. However, quantitative methods have their own unique strengths – therefore, given this study's use of both quantitative *and* qualitative methods to examine shame and guilt, a review of the quantitative and qualitative literature on shame, guilt, and suicidality is provided next.

REVIEW OF SCIENTIFIC LITERATURE ON SHAME, GUILT, AND SUICIDE RISK

Quantitative Findings

Suicide Desire: Thwarted Belongingness and Perceived Burdensomeness

Joiner (8) proposed the Interpersonal-Psychological Theory of Suicide (IPTS) which describes three necessary preceding factors for a death by suicide to occur: (1) thwarted belongingness; (2) perceived burdensomeness; and (3) acquired capability for suicide. Individuals with a sense of thwarted belongingness feel disconnected from others which subsequently is associated with a reduced frequency or intensity of engagement in meaningful relationships – a cycle that may result in a perception that previously meaningful relationships are strained or lost. Individuals with perceived burdensomeness no longer see themselves as meaningfully contributing to the lives of others, and see themselves as a liability to people around or close to them. An acquired capability for suicide is the final necessary element needed to die by suicide. This component includes not only the preparatory steps and behavior resulting in death, but also the individual's ability to tolerate a degree of pain and fear associated with

their chosen self-destructive behavior; and the ability to overcome the instinct for self-preservation and inflict fatal injuries on oneself. According to Joiner's (8) model, thwarted belongingness and perceived burdensomeness are the two interpersonal dynamics that drive suicidal desire, while acquired capability is needed to an individual to act on the desire by making a fatal or near-fatal suicide attempt.

Even though Joiner did not specifically include shame and guilt in his model, several inferences can be reasonably made. First, related to thwarted belongingness, individuals experiencing shame are likely to socially withdraw and to isolate – hence, these individuals are likely to experience a reduced sense of social belonging. A subset of those with guilt who do not have the interest or the capability to make amends, and who experience co-occurring shame, may also socially withdraw and isolate, again subsequently leading to thwarted belongingness. Second, individuals who experience shame and/or guilt may perceive themselves as a burden to loved ones with regard to their perceived wrongdoings. Further, the potential psychological consequences of repeated, prolonged, or intense shame and guilt reactions, such as depression, substance abuse, and interpersonal conflicts, may likely promote feelings of burdensomeness as well.

A greater understanding of shame and guilt's relationship to suicidality can meaningfully contribute to Joiner's (8) theory in several ways. Most notably, shame and guilt may play a significant role in establishing the desire for suicide through their potential contributions to an increased sense of thwarted belongingness and perceived burdensomeness. To date, only one published study has examined the associations among shame, guilt, and the three constructs described in IPTS (112). This study used a large sample of veterans (N = 541) to determine the

relationship between various negative emotions and suicide risk, using Joiner's (8) framework. Investigators found that shame was associated with suicide risk through both thwarted belongingness and perceived burdensomeness, whereas guilt was only associated with suicide risk through perceived burdensomeness (112). Rogers and colleagues (112) concluded that such pattern of findings is commensurate with previous research suggesting guilt and regret among veterans may lead to feelings of being a burden to loved ones or the country (e.g., 113; 114). Overall, the theoretical framework of Joiner's theory and the current literature on shame's interpersonal effects suggests individuals experiencing high levels of shame may be at greater risk for developing a sense of thwarted belongingness and perceived burdensomeness.

Hopelessness

Hopelessness is an emotion associated with negative cognitions about the future and a sense of helplessness in improving one's prospects (115), and is considered a key variable in clinical identification of persons at imminent risk for suicide (116; 117). Several studies have found an association between hopelessness and increased risk for suicide (118; 115; 119). In longitudinal studies, hopelessness appears to be a reliable predictor of eventual death by suicide among psychiatric patients (120; 121). Much like shame and guilt, hopelessness can be differentiated into state-based and trait-based forms (4). While state hopelessness has been associated with increased suicide risk, trait hopelessness, or the tendency to view oneself as worthless and defective in enduring and unchangeable ways (122), has been shown to "predict current and future suicide attempts above and beyond other common risk factors for suicide" (p. 213; 4).

Shame-proneness, and not guilt-proneness, is associated with an increased proneness toward hopelessness (123). Conceptually, it follows that an increased frequency and intensity of shame may lead to increased risk of experiencing hopelessness. That is, if someone believes their wrongdoings are due to internal, stable, and global flaws within themselves, they would be more likely to experience thoughts and feelings of being worthless, defective, and unable to change the life circumstances that are perceived to be the source of their distress. Taken together, these psychologically painful emotions may increase risk for suicide through the distress they induce, as well as through the cognitive and behavioral responses used by the individual in an attempt to down-regulate this distress. Given that the association between shame and hopelessness is hypothesized to be primarily related to the cognitions associated with hopelessness, this dissertation study conceptualizes hopelessness as a cognitive construct.

Emotion Regulation

Emotion regulation is discussed in the literature as the ability to adapt emotional responses through cognitive appraisals and behavioral responses in such a way as to meet changing situational demands (124; 125; 126). It encompasses skills such as emotional awareness and understanding, acceptance of emotions, impulse control, behavioral activation, and perceived self-efficacy in implementing effective strategies when experiencing psychologically painful emotions (127). Several studies have found emotion regulation deficits to be associated with suicide ideation and behaviors (127; 128; 129).

Individuals with a history of suicide attempts have also been found to have a tendency to respond impulsively to negative moods compared to controls (130). Low distress tolerance, a similar construct to emotion dysregulation, has been associated with suicide ideation in college

undergraduates (126). Baumeister (131) has suggested that the desire to die results from the perception of intolerable emotional pain associated with a sense that one is unable to generate adaptive coping strategies. Emotion regulation may also increase the risk for suicide indirectly, through emotion regulation strategies such as Non-Suicidal Self-Injury (NSSI) (132). NSSI is defined as the intentional destruction of one's body tissue without suicidal intent, and is distinct from culturally sanctioned forms of self-directed harm (133; 134).

Social Problem-Solving

As moral emotions, shame and guilt have generally been thought to mediate the relationship between the experience of empathy and the increased desire or lack of desire to engage in reparative action when one recognizes a social infraction (6). Reparative action such as confession, apology, and atonement increases social connection (6), and can therefore be thought as a behavior that would likely prevent or interfere with developing feelings of thwarted belonging and perceived burdensomeness. However, while some studies on trait-based guilt have shown a positive relationship to other-oriented empathy, shame has been linked to a *decrease* in interpersonal empathy, with some studies showing an inverse relationship between proneness to shame and dispositional capacity for empathy (91; 135; 136).

State-based shame, though less researched than trait-based shame as related to interpersonal empathy, has thus far shown similar results. Marschall (137), for example, induced feelings of shame in a laboratory setting by providing participants with randomized feedback on their intelligence test after participants had been made to publicly estimate their test scores. Participants in the shame condition were told they scored significantly lower than their estimation in front of the experimenter and a research assistant. These participants experienced

significantly more feelings of shame than those in the control condition, and were subsequently more likely to report less empathy for a disabled student in an unrelated task. Notably, the effect of shame on reduced empathy was present even for those individuals who were not shame-prone, meaning that shame induction experiences are likely to contribute to shame-prone individuals' general tendency toward unempathic responses rather than some other common variable. Shame may therefore reduce one's capacity to engage in empathic reasoning, which in turn may inhibit reparative actions that would likely reduce acquired desire for suicide under Joiner's model (8).

Furthermore, research has consistently shown shame to be associated with a desire to engage in social withdrawal (138; 139; 102; 140; 42; 141). In Tangney's (141) study, for instance, 65 undergraduate students were asked to write about personal shame, guilt, pride, and depressive experiences and rate each along 22 dimensions thought to distinguish shame and guilt emotions per H. B. Lewis's (21) definitions. Shame and guilt differed on 17 of the 22 dimensions. Of note, shame was reported as a significantly more painful experience, and was accompanied by a sense of being inferior and physically small, focused on being evaluated by others, and led to a stronger desire to hide from others. Additionally, participants reported feeling more isolated and less belongingness than when experiencing guilt, further implicating shame's potential to contribute to suicidal desire per Joiner's model.

Research suggests individuals who are preoccupied with the need to belong may be particularly vulnerable to shame, due to perfectionistic thinking and/or a tendency to blame oneself for perceived rejections (e.g., 142; 143; 144). It has been theorized that perfectionism is a common social problem-solving strategy to hide, avoid, and/or mitigate shame feelings (142; 145; 146). Chen and colleagues (142), for instance, found that feelings of shame mediated the

relationship between preoccupied attachment (i.e., preoccupation with belonging) and interpersonal perfectionism (i.e., minimizing one's flaws to others). Shame may therefore be associated with thwarted belongingness not only through the behavioral consequences of shame (i.e., the desire to withdraw), but also because individuals preoccupied with the desire to belong may be more prone to feelings of shame over perceived social rejections.

Lastly, shame's relationship to anger, both as oriented to the self and to others, may also add to our current understanding of the interpersonal theory of suicide. "The link between shame and anger is widely recognized in the clinical literature" (147), and many studies have demonstrated a link between these two emotions as being related to suicide behavior (e.g., 148; 149; 150). Lewis' shame-rage theory (21), is the most referred to and adopted theory linking shame and anger which described shame as instigating a hostile form of anger she labelled "humiliated fury".

Lewis' (21) theory discussed the link between shame and anger as being directed toward the self, but evoking such strong feelings that the individual may feel "overwhelmed and paralyzed" by these emotions (21). In her view, since because shame is a consequence of viewing oneself as wholly defective, there are a lack of options to remediate feelings of shame compared to guilt, such as efforts to amend, compensate, change future behavior, or otherwise atone for one's actions (6). The agonizing, persistent feeling of shame remains because fundamental defects of the self cannot be alleviated through contrition or corrective action. Tangney and Dearing (6) go on to discuss how, despite a lack of research on this topic, there are "at least two obvious paths" to diffusing feelings of shame: fight or flight. An individual experiencing shame may engage in social withdrawal to escape reminders of shame and to hide

one's defective self from others. As previously mentioned, research has consistently shown that feelings of shame are often associated with a desire to hide or escape (138; 18; 140; 6; 92). Notably, suicide has been proposed as the ultimate escalation of a person's desire to escape from others, from current life problems, and their implications about the self (131).

The other potential coping strategy, the "fight" strategy, involves externalizing blame to others in lieu of blaming the self. This can serve an ego-protective function, defending and preserving the individual's self-esteem and providing a more effective means of escape from their shame feelings. Anger towards others serves the added function of regaining a sense of agency and control; where shame leads to feelings of worthlessness, helplessness, and deficiency. Anger bolsters the self with a sense of self-righteousness and authority (6). Several studies have examined the link between shame and externalizing blame, as well as shame's specific link to anger (151; 141; 135; 136; 150). For example, Tangney and colleagues (150) observed a pattern of anger as well as aggression in shame-induced children. Of interest, the experience of guilt was not associated with externalizing blame, anger, or aggression in any of these studies.

Several studies have identified a link between anger and increased suicide risk (e.g., 152; 153). A qualitative study by Morgan and Priest (154), for example, found that inpatients who had died by suicide to have conveyed notable levels of anger towards others in the days preceding their death and that their anger was as evident as their symptoms of depression. Additionally, constructs related to anger, such as verbal and physical aggression and hostility, have also been linked to an increased suicide risk in multiple studies (e.g., 155; 156). Among depressed men, a history of aggression towards others adds significant risk of suicide (157). Weissman and

colleagues (158) found that hostility significantly distinguished between females who had attempted suicide and those who had experienced depression (without attempted suicide).

The mechanism through which anger may increase suicide risk is, as yet, unknown, though Hawkins and colleagues (152) offered Joiner's interpersonal theory of suicide (8) as a means to explain this relationship. These investigators found the significant relationship between anger and suicide ideation was fully mediated by thwarted belongingness and perceived burdensomeness. However, the link between anger and acquired capability fell just short of significance. Explanation of their findings suggests that anger may be more directly linked to suicide risk through its influence on increased interpersonal conflict, which may then indirectly influence one's experience of painful and provocative events.

However, the model offered by Hawkins and colleagues (152) may be well suited to explain the link between shame and increased suicide risk rather than a connection between anger and suicide risk. Shame has been linked to NSSI in multiple studies (e.g., 159; 132; 160). Given shame's well-established link to anger in the literature, it may be that shame's link to suicide risk is partially mediated by anger as it relates to increased interpersonal conflict, but is independent of anger in relation to an acquired capability for suicide. Furthermore, shame's focus on a wholly defective self may mean that shame-induced anger, not anger in general, drives the relationship between anger and perceived burdensomeness.

Qualitative Findings

Suicide research has predominantly focused on quantitative methods, where the primary aims are to ascertain cause-and-effect (i.e., explanatory) relationships between variables through statistical analyses (161). This method is valuable in determining questions such as "how many,"

"how much," and "how likely," but are insufficient to provide greater context on "why," "what," and "how" (162). In Hjelmeland and Knizek's (162) article, the authors provide a critical review of how this bias in methodology has led the suicidology field "into a dead-end of repetitious research" (p. 74), and call for an increased investment in qualitative research to improve our understanding of suicidal phenomenology (p. 78). Specifically, the authors discuss various shortcomings of quantitative suicidology research, such as the use of standardized questions, the assumption of linear behavioral models, and the assumption that there is one single truth to be found (162). These shortcomings, at their core, have their foundation in the natural sciences, where the purpose of scientific research is to uncover a single set of inputs that generate the output of interest.

However, human behavior rarely has a single, universal set of stimuli that produce the desired output; as the authors put it, "human beings are not just mechanical machines that respond to stimuli" (p. 77, 162). The field of suicidology has increasingly acknowledged the unlikelihood of capturing the complexity of suicidal behavior within a single, unifying theory, and how pathways to suicidal behavior will vary substantially across sex, age, culture, geographic location, and personal history (e.g., 163). A meta-analysis of 365 studies found, for instance, that despite 50 years of research and theories on risk factors for suicide, there are no robust data for risk and protective factors for suicide, such that machine-learning suicide prediction models produced accurate overall classification but extremely low predictive validity (164). Shame and guilt have been proposed as one potential pathway to suicidal behavior (e.g., 6). As previously mentioned, however, few studies have looked into the associations among shame, guilt, and suicide. Given that this line of research is still in its infancy, qualitative

research offers one type of methodology (mostly exploratory in nature) (1) to enhance our understanding on the relationship of these emotions to suicidal behavior; and (2) to generate meaningful hypotheses for future studies.

A majority of qualitative studies on shame, guilt, and suicide have focused on themes of shame and guilt in relation to family members of suicide decedents (e.g., 165) and themes of shame and guilt associated with the stigma of being a suicide survivor (e.g., 166). While these studies are not pertinent to the topic of this proposed study, their methodology offers insight into how best to capture the emotions of shame and guilt using qualitative methods. Studies that have qualitatively examined shame tend to code for shame under the following circumstances:

Table 1. Common Shame Codes in Qualitative Studies of Shame, Guilt, and Suicide

Shame Code	Examples of Qualitative Studies
When the word 'shame' or 'ashamed' are explicitly used by the individual	166; 167; 168; 169; 170
When individuals describe themselves in overly negative, global terms, such as being "stupid"	166; 168; 169; 170
When individuals describe feeling "like a failure," or detail several perceived failures	166; 168; 169; 170
When individuals describe feeling exposed, humiliated, or judged negatively by others	166; 167; 168; 169; 170

With regard to guilt, only one qualitative study on suicide appears to have described how guilt was conceptualized and coded (171). Specifically, this study explored constructs of Joiner's IPTS (8) in interviews of OEF/OIF soldiers, and, using a grounded theory approach, identified coded themes of guilt as "combat-related guilt" (i.e., regret over combat decisions they made) and "survivor guilt" (i.e., questioning the value of their life versus the lives of those who died in

combat). Beyond the suicide literature, however, qualitative studies on guilt have used a variety of coding approaches and theoretical frameworks, including several studies that have applied Tangney and Dearing's (6) conceptualization (e.g., 172; 173). These studies have tended to use the following coding framework:

Table 2. Common Guilt Codes in Qualitative Studies of Shame, Guilt, and Suicide

Guilt Code	Examples of Qualitative Studies
When individuals directly use the term 'guilt' or guilty'	173; 174; 175; 176
When individuals refer to regret or remorse regarding past behavior	173; 174; 175
When individuals describe wanting to engage in reparative action	173; 174
When individuals describe feeling responsible for negative outcomes	173; 174; 175; 176

Within the few studies using a qualitative approach to examine shame and guilt in relation to suicide, the majority are psychological autopsies involving record reviews and analysis of suicide notes (e.g., 177; 178; 179; 180). In a study of suicide notes in South India, themes of shame, guilt, or apology were found in 80% of the 22 suicide notes (180). In a psychological autopsy investigation of 182 suicide deaths in Tabasco, Mexico between 2007 and 2014, themes of shame and guilt were observed in 91.8% of cases in the 30 days prior to death (181). Among these studies, one of the more interesting findings came from an exploration of emotional themes within suicide notes by Coster and Lester (177). These investigators found guilt was the third most common reference (24%) in suicide notes and shame was the fourth most common reference (14%). References to guilt often contained a discussion about personal motivation for suicide as a form of punishment or reparative action for perceived wrongdoings (177). Shame references contained three reoccurring themes: (1) a belief that others will judge

them harshly for perceived wrongdoings; (2) a belief that they were wholly defective; and (3) a belief that they were a burden to loved ones (177).

Current Study

Conceptual Model

To advance suicide prevention research in the realm of shame, guilt, and suicide risk, this dissertation study investigated the association of shame and guilt with thwarted belongingness, perceived burdensomeness, hopelessness, emotion regulation, and social problem-solving using both qualitative and quantitative methods. Specifically, the current study used a cognitive-behavioral framework to conceptualize the hypothesized pathways resulting in the association of shame and guilt to emotional distress, interpersonal functioning difficulties, and suicidality. This model uses the following basic cognitive-behavioral structure:

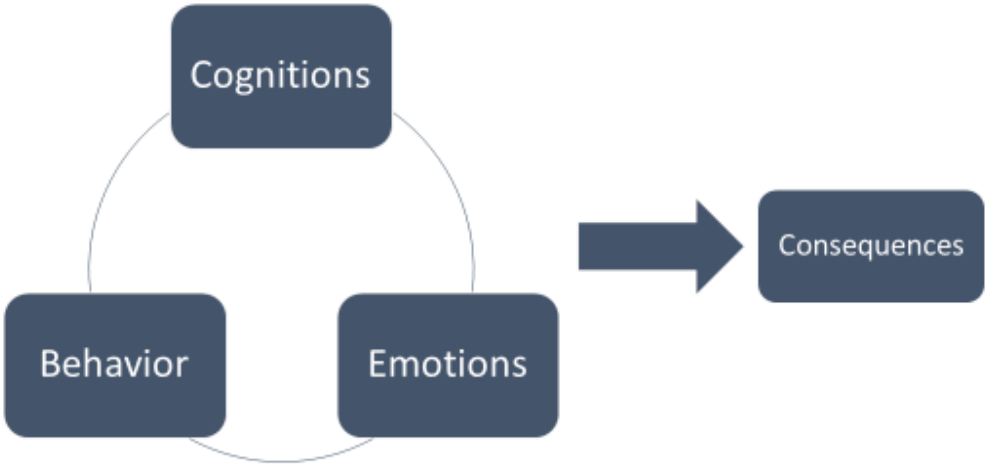

Figure 1. Basic Structural Framework of CBT

This framework is derived from the theoretical framework of cognitive-behavior therapies (CBT), which were first developed by Beck (182). There are two fundamental principles of CBT: (1) that our cognitions influence our emotions and behaviors; and (2) that how we behave, in turn, influences our thought patterns and emotions. The behavioral influences of CBT further stipulate that cognitive, affective, and behavioral patterns are strengthened or

weakened by the consequences associated with that pattern (i.e., through reinforcement and punishment) (183). Given the significance of CBT in clinical settings, this study used the CBT framework to conceptualize the relationship among shame, guilt, and suicide in order to increase the clinical validity and applicability of this study to clinical, actionable recommendations.

This study hypothesized that shame has a more direct pathway to suicide behavior due to its relationship to avoidance and escape tendencies as the primary strategies for emotion regulation. This tendency, in turn, is associated with decreased interpersonal functioning (e.g., redirecting blame to others leading to interpersonal conflict, social withdrawal leading to decreased sense of belonging). While guilt can also lead to maladaptive emotion regulation strategies, this pathway is not as strong. Guilt has a stronger association to repair tendencies (e.g., making amends, apologizing), which can result in self-forgiveness if the individual receives *and accepts* forgiveness from others, or *reappraises* their social transgressions in light of their reparative behaviors (e.g., "I did the best I could to make things right"). Emotion regulation influences an individual's ability to manage and reduce shame and guilt experiences, which, in turn, influences the degree to which these emotions impact interpersonal functioning. Below are two examples of how shame and guilt are associated with suicide pulled from the suicide narratives of participants from the dissertation study:

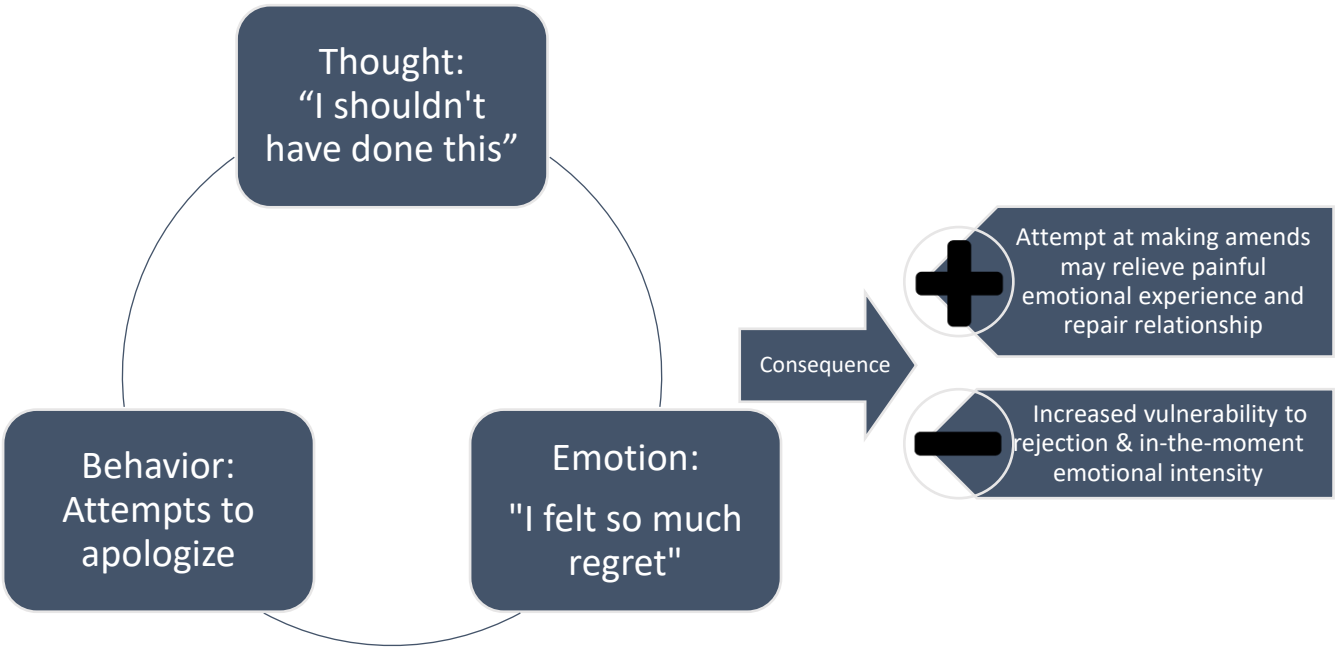

Figure 2. Shame-Guilt Pathways to Suicide: Conceptual Framework for Guilt Pathway

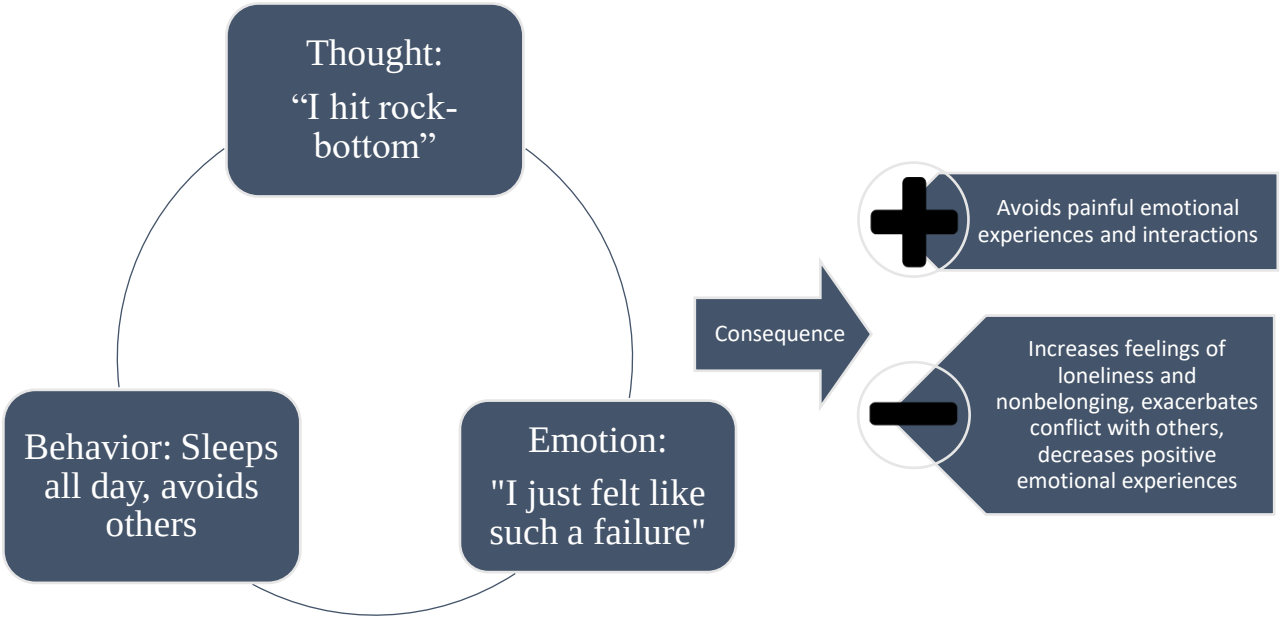

Figure 3. Shame-Guilt Pathways to Suicide: Conceptual Framework for Shame Pathway

Repeated, prolonged, or intense shame and guilt reactions such as these can lead to avoidance and escape tendencies which damage interpersonal relationships over time, leading to isolation and a sense of being a burden to loved ones due to the individual's perceived defects and social transgressions. The damage to important relationships, in combination with the individual's perception of their transgressions as resulting from internal, stable, and global flaws within him or herself, increases the likelihood of experiencing thoughts and feelings of being worthless, defective, and unable to change life circumstances. This pattern of thoughts and feelings, in turn, can increase the experience of emotional distress due to thoughts and feelings of hopelessness and worthlessness. Finally, the prolonged, repeated, or intense emotional distress contributes to a desire to escape psychological pain or the circumstances contributing to their psychological pain through suicide. The same problem-solving difficulties that contributed to the maintenance and/or exacerbation of shame and guilt feelings also contributes to difficulty generating solutions to interpersonal problems while in a heightened emotional state, increasing the likelihood that he/she will perceive suicide as the only solution. In conclusion, this model demonstrates how shame, and to a lesser extent, guilt, can contribute to suicidality through their association to emotional distress and interpersonal functioning difficulties.

Rationale and Significance of Proposed Study

With this model in mind, this dissertation study investigated the association of shame and guilt with suicide-related cognitions (i.e., thwarted belongingness, perceived burdensomeness, and hopelessness), emotion regulation difficulties, and social problem-solving difficulties. Given the established literature discussed in this chapter which identifies hopelessness, emotional dysregulation, and interpersonal functioning difficulties as significant contributors to suicide, and

the relationship among those factors with shame and guilt, this study explored the associations between these variables using a mixed methods approach. Specifically, this study first identified how persons at risk for suicide perceive, express, and regulate these emotions, common precipitants to shame and guilt, and how shame and guilt relate to their suicidality. Given the ongoing debate on how to conceptualize and differentiate shame and guilt, especially in relation to psychiatric symptoms, this approach allowed for more accurate interpretations on the relationship between these variables free from the current controversies regarding quantitative measures of shame and guilt. This mixed methods approach also allowed for valuable comparisons of qualitative and quantitative data on shame and guilt, which may present a meaningful contribution to this literature.

This study also examined the association of shame and guilt with suicide-related cognitions, emotion regulation, and social problem-solving using quantitative methods. Specifically, this study tested whether shame, compared to guilt, had a stronger association with thwarted belongingness, perceived burdensomeness hopelessness, emotion dysregulation, and social problem-solving deficits. This study did not directly test a model due to considerations regarding sufficient statistical power, the limits of cross-sectional data in testing causal relationships, and given that this study used previously collected data. However, this study was able to identify whether there is preliminary evidence for the hypothesized framework by exploring whether shame, and to a lesser extent, guilt, are significantly associated with suicide-related cognitions, emotional distress, and interpersonal functioning difficulties.

CHAPTER 2: Specific Aims and Hypotheses

Rationale for Specific Aims

Understanding the function of shame and guilt in relation to suicidal thoughts and behaviors can inform suicide prevention research and guide clinical practice. The broad objective of this dissertation was to examine the emotions of shame and guilt, both qualitatively and quantitatively, in a sample consisting of primarily military service members and secondarily consisting of military dependents. Overall, the dissertation study was designed (1) to determine personal experiences of shame, guilt, and suicidality of military personnel and beneficiaries admitted for psychiatric inpatient care due to suicidal thoughts and behaviors, (2) to measure the strength of the association among shame, guilt, suicide-related cognitions (i.e., thwarted belongingness, perceived burdensomeness, and hopelessness), emotion regulation difficulties, and social problem-solving deficits.

Overall, dependence on purely quantitative methods in suicide research has limited the understanding of the complexity of suicide behavior, the implementation of targeted prevention efforts, and the implementation of specific intervention strategies for managing and treating suicide risk. Therefore, this dissertation study employed a mixed-methods approach to enhance our understanding of shame, guilt, emotional distress, interpersonal functioning, and suicide risk. In the section that follows, the rationale for each aim of this study is provided, followed by the specific aims and hypotheses.

Qualitative Aim 1

To date, few qualitative examinations of shame, guilt, and suicidality have been performed, with a majority exploring themes of shame and guilt in relation to family members of suicide decedents (e.g., 165) and themes of shame and guilt associated with the stigma of being a suicide survivor (e.g., 166). Qualitative research methods offer a number of advantages over quantitative methods of inquiry and can serve the basis for generating meaningful hypotheses for further research. Qualitative research is concerned with understanding suicidal behavior from the perspective of lived experience, i.e., "how individuals engaging in suicidal ideation and/or behavior interpret themselves, their actions, and their surroundings" (p. 75, 162). This approach allows for more accurate interpretations on the relationship between variables, especially when substantial barriers to quantitative analyses of complex phenomena are present (162). This aim used the following strategy to qualitatively examine shame and guilt in relation to suicide risk severity:

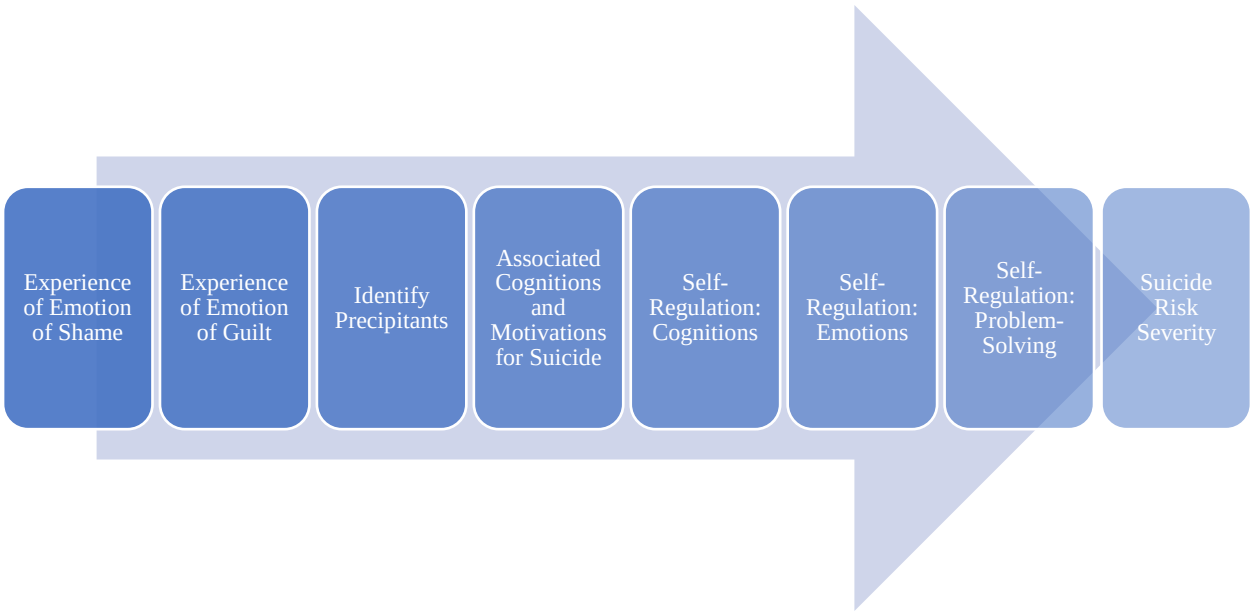

Figure 4. Qualitative Aim 1 Conceptual Strategy

Gaining additional insight into patients' experiences of shame and guilt in relation to their specific suicide-related cognitions (e.g., thwarted belongingness and perceived burdensomeness), cognitions and behaviors (e.g., motivations for contemplating or attempting suicide), cognitions and emotions (e.g., hopelessness), and overall emotion regulation functions provided rich content for further analysis and thematic summaries – and served a solid foundation for future research in this realm.

Specific Aim 1: To qualitatively examine described experiences of shame and guilt in relation to reasons for dying, motivations for contemplating or attempting suicide, emotion regulation strategies, and hopelessness among service members psychiatrically admitted to a military inpatient treatment facility following a suicide-related event.

Using a qualitative approach, the following questions were addressed:

1a. What are the most common precipitating events contributing to the experiences of shame and guilt among this highly vulnerable patient population?

1b. How often do individuals describe experiencing shame and guilt in relation to their suicide narrative?

1c. How do shame and guilt relate to one's motivations for contemplating or attempting suicide?

1d. How does thwarted belongingness and perceived burdensomeness relate to the emotions of shame and guilt?

1e. How does the experience of hopelessness relate to the emotions of shame and guilt?

1f. What strategies are used to regulate feelings of shame and guilt during a suicidal crisis?

1g. In what ways are shame and guilt related to social problem-solving strategies?

Quantitative Aims 2, 3, and 4

Specific Aim 2

While the literature on shame and guilt remains riddled with disagreements on how to conceptualize and differentiate these emotions, literature reviews have identified a few common themes: (1) shame is a more psychologically painful emotion than guilt, and (2) shame appears to have a more consistent relationship to psychopathology, increased symptom severity, psychiatric distress, and interpersonal difficulties (178). Furthermore, a meta-analysis on the neural correlates of shame and guilt found support for Lewis' (21) conceptualization of shame, given

that shame showed a stronger activation of brain regions linked to self-evaluation and down-regulation of negative emotions (102).

Given these findings, Specific Aim 2 hypothesized that shame, compared to guilt, would show a stronger association to suicide-related cognitions – namely, thwarted belongingness, perceived burdensomeness, and hopelessness. This aim sought to provide preliminary evidence that the observed relationship of shame to suicide thoughts in some studies (4; 1) can be best understood through shame's association to thoughts of nonbelonging, being a burden to others, and of being unable to change their life circumstances. Thwarted belongingness and perceived burdensomeness are interpersonal variables in Joiner's IPTS model, and were selected due to their extensive support in the literature as important components to the development of suicide thoughts (8). It follows that individuals experiencing shame are likely to socially withdraw and to isolate – hence, experience a reduced sense of social belonging. Further, individuals who experience frequent, prolonged, and/or intense shame feelings may begin to feel like a burden to significant others or society with regard to their perceived wrongdoings and/or the interpersonal consequences of shame (e.g., anger, withdrawal). Finally, hopelessness was selected given that it also shows a robust association with suicide risk in the literature. Since shame can be conceptualized as a global, stable, negative self-attribution, it follows that shame may be associated with feelings of hopelessness.

Specific Aim 2: To determine the extent to which shame and guilt are consistently associated with suicide-related cognitions (i.e., thwarted belongingness, perceived burdensomeness, and hopelessness) among psychiatric inpatients admitted to a military treatment facility following a suicide-related event.

Hypothesis 2a. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater thwarted belongingness as measured by the Interpersonal Needs Questionnaire (INQ).

Hypothesis 2b. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater perceived burdensomeness as measured by the INQ.

Hypothesis 2c. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with higher levels of hopelessness as measured by the Beck Hopelessness Scale (BHS).

Specific Aim 3

Given the established literature identifying emotion dysregulation as a significant contributors to suicide, this study investigated the association of shame, guilt, and emotion dysregulation within this high-risk sample. Specific Aim 3 began this analysis by examining the strength of association of shame and guilt to specific aspects of emotion regulation – namely, an individual's acceptance of emotional responses when distressed, his or her use of effective emotion regulation strategies when distressed, difficulty engaging in goal-directed behavior when distressed, impulsivity, and, finally, emotional awareness and clarity. Previous studies have identified a link between emotion dysregulation and increased risk for suicide, and shame has

been suggested to be one of the primary emotions self-destructive behaviors such as NSSI is meant to down-regulate (132; 160). Given that shame may be a particularly psychologically painful emotion, emotion dysregulation was included in the current study to assess whether shame, compared to guilt, may be more strongly linked to difficulty identifying and engaging in emotion regulation strategies.

Specific Aim 3: To determine the extent to which shame and guilt are consistently associated with emotion regulation difficulties among psychiatric inpatients admitted to a military treatment facility following a suicide-related event.

Hypothesis 3a. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater nonacceptance of emotional responses while distressed as measured by the Difficulties in Emotion Regulation Scale (DERS).

Hypothesis 3b. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater limitations in effective emotion regulation strategies while distressed as measured by the DERS.

Hypothesis 3c. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater difficulty engaging in goal-directed behavior while distressed as measured by the DERS.

Hypothesis 3d. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater impulse control difficulties as measured by the DERS.

Hypothesis 3e. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with limited awareness of emotions as measured by the DERS.

Hypothesis 3f. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with lack of emotional clarity as measured by the DERS.

Specific Aim 4

Specific Aim 4 sought to identify the strength and consistency of association among shame, guilt and social problem-solving difficulties. This aim hypothesized that shame, compared to guilt, would be more consistently associated with increased interpersonal difficulties, including a tendency to perceive problems as unsolvable and doubt their ability to handle the problem, a tendency to react impulsively or carelessly, and a tendency to avoid or procrastinate problem-solving altogether. Social problem-solving difficulties was selected as a variable given the association of shame to anger, isolation, and withdrawal. Research has consistently shown shame to be associated with anger (4; 21; 147; 148; 149; 150; 141) and a desire to engage in social isolation and withdrawal (21; 140; 92; 138; 141; 3; 139). It follows, then, that shame may be associated with greater difficulty in identifying and utilizing effective social problem-solving strategies, which, in turn, would likely increase one's perception of being unable to solve social problems effectively (i.e., developing a negative orientation to social problem-solving). Furthermore, guilt has been suggested to be associated with prosocial problem-solving strategies, such as engaging in reparative action (1; 19; 27).

Specific Aim 4: To determine the strength and consistency of the relationship among shame, guilt, and social problem-solving difficulties among psychiatric inpatients admitted to a military treatment facility following a suicide-related event.

Hypothesis 4a. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with a negative problem-solving orientation as measured by the Social Problem-Solving Inventory-Revised, Long Form (SPSI-R:L).

Hypothesis 4b. Higher magnitude of guilt, compared to higher magnitude of shame, will be associated with a rational problem-solving style as measured by the SPSI-R:L.

Hypothesis 4c. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with an impulsive/careless problem-solving style as measured by the SPSI-R:L.

Hypothesis 4d. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with an avoidant problem-solving style as measured by the SPSI-R:L.

CHAPTER 3: Methods

Overview and Research Design

This dissertation study used a cross-sectional, retrospective design to examine the association among shame, guilt, emotional distress, interpersonal functioning, and suicide using previously collected data from an ongoing randomized controlled trial (RCT) of Post-Admission Cognitive Therapy (PACT). Using an exploratory sequential design, qualitative and quantitative data were collected from 58 participants (military personnel and beneficiaries) randomized to the PACT treatment condition; these individuals were recruited from the psychiatric inpatient units at Walter Reed National Military Medical Center (WRNMMC), Fort Belvoir Community Hospital (FBCH), and Washington DC Veterans Affairs Medical Center (DC VAMC).

Participants and Case Selection

All patients aged 18 and older hospitalized at WRNMMC, FBCH, and DC VAMC inpatient psychiatric units who met entry criteria (listed below) were offered participation in the PACT randomized controlled trial, which is considered as the parent[1] study. A total of 218 participants were consented and randomized.

Inclusion criteria for the parent study:

1. Active Duty military, retired, veteran, Reserves, and Defense Enrollment Eligibility Reporting System (DEERS) eligible dependents

[1] Parent study refers to the Post Admission Cognitive Therapy randomized controlled trial from which the data for this dissertation study has been derived.

2. Psychiatrically admitted following a suicide-related event: This information was provided to the study team by the referring physician and/or treatment team member.
3. Aged 18 and older

Exclusion criteria for the parent study:

1. Medical incapacity to participate and/or serious cognitive impairment: Patients who were unable to provide consent or participate in the study because of an acute, unstable, or severe disorder (e.g., active psychosis) were excluded. The referring provider considered the patient's level of medical incapacity and degree of cognitive impairment and did not refer patients who are judged by the inpatient treatment team to be medically or cognitively impaired and unable to consent.
2. Unable to communicate (speak and read) in English
3. Unable to provide written informed consent: Patients must have been able to understand the nature of the study and provide written informed consent on the IRB-approved form.

For the current dissertation study, all data was derived from the PACT parent study (N = 218). However, only participants randomized to the treatment condition (i.e., active psychotherapy cases in Post Admission Cognitive Therapy + Enhanced Usual Care) were considered for inclusion in the dissertation sample (n = 111), since participants assigned to the control condition (i.e., Enhanced Usual Care) did not receive active psychotherapy and therefore, lacked audiotaped recordings of therapy sessions from which the qualitative portion of this study was based. Out of the 111 potentially eligibly cases, participants were only included in this dissertation study if they had also provided consent to be audio-recorded during their

psychotherapy sessions, and had audio-recordings for sessions 1 and 2 available. A total of 58 participants out of 111 (52%) met the stated inclusion criteria for this dissertation study. Figure 5 demonstrates the flow of participants into the parent study and the process of case selection for this dissertation project.

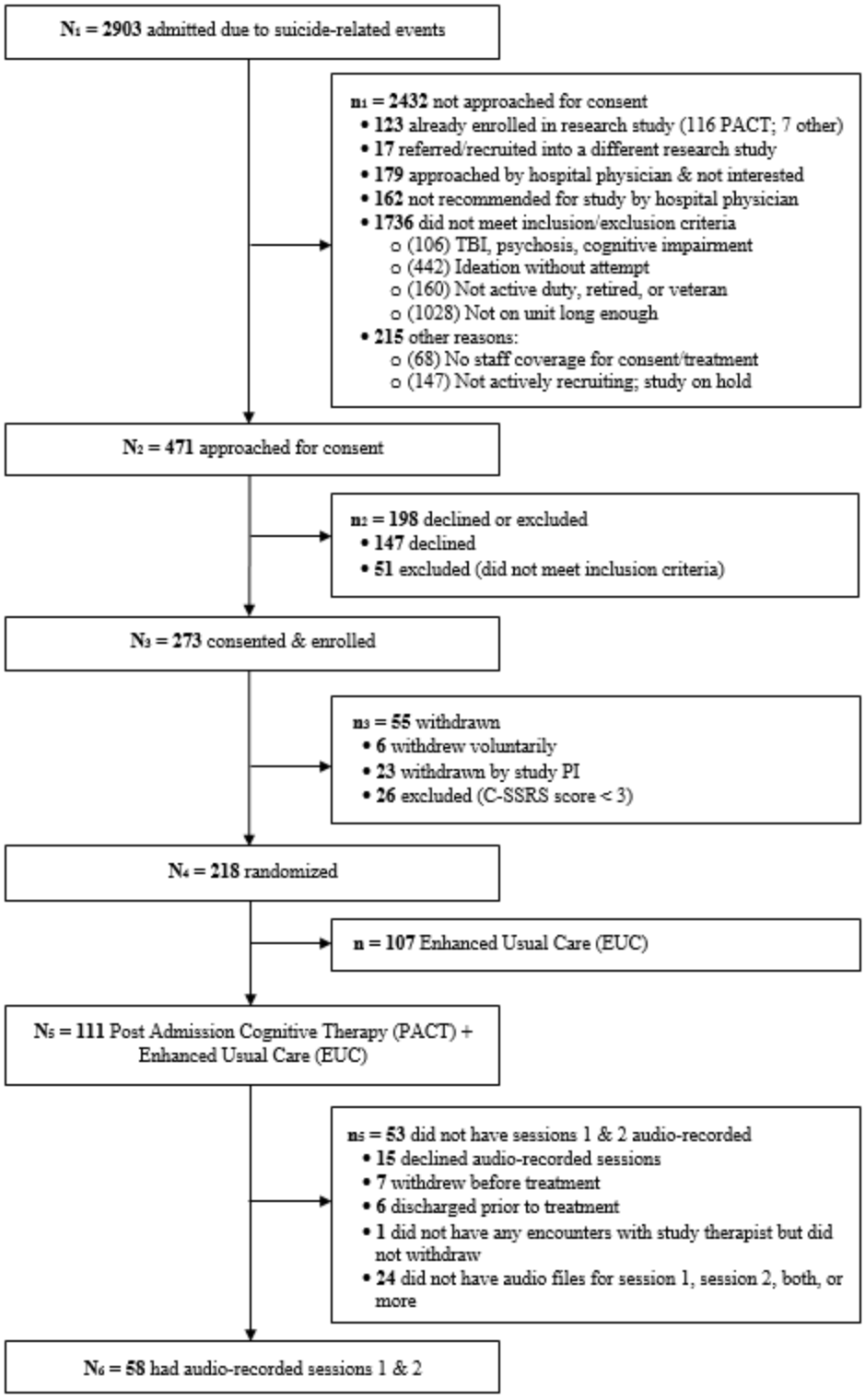

Figure 5. Selection of PACT Randomized Controlled Trial Participants for Inclusion into Dissertation Study

Procedures: Recruitment into the Parent Study

Identification and referral of eligible patients. Eligible study participants were referred to the research team by one or more inpatient providers (e.g., psychiatrist, psychiatric resident, nurse practitioner, social worker) at WRNMMC, FBCH, and DC VAMC. At each morning report, per the units' currently established policies, the treatment team discussed patients admitted within the past 24 hours. Those who were admitted following a suicide related event and were considered "potentials" for participation in the parent study were approached later in the day by a member of the inpatient treatment team. More specifically, the patient was asked if he or she would like to speak with a research team member about participating in a study for a novel treatment for suicide thoughts and behaviors.

Invitation for participation and informed consent. If the patient agreed, a member of the research team approached the patient and invited him or her to participate in the PACT study. After informed consent was provided, the research team member verified the patient was eligible to participate in the study with a post-consent screening measure (i.e., the Columbia Suicide Severity Rating Scale Screener [185]). Participants who were not eligible for the study based on their responses to the screener ended their study participation at this time, while eligible participants proceeded to Part 2 of the study. The baseline assessment protocol consisted of two phases which could have been completed during the same day or different days depending on the needs of the participant: Phase 1 consisted of self-report measures administered by Bachelor's or Master's level case managers; and Phase 2 consisted of clinician-administered measures administered by a study clinician with a Master's degree or above. Both components of the baseline assessment took approximately 3 to 5 hours to complete, with the option to take breaks

and break up the assessment into multiple sessions to minimize participant fatigue. The measures selected for the current study are described in detail below ("Measures", p. 72).

Participants randomized to the treatment condition received up to six 90-minute face-to-face individual CBT sessions with a study clinician over the course of approximately three days during their inpatient psychiatric hospitalization. The PACT treatment consisted of three phases: (1) sessions one and two involved a detailed review of the participant's suicide narrative, development of a safety plan, and establishment of treatment goals and conceptualization with the participant; (2) sessions three and four involved instruction on a variety of CBT strategies for reducing the recurrence of suicide-related behaviors (e.g., emotion regulation strategies, problem-solving skills), and; (3) sessions five and six involved updates to an existing safety plan to be used after hospitalization, discussion of outpatient self-care strategies, dissemination of helpful resources, and a series of relapse prevention strategies.

Participants randomized to the treatment condition were given the option to consent to audio-recording of their PACT psychotherapy sessions, though this was not a prerequisite for participation in the parent study. For this dissertation study, as noted earlier, a total of 58 cases were selected and these consisted of individuals who randomly were assigned to the treatment condition and who consented to audio-recording, and who had both sessions 1 and 2 of their encounters available for examination. Written transcripts were subsequently coded for qualitative themes described in Aim 1.

Procedures and Data Analytic Plan: Qualitative Aim (Aim 1)

Overview of transcription and coding process. The audio-recordings of sessions one and two of PACT were transcribed and de-identified by trained volunteers and research assistants (with a minimum of 2-years of college education) at the Suicide Care, Prevention, and Research (CPR) Initiative, the lab from which this data were derived. Transcriptions were cleaned, and checked for quality, accuracy, and de-identification by a Bachelor's level transcription supervisor. The transcriptions were then imported into NVivo 11 Plus, a qualitative analysis software, where sessions one and two were coded for themes by trained coders. Figure 6 depicts the general transcription and coding process for this study:

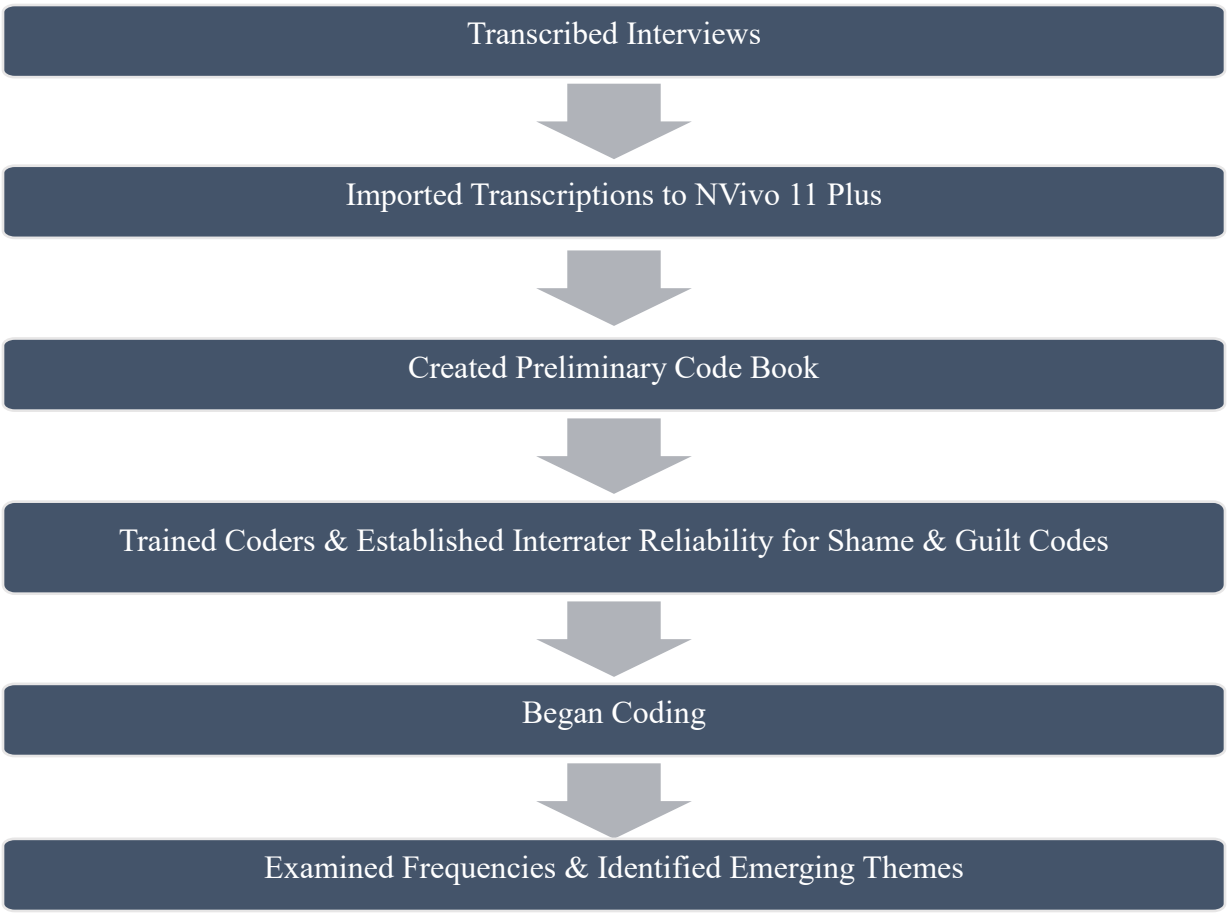

Figure 6. Transcription and Coding Procedures

Shame and guilt preliminary coding development. In order to code for themes pertaining to Aim 1, codes for shame and guilt were developed by the author of this dissertation using 10 random cases out of 58 (i.e., 17% of the entire sample). This preliminary coding was performed using NVivo 11 Plus, a qualitative data management software that allows users to create, categorize, and manage in-text coding within and between cases. The codes for shame and guilt were developed by first reading through the transcripts of each case for sessions one and two; coding sections of the texts for shame and guilt whenever participants discussed shame and guilt explicitly. This process was repeated multiple times to group and refine shame and guilt codes into themes across the 10 cases, in a process called the constant comparative method (186; 187). The constant comparative method is one type of grounded theory approach in qualitative research which involves examining a number of hypotheses during the course of continuously creating and revising thematic coding for the purposes of theory generation (186). Grounded theory approaches in qualitative studies are commonly used when developing initial coding, especially in the exploratory phase of research. The shame and guilt codes developed and added to NVivo 11 Plus as the template for all shame and guilt coding for this dissertation study were as follows:

Table 3. NVivo 11 Plus Shame Codes

Parent Node:	***Shame***
Child Node 1: ***"Shame"***	Participant specifically uses word "shame" or "ashamed."
Child Node 2: ***"Feeling judged by others"***	Participant describes feeling embarrassed, humiliated, smeared, mortified, abased, or other term/phrase indicating that participant felt judged by others.

	For this code, shame must be described in relation to the interpretation/judgment of others, real or perceived.
Child Node 3: *"Failure"*	Participant describes "feeling like a failure," "failing," or other term/phrase indicating that participant feels like they are to blame for their life not turning out the way they had hoped/planned.
Child Node 4: *"Self-anger"*	Participant describes feeling anger toward him/herself. Examples include: "I hate myself," "I'm the worst," "I'm a terrible person," "I was so mad at myself," "how could I do something so horrible," "what's wrong with me". Includes self-disgust, such as "I'm a deadbeat", "loser", "piece of sh*t," "has-been," "good-for-nothing."

Table 4. NVivo 11 Plus Guilt Codes

Parent Node:	***Guilt***
Child Node 1: *"Guilty"*	Participant uses the word "guilt," "guilty," "guilted," specifically.
Child Node 2: *"Remorse/Regret"*	Participant describes feeling remorse or regret for a specific behavior (e.g., "I feel bad about having done that," "I shouldn't have done that.").
Child Node 3: *"Feeling responsible"*	Participant describes feeling responsible for a negative outcome or consequence (e.g., "It's my fault X lost his job," "If I hadn't done that, X would be alive," "they should blame me for what happened").
Child Node 4: *"Feeling apologetic"*	Participant describes negative feelings leading to a desire to apologize or make amends (e.g., "I wish I could say I'm sorry for what I did," "I want so badly to make things right," "If I could just explain what happened, I'd feel better").

Codebook development. The author of this dissertation developed a codebook for documenting definitions, explanations, and/or examples for codes relevant to Aim 1 (i.e., precipitating events, motivations for contemplating/attempting suicide, thwarted belongingness, perceived burdensomeness, hopelessness, emotion regulation strategies, and social problem-

solving strategies) (Appendix B). The codebook developed for this study was largely derived from the Department of Defense Annual Suicide Death Review Data Dictionary and Training Manual developed by the Suicide CPR Initiative, which primarily utilized content analysis methods. Content analysis involves the utilization of codes that are derived from theory and/or prior knowledge. This approach was selected for this dissertation study to maintain consistency among terms within the qualitative and quantitative portions of this study. The qualitative definition of social problem-solving strategies, for example, exactly match the definitions developed for the SPSI-R:L measure utilized in the quantitative portion of this study.

Coder training. The coding team consisted of the author of this dissertation and three research assistants (bachelor's or master's degree) from the Suicide CPR Initiative. The coding team met weekly throughout the coding process to address additional questions and concerns and refine coding procedures as needed. The same 10 cases used in the code book development process described above, and an additional 2 cases (n = 12, or 20.68% of the study sample), were subsequently reviewed by the coding team members to train on coding procedures. This process was also used to establish interrater reliability for shame and guilt magnitude codes (discussed later in this chapter under *Magnitude Coding Procedures*, p. 70). Interrater reliability was not established for other coding variables, as the emerging themes for this study were developed using group consensus methods. Table 5 outlines the training procedures for shame and guilt coding, while Table 6 outlines the training procedures for Aim 1 coding (i.e., all other coding to answer the research questions for Aim 1). The decision to utilize different coder training procedures for shame and guilt coder training versus all other coding variables stemmed from the need to establish interrater reliability for the shame and guilt magnitude codes. Since the Aim 1

coder training was an important component of the Aim 1 coding procedures, the training process is described in the section that follows, as part of the coding procedures.

Table 5. Coder Training Procedures: Shame & Guilt Coding

1	Dissertation author reviewed codes for shame & guilt with coding team; discussed questions, suggestions, & concerns
2	Two cases were double-coded (i.e., coded by two coders each)
3	Interrater reliability for shame and guilt magnitude ratings was assessed
4	Coding team met to discuss shame & guilt codes and areas of discordance; consensus was reached on coding procedures based on group discussion
5	New rules and clarifications were added to the code book instructions
6	Two additional cases were double-coded repeating steps 2 through 5, until all 12 cases were coded

Table 6. Coder Training Procedures: All Other Coding (Aim 1)

1	Dissertation author reviewed preliminary codebook with coding team; discussed questions, suggestions, & concerns
2	Each of the 4 coders were assigned one case to code independently; one team member was always assigned to review the other coder's work
3	Two-person team (i.e., coder and reviewer for each case) met to develop case summary & to arrive at a consensus regarding codes
4	Coding team (i.e., all 4 members) met to discuss case summaries and derive emerging themes; questions, suggestions, & concerns discussed
5	New rules and clarifications added to code book instructions
6	Repeat steps 2 through 5 until saturation

Aim 1 coding procedure. Sessions 1 and 2 of the PACT protocol were chosen since these were the sessions where study therapists asked participants to relay their suicide narratives. Suicide narratives refer to stories preferably with a beginning, a middle, and an end that describe

the chain of events/circumstances, thoughts, feelings, behaviors that activated the patient's suicide crisis. Only the suicide narratives were coded; study team coders were instructed to stop coding when PACT study therapists shifted the focus of the session onto other components of the therapy (e.g., safety planning, sharing the case conceptualization). In the vast majority of cases, study therapists explicitly discussed this shift in focus (e.g., "Now we are going to work on the safety plan"). However, study team coders were instructed to read through all of sessions 1 and 2 to ensure the entire suicide narrative was captured for each case.

The coding team conducted a qualitative analysis that borrowed from grounded theory approaches. For each case coded for Aim 1 of this dissertation study, the coder was assigned the task of developing a detailed timeline of events discussed in the suicide narrative. Furthermore, the coder was in charge of conducting the in-text coding on NVivo 11 Plus for each of the variable of interest referenced in the coding manual. Finally, the coder took primary responsibility for developing a draft of the Case Summary Sheet. The Case Summary Sheet (Appendix C) was the template used to capture all memos for each case using a standardized format for easy comparison. Memos are notes about the data frequently used in grounded theory approaches to capture hypothesized "conceptual connections between categories" (p. 61, 188). Memos document the coder's thinking process to contextualize insights gained from the coding process. For this study, the Case Summary Sheet captured the following: (1) a summarized timeline of events within the suicide narrative; (2) a bulleted list of how, in the participant's own words, shame and guilt related to each research question within Aim 1 (e.g., direct quotes about how shame and hopelessness were connected); and finally, (3) a "for consideration" section for

each research question, where coders discussed possible interpretations and emerging themes. Case Summary Sheets were stored in a Google Docs format on a Shared Drive.

The reviewer was assigned the task of reading through the case in order to knowledgeably discuss it with the coder. The reviewer and coder discussed the details of case with the aim of arriving at a consensus on each element of the Case Summary Sheet. In coding team meetings, the coder presented the case and Case Summary Sheet to the team. Importantly, the reviewer also served the role of providing diverging opinions for group debate and asking more detailed clarifying questions. Team members were given an opportunity to ask clarifying questions. The primary purpose of the coding team meetings was to derive emerging themes among cases through group consensus. Emerging themes were developed from discussions on similarities and differences to previously discussed cases, which was conducted after each coder presented their case.

Emerging themes were recorded on a Google spreadsheet in a Shared Drive. Two lists of emerging themes were maintained at all times: (1) a list of themes noted in at least half of cases coded, and (2) a list of themes "for further consideration," as less than half of all cases coded contained this theme. This strategy was used to reduce the potential of overlooking new emerging themes that may have gone unnoticed earlier in the coding process. Furthermore, a portion of each coding meeting was specifically dedicated to identifying whether the listed emerging themes should be modified, merged, or eliminated based on new cases. If a new coding rule significantly influenced the coding of a previous case, or if a new emerging theme developed, the coder and reviewer assigned to that previous case were in charge of revising the case summary as needed.

Saturation. Coding for Aim 1 continued until the study coding team reached a consensus that saturation had been reached for at least one theme for each research question posed for Aim 1. Saturation is a method used in grounded theory to determine when gathering additional data (i.e., coding additional cases) has reached a point of diminishing returns. Specifically, saturation is reached when new cases are no longer adding additional insights to the themes already developed (186). For the purposes of this dissertation study, saturation for a research question was agreed to have been reached when coding an additional case where shame was a predominant theme *and* an additional case where guilt was a predominant theme did not produce any modifications to the existing themes.

Magnitude coding procedures. The major goal of coding shame and guilt within the suicide narrative was to develop a rating of (1) the overall intensity and (2) the relevance of shame and guilt in the *entire* suicide narrative. This approach is referred to in the literature as *magnitude coding* (189; 190), and involves turning qualitative data into "alphanumeric or symbolic code or sub-code to an existing code datum…to indicate its intensity, frequency, direction, presence, or evaluative content" (p. 72-73; 191). Magnitude coding is commonly applied to emotion coding (e.g., 192) and has been widely used in mixed methods research (p. 76-77; 191).

Two magnitude code ratings were assigned to each case by the coder: (1) an overall shame magnitude rating, and (2) an overall guilt magnitude rating. The magnitude code ratings were on a scale of 0 to 5 with the following specifiers:

Table 7. Magnitude Code Ratings for Shame and for Guilt

0	Emotion of interest (i.e., shame or guilt) was not mentioned at all in the narrative

1	Reference to emotion of interest (shame or guilt) AND no explicit/implicit high emotional intensity
2	Potentially some reference to shame and guilt specifically or high emotional intensity of an adjective. Also, no reference to shame/guilt or an adjective as a reason for dying, motivation for suicide, or emotion felt *during* a suicide crisis
3	Shame/guilt or adjective referenced as a reason for dying, motivation for suicide, or emotion felt *during* or *leading up to* suicide crisis, but no indication it was the primary emotion or motivating factor
4	Shame/guilt or adjective referenced as a reason for dying, motivation for suicide, or emotion felt *during* or *leading up to* a suicide crisis, with some indication it was the primary emotion or a motivating factor
5	Shame/guilt (not an adjective) referenced as a reason for dying, motivation for suicide, or emotion felt *during* a suicide crisis, with clear indication it was a primary emotion or important motivating factor

When considering the shame/guilt magnitude coding for each case, coders were asked to take the following factors into account:

- How often is shame/guilt explicitly stated in the suicide narrative?
- How often is similar emotional content to shame and guilt (e.g., adjectives or related emotion words) mentioned in the suicide narrative?
- Does shame/guilt explicitly or implicitly relate to the individual's stated reasons for dying or motivation for suicide (e.g., patient mentioned feeling ashamed/guilty in relation to their divorce, and cite their divorce as a major reason for wanting to die by suicide)?

- Is shame/guilt or a similar emotion one of the primary emotions described in the moments leading up to the suicide attempt or decision to seek care for suicide thoughts (i.e., is there a strong temporal association between these emotions and the moments *during* a suicide crisis)?
- Does the individual describe shame/guilt or a similar emotion as very intensely felt, painful, difficult to cope with, or difficult to control?
- Does the individual's behaviors following shame/guilt feelings imply that these emotions were intensely felt, painful, difficult to cope with, or difficult to control? (e.g., patient describes feeling ashamed/guilty, then describes binge drinking)

Interrater reliability was established among the PI and two coding team members with regard to the overall magnitude ratings to ensure agreement between all coders. The fourth team member, who participated in coding for Aim 1, was dropped from the shame and guilt coding process due to low interrater reliability. Overall, 20% of cases (i.e., 12 of 58 cases total) were double-coded (i.e., coded by two team members) in order to establish interrater reliability. Interrater reliability was assessed using an intraclass correlation; more specifically, a two-way, mixed effects model averaging the reliability of all raters. This type of interclass correlation assumes rater effects are random while measures effects are mixed, and is commonly used in qualitative research (e.g., Koo & Li, 2016). Final interrater reliability among the three coders at the conclusion of the training period was a intraclass correlation of .924 and .774 for shame and guilt magnitude, respectively.

Measures

Demographics and Military Questionnaire: This demographics questionnaire is a self-report, multiple-choice measure, created by the Suicide CPR Initiative, to include age, race, gender, branch of service, military pay grade, time in service, military status, deployment history, combat experience, marital status, highest level of education completed, legal status, and financial status. See Appendix A for a copy of this measure (p. 1).

Beck Depression Inventory, Second Edition (BDI-II). The BDI-II is a 21-item ($\alpha = .92$) self-report measure of depressive symptoms (193). Items are rated on a 4-point Likert scale ranging from 0 to 3, where ratings are summed and higher scores indicate greater severity of depressive symptoms. The BDI-II has an approximate administration time of five to 10 minutes. The BDI-II has good reliability and concurrent validity within medical samples (e.g., 194), with an internal consistency rendering a Cronbach's alpha of .94. The BDI-II is widely used in clinical and research settings, and has received extensive validation and is considered a reliable assessment of current depressive symptoms within the past 2 weeks. This is a copyrighted measure for sale; therefore a copy is not included here.

The Beck Hopelessness Scale (BHS): The BHS is one of the most widely used self-report measures for assessing feelings of hopelessness and negative expectancies (195). It is a 20-item measure, with 11 negatively phrased items and 9 positively phrased items in a True or False response format. Scores range from 0 to 20, with higher scores indicating increased hopelessness. The BHS takes approximately five to 10 minutes to administer. The BHS has good reliability and concurrent validity based on the original study sample (195), with an internal consistency rendering a Cronbach's alpha of .88. Follow-up studies have mostly supported these

psychometrics (e.g., 195; 196). The BHS is highly correlated with severity of depression (197), frequency of suicidal thoughts (198), lifetime suicidal behaviors (199), and concerns about stress, loneliness, and relationship problems (200). This is a copyrighted measure for sale; therefore a copy is not included here.

The Difficulties in Emotion Regulation Scale (DERS): The DERS is a 36-item self-report measure of problems with emotion regulation (126). The total score for this measure ranges from 36 to 180, with higher scores indicating greater problems with regulating emotions. The DERS includes six subscales: (1) nonacceptance of emotional responses while distressed (i.e., Nonacceptance subscale); (2) limited strategies to effectively regulate emotions while distressed (i.e., Strategies subscale); (3) difficulty engaging in goal-directed behavior while distressed (i.e., Goals subscale); (4) impulse control difficulties (i.e., Impulse subscale); (5) limited awareness of emotions (i.e., Awareness subscale); and (6) lack of emotional clarity (i.e., Clarity subscale). Several studies have confirmed this six-factor analysis (e.g., 126). The DERS has strong internal consistency and convergent validity, and Cronbach's alpha values range from .88 to .97. This is a copyrighted measure for sale; therefore a copy is not included here.

Interpersonal Needs Questionnaire (INQ). The INQ is a 12-item self-report measure of thwarted belongingness and perceived burdensomeness (201). Items are rated on a 7-point Likert scale ranging from 1 (not at all true for me) to 7 (very true for me), with higher scores indicating a higher degree of thwarted belongingness and perceived burdensomeness. This measure takes approximately five to 10 minutes to administer. Van Orden and colleagues (201) reported good internal consistency for thwarted belongingness ($\alpha = .85$) and perceived burdensomeness ($\alpha = .89$) subscales, and the construct validity of this measure has been reported as having moderate

correlations with measures of suicidality and depressive symptoms. This is a copyrighted measure for sale; therefore a copy is not included here.

Social Problem-Solving Inventory-Revised, Long Form (SPSI-R:L). The SPSI-R:L is a 52-item self-report measure of social problem-solving ability (202). The measure assesses two specific domains: (1) problem-solving orientation, and (2) problem-solving style, each with two and three subscales, respectively. The problem-solving orientation subscales are positive problem orientation and negative problem orientation. The problem-solving style subscales are rational, impulsive/careless, and avoidant. Items are rated on a 5-point Likert scale from 0 (not at all true of me) to 4 (extremely true of me), and higher scores indicate greater intensity on each dimension (e.g., greater intensity of negative orientation to problem-solving). The SPSI-R:L takes approximately 20 minutes to administer. Psychometric properties for the SPSI-R:L have shown good reliability ($\alpha = .74$ to $\alpha = .94$) and validity. This is a copyrighted measure for sale; therefore a copy is not included here.

Procedures and Data Analytic Plan: Quantitative Analyses (Aims 2, 3, & 4)

Missing Data and Software Analysis

Data was evaluated for missing data, outliers, and type of distribution using IBM SPSS Version 25.0. Missing values were not expected because measures were checked for completion by the research team member throughout the data collection portion of the baseline assessment. Missing data would be due to the participant's request not to complete a particular portion of the study questionnaires. Data imputation methods were not needed to handle any missing data in the analysis. Examination of outliers were examined and none were found. Distributions were examined to determine if transformations were necessary; variables were normally distributed within an expected range of kurtosis and skewness.

A Priori Power Calculations

A priori power calculation for t-tests and correlations. Independent-sample, two-tailed t-tests with 80% power, a sample size of 58, and an alpha level of 0.05 was found to be able to detect a large effect size (i.e., Cohen's *d* of 0.75). Pearson's correlations with 80% power, a sample size of 58, and an alpha level of 0.05 was found to be able to detect a medium effect size (i.e., correlation coefficient *r* of .35).

A priori power calculation for multiple linear regressions. G*Power calculations indicated the sample size of 58 was slightly underpowered to detect a medium effect (i.e., Cohen's f^2 of 0.18, where a Cohen's f^2 of 0.15 is considered a medium effect) for multiple linear regressions with 80% power, an alpha level of 0.05, and 4 predictors (i.e., shame and guilt magnitude, plus 2 potential covariates).

Covariates

Prior to conducting quantitative analyses in aims 2 and 3, bivariate analyses were conducted on demographic data to determine whether there was a need to control for any covariates. Specifically, a series of t-tests and correlations were used to ascertain whether a significant relationship with the dependent variables (i.e., thwarted belongingness, perceived burdensomeness, hopelessness, emotion regulation, and social problem-solving) existed among the following demographic factors: (1) Age; and (2) Sex. If age and/or sex were to be found significantly related to the dependent variable, then they were expected to be used as a covariate in subsequent analyses.

Specific Aim 2

The goal of Specific Aim 2 was to investigate the relationship among shame, guilt, and suicide-related cognitions. Specifically, this aim assessed the extent to which shame and guilt, as measured by magnitude ratings of emotional intensity within the participants' suicide narratives, were associated with thwarted belongingness, perceived burdensomeness, and hopelessness. This was achieved by a series of multiple linear regressions using SPSS Version 25.0.

Prior to conducting the regression analyses, the magnitude shame variable and magnitude guilt variable were assessed for their validity by analyzing their correlation to 2 items on the DERS and 5 items on the BDI-II. Specifically, the magnitude shame variable was analyzed for its correlation with item 21 on the DERS, "*When I'm upset, I feel ashamed with myself for feeling that way,"* and items 3 (i.e., feeling like a failure), 7 (i.e., self-dislike), 8 (i.e., self-criticalness), and 14 (i.e., worthlessness) on the BDI-II. The magnitude guilt variable was analyzed for its correlation with item 25 on the DERS, "*When I'm upset, I feel guilty for feeling*

that way," and item 5 (i.e., guilty feelings) on the BDI-II. If either of these variables were not significantly correlated with these items, the coding team met to discuss potential errors and/or alterations to the magnitude coding scheme. Notably, these items are not considered validated measures of shame and guilt; however, the potential to demonstrate a correlation between these items and the magnitude coding scheme was expected to allow for greater certainty that the coding scheme meaningfully captured a participant's tendency to experience either or both of these emotions.

Hypothesis 2a (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater thwarted belongingness) was analyzed using multiple linear regression, with shame and guilt magnitude scores as the independent variable (IV) and the Thwarted Belongingness subscale of the INQ as the dependent variable (DV). Similarly, hypothesis 2b (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater perceived burdensomeness) was analyzed with shame and guilt magnitude scores as the IV and the Perceived Burdensomeness subscale of the INQ as the DV. Lastly, hypothesis 2c (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with higher levels of hopelessness) was analyzed with shame and guilt magnitude scores as the IVs and the BHS as the DV. For all Aim 2 hypotheses, any covariates found to be significantly associated with the respective DV were included in the analysis.

Table 8. Aim 2, Hypotheses 2a, 2b, and 2c Multiple Linear Regression Analyses

Statistical Method:	Multiple Linear Regression
Dependent Variable(s):	
Hypothesis 2a.	Thwarted belongingness (INQ)

Hypothesis 2b.	Perceived burdensomeness (INQ)
Hypothesis 2c.	Hopelessness (BHS)
Independent Variables:	
Block 1.	Shame Magnitude Score
	Guilt Magnitude Score
Block 2.	Covariate(s)

Specific Aim 3

The goal of Specific Aim 3 was to determine the strength of the relationship among shame, guilt, and emotion regulation difficulties. All the hypotheses within Specific Aim 3 used multiple linear regression, shame and guilt magnitude scores as the IV, and one of the subscales of the DERS as the DV. Hypothesis 3a (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater nonacceptance of emotional responses) used the Nonacceptance subscale of the DERS as the DV. Similarly, hypothesis 3b (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater limitations in effective emotion regulation strategies while distressed) used the Strategies subscale of the DERS as the DV. Hypothesis 3c (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater difficulty engaging in goal-directed behavior while distressed) used the Goals subscale of the DERS as the DV. Hypothesis 3d (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater impulse control difficulties) used the Impulse subscale of the DERS as the DV. Hypothesis 3e (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with limited awareness of emotions) used the Awareness subscale of the DERS as

the DV. Finally, hypothesis 3f (i.e., that higher magnitude of shame, compared to higher magnitude of guilt will be associated with lack of emotional clarity) used the Clarity subscale of the DERS as the DV.

Table 9. Specific Aim 3, Hypotheses 3a, 3b, 3c, 3d, 3e, and 3f Multiple Linear Regression Analyses

Statistical Method:	Multiple Linear Regression
Dependent Variable(s):	
Hypothesis 3a.	Nonacceptance (DERS)
Hypothesis 3b.	Goals (DERS)
Hypothesis 3c.	Impulse (DERS)
Hypothesis 3d.	Awareness (DERS)
Hypothesis 3e.	Strategies (DERS)
Hypothesis 3f.	Clarity (DERS)
Independent Variables:	
Block 1.	Shame Magnitude Score
	Guilt Magnitude Score
Block 2.	Covariate(s)

Specific Aim 4

The goal of Specific Aim 4 was to determine the strength of the relationship among shame, guilt, and social problem-solving deficits. All the hypotheses within Specific Aim 3 also used multiple linear regression, shame and guilt magnitude scores as the IV, and one of the subscales of the SPSI-R:L) as the DV. Hypothesis 4a (i.e., that higher magnitude of shame,

compared to higher magnitude of guilt, will be associated with a negative problem-solving orientation) used the Negative Orientation subscale of the SPSI-R:L as the DV. Similarly, hypothesis 4b (i.e., that higher magnitude of guilt, compared to higher magnitude of shame, will be associated with a rational problem-solving style) used the Rational subscale of the SPSI-R:L as the DV. Hypothesis 4c (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with an impulsive/careless problem-solving style) used the Impulsive/Careless subscale of the SPSI-R:L as the DV. Finally, hypothesis 4d (i.e., that higher magnitude of shame, compared to higher magnitude of guilt, will be associated with an avoidant problem-solving style) used the Avoidant subscale of the SPSI-R:L as the DV.

Table 10. Specific Aim 4, Hypotheses 4a, 4b, 4c, and 4d Multiple Linear Regression Analyses

Statistical Method:	Multiple Linear Regression
Dependent Variable(s):	
Hypothesis 4a.	Negative Orientation (SPSI-R:L)
Hypothesis 4b.	Rational (SPSI-R:L)
Hypothesis 4c.	Impulsive/Careless (SPSI-R:L)
Hypothesis 4d.	Avoidant (SPSI-R:L)
Independent Variables:	
Block 1.	Shame Magnitude Score
	Guilt Magnitude Score
Block 2.	Covariate(s)

Integration of Qualitative and Quantitative Data

This dissertation study borrowed from an exploratory sequential mixed methods research design to integrate the qualitative and quantitative data and findings. Exploratory sequential designs allow the researcher to utilize qualitative data analyses to inform subsequent quantitative data collection and analyses (203). The quantitative aims of this study (i.e., Aims 2, 3, and 4) relied on the qualitative results of this study, such that a shame magnitude variable and a guilt magnitude variable were a necessary component for conducting the quantitative analyses. Once the shame and guilt magnitude coding process was completed, the data analytic process for qualitative aim 1 and quantitative aims 2, 3, and 4 occurred simultaneously. Qualitative and quantitative findings were first discussed separately, then an integrated interpretation and discussion followed. As previously mentioned, qualitative codes in this study were designed to closely match the quantitative variables, which facilitated the integration of qualitative and quantitative findings. Figure 7 (below) demonstrates the exploratory sequential mixed methods process used for this study, which can be divided into five phases: (1) the development of the code book, (2) the shame and guilt magnitude coding, the simultaneous analysis of the (3) qualitative and (4) quantitative data, and finally, (5) the integrated interpretation of both qualitative and quantitative findings.

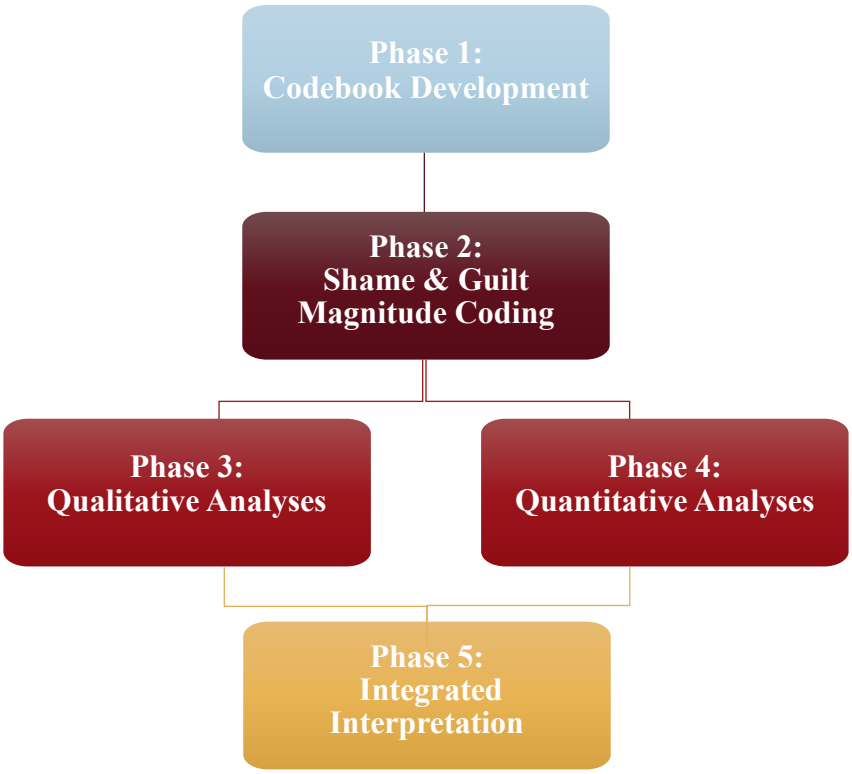

Figure 7. Exploratory Sequential Mixed Methods Research Design for Dissertation Study

CHAPTER 3: Results

SAMPLE DEMOGRAPHICS

The subsample of 58 service members and adult dependents utilized in this study, who were in the treatment arm of the PACT study and consented to audiotaped psychotherapy sessions, represented 27% of the parent study. This subset was demographically consistent with the characteristics observed in the other three-fourth of the overall study participants in the parent study, including age ($t(216) = -1.336$, $p = .183$), gender ($\chi^2(1, N = 218) = 1.752$, $p = .186$), race/ethnicity ($\chi^2(5, N = 218) = 2.745$, $p = .739$), education level ($\chi^2(4, N = 218) = 7.781$, $p = .100$), marital status ($\chi^2(3, N = 218) = 2.407$, $p = .492$), religious affiliation ($\chi^2(5, N = 218) = 3.380$, $p = .642$), religiosity ($\chi^2(4, N = 218) = 2.745$, $p = .601$), reason for admission ($\chi^2(2, N = 218) = 1.950$, $p = .377$), branch of military service ($\chi^2(4, N = 192) = 4.442$, $p = .349$), and paygrade ($\chi^2(4, N = 192) = 3.826$, $p = .430$). Demographic details can be found in Table 11.

The subsample of 58 service members and adult dependents utilized in this study consisted primarily of participants who were admitted following suicide ideation with a history of one or more suicide attempts (67.2%). At the time of their most recent suicide attempt, most participants believed the lethality of their chosen suicide method would lead to death (67.2%), though, from a medical standpoint, most suffered only minor physical damage (22.4%). Participants were primarily male (55.2%), with an average age of 31.4 years (range 19 to 66 years). The majority were Caucasian (62.1%), married (48.3%), with some college education without a degree (31.0%). Regarding religious affiliation and religiosity, most were Christian/Protestant (32.8%) and were self-reported to be slightly religious or spiritual (32.8%).

Military demographics include a primarily active duty sample (69.0%) with a majority serving in the Navy (29.3%), and enlisted rated E5-E9 (41.4%). Most participants in this sample had deployed (58.6%), with almost one-quarter being deployed to a combat area at least once since 9/11 (24.1%).

Table 11. Demographic Data

Demographic	Total Sample (N=218)	Study Sample (n=58)
Age, in years		
M (SD)	30.0 (9.6)	31.4 (9.9)
Range, years	18 – 66	19 – 66
Gender		
Male	136 (62.4)	32 (55.2)
Female	82 (37.6)	26 (44.8)
Race/Ethnicity		
Black or African American	32 (14.7)	9 (15.5)
Alaska Native/Other Pacific Islander	15 (6.9)	3 (5.2)
Non-Hispanic White or Caucasian	129 (59.2)	36 (62.1)
Hispanic or Latino	19 (8.7)	3 (5.2)
Two or more	19 (8.7)	5 (8.6)
Other	4 (1.8)	2 (3.4)
Education Level		
High School Diploma	50 (22.9)	12 (20.7)
Some College, no degree	89 (40.8)	18 (31.0)
Associate's Degree	24 (11.0)	11 (19.0)
Bachelor's Degree	38 (17.4)	13 (22.4)
Graduate or Professional Degree	17 (7.8)	4 (6.9)
Marital Status		
Never Married/Cohabitating	87 (39.9)	19 (32.8)
Married	91 (41.7)	28 (48.3)
Separated	18 (8.3)	6 (10.3)
Divorced	22 (10.1)	5 (8.6)

Notes. a. Data is presented as *N* (valid %) unless indicated otherwise
b. Due to rounding, percentages may not equal 100%

Table 11. Demographic Data, Continued

Demographic	Total Sample (N=218)	Study Sample (n=58)
Religious Affiliation		
Agnostic/Atheist	39 (17.9)	10 (17.2)
Catholic	24 (11.0)	8 (13.8)
Christian/Protestant	69 (31.7)	19 (32.8)
Spiritual	36 (16.5)	12 (20.7)
Other	35 (16.1)	6 (10.3)
Unknown/Not Applicable	15 (6.9)	3 (5.2)
Religiosity/Spirituality		
Very Religious/Spiritual	36 (16.5)	10 (17.2)
Somewhat Religious/Spiritual	47 (21.6)	13 (22.4)
Slightly Religious/Spiritual	59 (27.1)	19 (32.8)
Not at All Religious/Spiritual	36 (16.5)	9 (15.5)
Unsure	20 (9.2)	7 (12.1)
Prefer Not to Answer/Not Applicable	20 (9.2)	0 (0.0)
Military Status		
Active Duty	157 (72.0)	40 (69.0)
Reserves	5 (2.3)	3 (5.2)
Veteran	30 (13.8)	8 (13.8)
Beneficiary	26 (11.9)	7 (12.1)
Branch[c]		
Army	82 (42.7)	16 (27.6)
Air Force	22 (11.5)	8 (13.8)
Navy	51 (26.6)	17 (29.3)
Marine Corps	34 (17.7)	9 (15.5)
Coast Guard	3 (1.6)	1 (1.7)
Rank[c]		
E1-E4	83 (43.2)	20 (34.5)
E5-E9	74 (38.5)	24 (41.4)
W1-O10	27 (14.1)	6 (10.3)
Cadet/Midshipman	8 (4.2)	1 (1.7)
Deployments[c]		
No	85 (44.3)	17 (29.3)
Yes	98 (51.0)	34 (58.6)
1	32 (16.7)	14 (24.1)
2	26 (13.5)	7 (12.1)
3+	40 (20.8)	3 (5.2)
Unknown	1 (0.5)	0 (0.0)
Not Applicable (Cadet/Midshipman)	8 (4.2)	1 (1.7)

Notes. a. Data is presented as *N* (valid %) unless indicated otherwise
b. Due to rounding, percentages may not equal 100%
c. Total Sample N = 192 and Study Sample n = 51, representing military participants only

Table 11. Demographic Data, Continued

Demographic	Total Sample (N=218)	Study Sample (n=58)
Reason for Admission		
Recent suicide attempt	31 (14.2)	11 (19.0)
Suicide ideation with history of suicide attempt	157 (72.0)	39 (67.2)
Suicide ideation without history of suicide attempt	30 (13.8)	8 (13.8)
Lethality Belief at Time of Most Recent Attempt		
No physical damage or very minor physical damage	1 (0.5)	0 (0.0)
Minor physical damage	9 (4.1)	4 (6.9)
Moderate physical damage & medical attention required	5 (2.3)	2 (3.4)
Moderately severe physical damage & medical hospitalization required	4 (1.8)	0 (0.0)
Severe physical damage & medical hospitalization w/ intensive care	12 (5.5)	4 (6.9)
Death	156 (71.6)	39 (67.2)
Unknown/Not Applicable	31 (14.2)	9 (15.5)
Actual Lethality – Most Recent Suicide Attempt		
No physical damage or very minor physical damage	60 (27.5)	11 (19.0)
Minor physical damage	34 (15.6)	13 (22.4)
Moderate physical damage & medical attention required	25 (11.5)	10 (17.2)
Moderately severe physical damage & medical hospitalization required	19 (8.7)	4 (6.9)
Severe physical damage & medical hospitalization w/ intensive care	7 (3.2)	4 (6.9)
Unknown/Not Applicable	73 (33.5)	16 (27.6)

Notes. a. Data is presented as *N* (valid %) unless indicated otherwise
b. Due to rounding, percentages may not equal 100%

QUALITATIVE RESULTS

Aim 1. To qualitatively examine described experiences of shame and guilt in relation to reasons for dying, motivations for contemplating or attempting suicide, emotion regulation strategies, and hopelessness among service members psychiatrically admitted to a military inpatient treatment facility following a suicide-related event.

The information that follows are the themes developed from research questions 1A through 1G for Aim 1. First, relevant definitions are provided to facilitate understanding of the results for each research question, even if themes did not emerge for all constructs included in the coding process for that research question. This is followed by themes that are arranged by "Shame and/or Guilt Themes" (i.e., themes associated with both emotions), "Predominantly Shame-Specific Themes" (i.e., themes associated predominantly with shame, though one or more participants may also have expressed guilt in relation to this theme), and "Predominantly Guilt-Specific Themes" (i.e., themes associated predominantly with guilt, though, again, one or more participants may also have expressed shame in relation to this theme). Figure 8 demonstrates the percentage of themes arranged using these three categories.

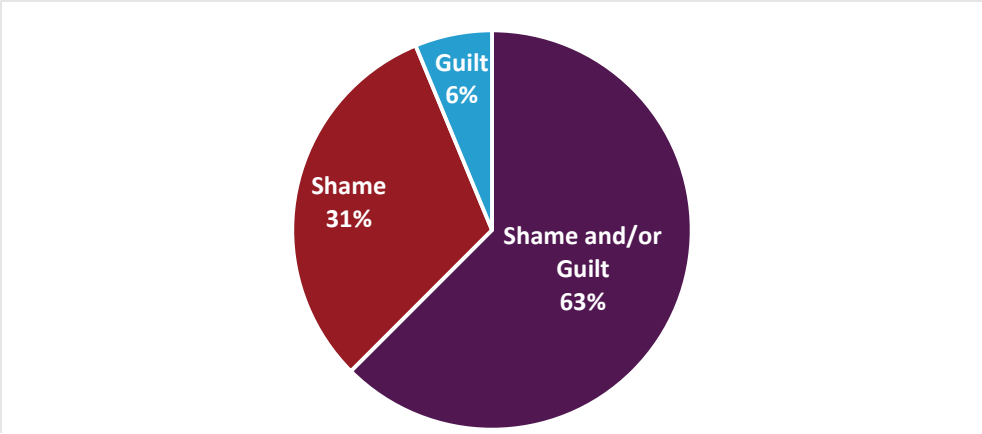

Figure 8. Themes Arranged by Coding Categories: Predominantly Shame-Specific, Predominantly Guilt-Specific, and Shame and/or Guilt Themes

Our team coded 16 cases in total for research questions 1A, 1C, 1D, 1E, and 1F. Table 12 (below) provides a summary of all 16 themes developed in association with these research questions. Research question 1B was answered through the magnitude coding process needed for the quantitative portion of this study, which therefore required coding all 58 cases for shame and guilt themes.

Table 12. Summary of Themes for Research Questions 1A, 1C, 1D, 1E, 1F, and 1G

Research Question	Shame and/or Guilt Themes	Predominantly Shame-Specific Themes	Predominantly Guilt-Specific Themes
1A: Precipitating Events	*1A.1 Shame and/or guilt in relation to the suicide attempt or hospitalization (p. 88)* *1A.2 Shame and/or guilt in relation to a perceived decline in academic and/or occupational functioning (p. 89)*	*1A.3 Shame in relation to negative self-appraisal and perceived failure (p. 90)*	*1A.4 Guilt in relation to familial functioning (p. 91)*
1C: Motivations for Contemplating and/or Attempting Suicide	*1C.1 Intrapunitive motivation for suicide in relation to several perceived failures (p. 95)* *1C.2 Suicide as escape/relief from emotional distress of shame and/or guilt (p. 96)*	*1C.3 Intrapunitive motivation for suicide stated as self-hate and/or feeling like a failure (p. 97)*	*None*
1D: Thwarted Belongingness & Perceived Burdensomeness	*1D.1 Feeling like a burden in relation to a social role, linked to shame and/or guilt (p. 99)*	*1D.2 Shame associated with feeling like a burden within social roles (p. 100)*	*None*
1E: Hopelessness	*1E.1 Hopelessness about being able to change a maladaptive behavior (p. 101)*	*None*	*None*
1F: Emotion Regulation Strategies	*1F.1 Emotion Regulation Strategy 1: Avoidance (p. 103)* *1F.2 Emotion Regulation Strategy 2: Self-Directed Injury (p. 104)* *1F.3 Emotion Regulation Strategy 3: Rumination (p. 105)*	*1F.4 Emotion Regulation Strategy 4: Sensation-Seeking and Addictive Behaviors (p. 106)*	*None*
1G: Social Problem-Solving	*1G.1 Impulsive/careless problem-solving style in relation to emotional distress, including shame and/or guilt (p. 109)*	*1G.2 Negative problem orientation (p. 110)*	*None*

1A. What are the most common <u>precipitating events</u> contributing to the experiences of shame and guilt among this highly vulnerable patient population?

Our team coded 16 cases in total for this research question (i.e., until group consensus that saturation was reached). *Precipitating events* was operationalized in this study as the action, event, or circumstance occurring before shame and/or guilt within the participants' suicide narrative timeline, which is either explicitly or implicitly referenced as contributing to the participant's experience of shame and/or guilt. Overall, this population appeared to have a wide variety of experiences that contributed to their emotions of shame and guilt. Moreover, this study did not find evidence of specific events that were more likely to contribute to shame than to guilt, or vice versa, within this population. A few notable themes emerged, which are captured below.

Table 13. Summary of 1A Themes

Shame and/or Guilt	Predominantly Shame	Predominantly Guilt
•**Suicide attempt and/or psychiatric hospitalization** *(75%)* •**Decline in academic and/or occupational functioning** *(62.5%)*	•**Negative self-appraisal and perceived failure** *(75%)*	•**Familial functioning** *(43.75%)*

Shame and/or Guilt Themes

***1A.1 Shame and/or guilt in relation to the suicide attempt or hospitalization*:** Twelve of the 16 cases (75%) expressed shame and/or guilt themes in relation to their most recent or a previous suicide attempt or hospitalization. Notably, participants who reference either or both emotions in relation to a prior suicide attempt or hospitalization cited this as an important contributor to their most recent suicide crisis. Shame and/or guilt was always expressed in relation to suicide *behaviors* (e.g., the suicide attempt itself, or actions leading to

hospitalization); there were no cases noted where participants reported feeling ashamed or guilty for experiencing suicide thoughts. Guilt was typically expressed with respect to the perceived impact the suicide attempt or hospitalization had on one's career or on other people. In contrast, shame was typically expressed with respect to not dying by suicide as intended. Representative examples are provided below:

Table 13. Example Quotes for Research Question 1A, Shame and/or Guilt in Relation to the Suicide Attempt or Hospitalization

Participant	Quote
Participant 009	*"I spent time in the emergency room, spent time in intensive care for a few days…I didn't really know what to think. I kind of laughed about it you know, I was like 'Well here, here I am trying to commit suicide and I can't even do that successfully.' You know it's like, how—I'm unlucky all the time, and here I am and I can't even do this right. And so I was pretty depressed afterwards about failing."*
Participant 503	*"I just started to kind of regret it, like 'If I didn't do that, then maybe he'd still want to be my friend. We could still have this civil relationship but I can't take it back and I've ruined everything. There's no taking that back, so you know it's your fault.' […] Less than a week later, I was in the hospital because I tried to cut myself and he — I had a lot of guilt after that too. I found out a month after all that that he had to start going to counseling and he couldn't sleep at night because of everything that happened. He was just really traumatized by it, and I just felt this overwhelming amount of guilt from that."*
Participant 102	*Therapist: It sounds like your suicide attempt has caused you some kind of regret or embarrassment.* *"It was incredibly embarrassing. More than anything, I think it was just a deep feeling of shame."*

1A.2 Shame and/or guilt in relation to a perceived decline in academic and/or occupational functioning: Ten of the 16 cases (62.5%) referenced shame and/or guilt themes in

relation to recent struggles in school or work, especially in comparison to how they had previously performed in these roles. Notably, participants often cited "regret" and/or "feeling like a failure" for this theme. For example:

Table 14. Example Quotes for Research Question 1A, Shame and/or Guilt in Relation to a Perceived Decline in Academic and/or Occupational Functioning

Participant	Quote
Participant 009	*"The thoughts I ruminated about were the people at work and them achieving their goal, and score one for them, they're the victor. So I felt like a super failure, I've put in a hard battle against these people for a full year and, of course, they won."*
Participant 025	*"I kept thinking if I could just go back to my old office, everything would be fine. […] I regret transferring up here. […] I know that I am smarter than a lot of the people that work in that office and they throw me aside."*
Participant 200	*"I had been thinking about suicide for months now and trying to dismiss the idea, but with all of the pressure that I had, and all the failure that I had, and the fact that the battalion wasn't functioning well. It felt like it was my fault."*

Predominantly Shame-Specific Themes

1A.3 Shame in relation to negative self-appraisal and perceived failure: Twelve of the 16 cases (75%) were noted to have several incidents of perceived failure leading up to their hospitalization for suicide thoughts and/or behaviors. The coding team reached a consensus that the self-appraisals being made in relation to these incidents seemed overly negative and harsh given the event described. A few representative and illustrative quotes are provided below:

Table 15. Example Quotes for Research Question 1A, Shame in Relation to Negative Self-Appraisal and Perceived Failure

Participant	Quote
Participant 181	*"I still kept doing like the day to day, dealing with really hard school, really tough academics and the other requirements of my job, which just strained me a lot. […] On really bad days it would start that […] one bad thing would happen, like someone would make an offhanded comment to me or something like that, that would make me start thinking about how many mistakes I made, how big of a failure I was, how I wasn't good enough to be where I am, how I'm a failure in my family's eyes."*
Participant 645	*"I had two kids, one of them didn't want to be there […] and the other girl was the one with the learning disability. […] She was not having it, she was just get away from me and stormed off and lay on the ground […] and she was like I want my old tutor and we couldn't get her to do anything […] and finally we found her old tutor […] and so we switched kids and I had two kids that were really awesome and well behaved. […]It really affect me, I don't know why because I'm not a bad person I feel like you're not good with kids are you a terrible—do you know what I mean? I don't know I was so scared of them […] I don't want to be responsible for messing them up like I don't want to say the wrong thing or discipline them, I don't want to do something wrong and then be judged by adults like why did you treat that child-like that I don't know it was just really weird I just felt really bad."*
Participant 600	*"I realized now what am I doing here. I'm in remedial PT because I can't run very fast, I'm not in shape. I'm having a hard time folding clothes the way they want. I'm having a hard time keeping up, always getting yelled at. […]It's pretty embarrassing I was only in for a month. I couldn't make that. You got people that have gone to Iraq and Afghanistan that deal with that and I couldn't survive boot camp. So yeah, it's pretty shameful."*

Predominantly Guilt-Specific Themes

1A.4 Guilt in relation to familial functioning: Seven of the 16 cases coded (43.75%) contained mention of guilt or regret expressed in relation to a perceived wrongdoing in relation to the participant's immediate family. Some expressed guilt/regret in relation to their infidelity,

to being emotionally or geographically distanced from their children, or for "letting [their family] down" in some way. Examples are provided below:

Table 16. Example Quotes for Research Question 1A, Guilt in Relation to Familial Functioning

Participant	Quote
Participant 167	*"As it gets closer to that I know that's not what I want to do, but I kept kinda going along hoping that maybe things could change. Maybe I would feel different. I started feeling bad because I feel like I'm not being, the person I need to be for him and my daughter, it's just kind of like it kept building and the more I kept it in the more frustrating and emotional I became."*
Participant 200	*"So a lot of times I'll say things that make her upset and I was always very slow to say I'm sorry, and she's always quick. I always felt guilty about the fact that it was hard for me to swallow pride. I still have a hard time saying sorry, or having a hard time thinking about what I said, or why it upset her. For the most part I think we both appreciate the fact that we're committed to the marriage and willing to work through our differences and our problems."*

1B. <u>How often</u> do individuals describe experiencing shame and guilt in relation to their suicide narrative?

For this research question, all 58 cases were explored, as this research question relates to the magnitude coding performed for the quantitative portion of this study. Of the 58 suicide narratives explored, 52 (89.66%) contained at least some mention of shame themes, and 33 (57%) contained at least some mention of guilt themes. Overall, shame themes were more commonly discussed than guilt themes. As part of the shame and guilt magnitude coding process, participants were categorized according to (1) whether shame and guilt were explicitly or implicitly referenced (i.e., through similar adjectives and descriptions of the emotion felt), (2) the

intensity of the emotion (i.e., shame, guilt, or similar adjective) referenced, and (3) the self-described importance of shame and guilt themes in their trajectory toward suicide. What follows is a summary of findings for each of the 6 categories to which participants were assigned.

Table 17. Summary of Findings for Aim 1, Research Question B

Group (Named After Descriptive Quality)	Shame (n = 58)	Guilt (n = 58)
1. Emotion of Interest Not Referenced at All	6 (10.3)	25 (43.1)
2. Emotion of Interest Referenced (using adjectives), Without Link to Suicide	9 (15.5)	6 (10.3)
3. Emotion of Interest Referenced (using emotionally intense adjectives and/or explicitly), Without Link to Suicide	16 (27.6)	5 (8.6)
4. Emotion of Interest Referenced (using adjectives), Linked to Suicide	6 (10.3)	8 (13.8)
5. Emotion of Interest Referenced, Linked to Suicide as Potential Primary Reason	13 (22.4)	9 (15.5)
6. Emotion of Interest Referenced (using emotionally intense adjectives and/or explicitly), Linked to Suicide as Primary Reason	8 (13.8)	5 (8.6)

Notes. a. Data is presented as *N* (valid %) unless indicated otherwise
b. Due to rounding, percentages may not equal 100%

Group 1: Emotion of Interest Not Referenced at All. Six participants, or 10.3% of our sample, did not reference any shame themes during their suicide narrative. Conversely, 25 participants, or 43.1% of our sample did not reference any guilt themes during their suicide narrative. Participants in this category often discussed a trajectory toward suicide that seemed clearly distinct from shame/guilt experiences. Some were specifically asked by their therapist if they experience shame or guilt in relation to some aspect of their narrative and said no, while others clearly cited other emotions, such as hopelessness, sadness, relief (at the prospect of dying by suicide), and anger.

Group 2: Emotion of Interest Referenced (using adjectives), Without Link to Suicide.

There were 9 participants (15.5%) who did not explicitly reference shame, but used terms associated with shame, such as embarrassment, self-disgust, or feeling like a failure. Similarly, 6 participants (10.3%) did not explicitly reference guilt, but used terms associated with guilt, such as regret, remorse, or feeling responsible. In addition to not explicitly referencing shame and guilt in their suicide narratives, participants were placed in this category if there was no explicit or implied high emotional intensity of shame/guilt themes, and if participants did not describe these experiences as related with their trajectory toward suicidal thoughts and behaviors.

Group 3: Emotion of Interest Referenced (using emotionally intense adjectives and/or explicitly), Without Link to Suicide. Sixteen participants, or 27.6% of our sample, described shame themes as emotionally intense and distressing without indicating that these experiences were related to their trajectory toward suicide. Comparatively, only five participants, or 8.6% of our sample, describes guilt themes in this way. Participants were placed in this category when they referred to experiencing shame, guilt, or terms associated with these emotions during their suicide narrative and described these experiences as emotionally intense and distressing, but otherwise did not relate them to their suicide thoughts and behaviors.

Group 4: Emotion of Interest Referenced (using adjectives), Linked to Suicide. There were six participants (10.3%) who described shame themes as related with their trajectory toward suicide without indicating that shame was a primary motivating factor in their desire to die. Similarly, eight participants (13.8%) described guilt themes as related to their suicide trajectory but not a primary motivating factor. Participants were placed into this category when their discussion of shame/guilt themes made clear, self-identified (or therapist-assisted) connections to their trajectory toward suicide, but when other emotions were either explicitly or implicitly

referenced as more important to understanding their motivations for wanting to die by suicide.

Group 5: Emotion of Interest Referenced, Linked to Suicide as Potential Primary Reason. Thirteen participants, or 22.4% of the sample, described shame themes as a reason for dying or motivation for suicide, with some indication of these experiences being a primary motivating factor. Comparatively, only nine participants, or 15.5% of the sample, described guilt themes as relevant to their suicide trajectory in this way. If participants never explicitly referenced shame or guilt in their suicide narrative, this is the highest rating they could receive regarding the importance of shame/guilt themes within their suicide narrative.

Group 6. Emotion of Interest Referenced (using emotionally intense adjectives and/or explicitly), Linked to Suicide as Primary Reason. The final category was reserved only for participants who referenced shame or guilt explicitly in their narrative *and* described the emotion as a primary motivating factor in their desire to die by suicide. Eight participants (13.8%) discussed shame themes as a critical motivating factor in their suicide narrative, while 5 participants (8.6%) discussed guilt themes as an important motivating factor.

Combining Groups Based on Reference to Shame or Guilt and Link to Suicide

Figure 9 (below) combines the groups discussed above to demonstrate the percentage of cases that (1) did not reference shame or guilt at all in the suicide narrative (i.e., Group 1), (2) referenced shame or guilt without linking the emotion to their suicidal thoughts and behaviors (i.e., combined Groups 2, 3, and 4), and finally, (3) reference shame or guilt *and* linked the emotion to their suicidal thoughts and behaviors (i.e., combined Groups 5 and 6). This reconfiguration provides greater clarity for the following findings: (1) 43% of cases never referenced guilt at all in the suicide narrative, compared to only 10% of cases that never

referenced shame; (2) shame was more likely to be referenced in the suicide narratives overall (i.e., 90% of cases), with a seemingly even chance of being linked to suicide; and (3), when guilt was mentioned, it was more often linked to suicide (i.e., 38% of cases).

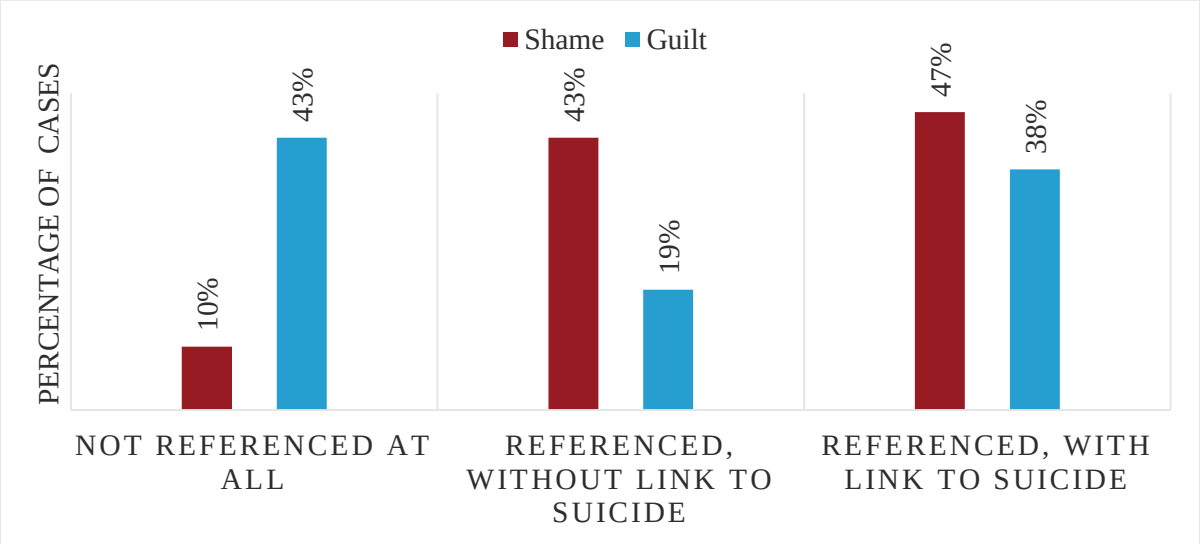

Figure 9. Percentage of Cases Where Shame/Guilt are Referenced, with/without Link to Suicide

1C. How do shame and/or guilt relate to one's <u>motivations for contemplating or attempting suicide</u>?

Our team coded 16 cases in total for this research question (i.e., until group consensus that saturation was reached). To capture the concept of *motivations for contemplating or attempting suicide*, the work by Holden, Kerr, Mendonca, & Velamoor (204) on intrapunitive, extrapunitive, and escape/relief as motivations to die by suicide was adopted. More specifically, intrapunitive motivations for suicide were coded as when participants described a desire to punish themselves (e.g., "I deserve to die"); extrapunitive motivations for suicide were coded when participants described a desire to punish others (e.g., "I wanted people to understand how

bad I feel"); and finally, escape/relief motivations for suicide were coded when participants described a desire to escape pain and/or find relief (e.g., "I couldn't take it anymore"). No themes emerged in relation to shame, guilt, and extrapunitive motivations for suicide.

Table 18. Summary of 1C Themes

Shame and/or Guilt	Predominantly Shame	Predominantly Guilt
• **Intrapunitive motivation for suicide in relation to several perceived failures** *(69%)* • **Suicide as escape/relief from emotional distress of shame and/or guilt** *(56%)*	• **Intrapunitive motivation for suicide stated as self-hate and/or feeling like a failure** *(69%)*	• **None**

Shame and/or Guilt Themes

1C.1 Intrapunitive motivation for suicide in relation to several perceived failures (i.e., "Niagara Falls Effect"): Similar to theme 1A.3 (i.e., *Shame in relation to negative self-appraisal and perceived failure*), this theme captures how 11 of the 16 cases (68.75%) described several incidents of perceived failures, often in different domains of their life (e.g., work, family), leading up to their desire for suicide. One participant referred to this as a "cannonball" or "Niagara Falls effect," which our team agreed was most likely meant as a reference similar to a "snowball effect," i.e., a metaphor for the accumulation of small events that build upon themselves, becoming larger and potentially dangerous. Notably, though "feeling like a failure" is more commonly associated with feelings of shame, some participants also described guilt in relation to these perceived failures. Examples of this theme are provided below:

Table 19. Example Quotes for Research Question 1C, Intrapunitive Motivation for Suicide in Relation to Several Perceived Failures (i.e., "Niagara Falls Effect")

Participant	Quote
Participant 514	*"I turned one small mistake I made into a larger mistake. And then it kind of all cannonballed from there, just kind was a Niagara Falls effect I guess. Where everything just came rushing down. And I guess with that happening I just kind of figured "what's the point in living?" So I was just in my thoughts, in my own personal internalization of everything, thinking "well my parents aren't gonna be home, there's nobody around, nobody to even listen if I wanted anybody to listen, so what's the point, I'm gonna be alone." So I decided the best choice of action was to try to kill myself."*
Participant 012	*"And the repeated offenses and breaking the trust over and over and over. And any, and any other woman that I can think of would've been long gone but for some reason she's still there. And I continue to fail her so that's what I mean I carved failure on my leg. You know and that's what I continue to feel like that, that I was kind of like, I was a lost cause. Like there was no point in, in trying to salvage anything. I'm the cancer, and when you have cancer you go to a doctor and you remove it."*

1C.2 Suicide as escape/relief from emotional distress of shame and/or guilt: Nine of the 16 cases coded (56.25%) made reference to their desire to die by suicide as a way to experience relief from or escape the emotional distress of shame and/or guilt (often accompanied by other emotions, such as hopelessness). Examples are provided below:

Table 20. Example Quotes for Research Question 1C, Suicide as Escape/Relief from Emotional Distress of Shame & Guilt

Participant	Quote
Participant 200	*"I was tired of being the center and the reason why everything was failing. I wanted it to all end."*
Participant 003	*"As we're driving I started thinking to myself, 'Man, I really screwed up this time. I really let the pressure get to me.' And as I said, I thought about*

	jumping out the back of the humvee. I started wondering if the fall, the jump, would kill me or seriously injure me."

Predominantly Shame-Specific Themes

1C.3 Intrapunitive motivation for suicide stated as self-hate and/or feeling like a failure: Eleven of the 16 cases (68.75%) coded referred to their self-hate (or similar term) and/or feeling like a failure (or similar term), in and of itself, as a reason for wanting to die by suicide. They described, for example, the sense of being overwhelmed and of being unable to cope with these thoughts and feelings, and/or the hopelessness they felt from seeing themselves in this way. Examples are provided below:

Table 21. Example Quotes for Research Question 1C, Intrapunitive Motivation for Suicide Stated as Self-Hate and/or Feeling like a Failure

Participant	Quote
Participant ##	*"Shame, guilt, self-hatred, I'm really hard on myself….and just a lot of self-loathing […] and that's just the way that I was thinking that, you know like, I've been trying to solve the problem with me being in the equation but I am the problem, so I might as well just remove that portion and allow others to have a second chance at happiness and at getting the fulfillment in life that they deserve. And I was like a roadblock. And I was just feeling like hopeless."*
Participant 012	*"You loathe yourself because you just, you can't get over the fact that – damn, this was the thing to do it. You hate the fact – you hate yourself because it's like if I was to just lean on her, and cope with the fact that everything I have ever gone through and then it just disgusts you 'cause it's just like, I should have coped with this all a long time ago, that way the situation would have never occurred. And you hate yourself because it's just like, you are the reason why this all occurred. Because of you, all this happened. […] All the thoughts were going through my head. And I drive. […] And I pretty much look at every guard rail […]. You just see every one as an opportunity to just take the pain away."*

Participant 046	*"I would never change, but even if-had I changed at all? I felt pretty good before all of this, for a little while that I was making progress, I wasn't re-en-raging on people, I wasn't mad. But I just felt like such a failure when I did get into this fight and I didn't realize how much I was bottling up, to make me want to hurt myself."*

Predominantly Guilt-Specific Themes. No predominantly guilt-specific themes were noted for this research question.

1D. How does <u>thwarted belongingness</u> and <u>perceived burdensomeness</u> relate to the emotions of shame and/or guilt?

Our team coded 16 cases in total for this research question (i.e., until group consensus that saturation was reached). For this research question, thwarted belongingness and perceived burdensomeness were operationalized per Joiner's (8) definitions. Specifically, thwarted belongingness was coded when there was evidence that the participant's interpersonal needs were unmet, such as when they expressed feeling like an outsider, feeling disconnected from people, that interpersonal interactions were not satisfying, that other people did not care or were unsupportive, or that they did not belong. Perceived burdensomeness was coded when the participant expressed a perception of being a burden to others or society, such as stating that others would be better off, happier, or relieved by their death, that others wish for their death, or that the participant is worth more dead than alive. Notably, perceived burdensomeness cannot be inferred from evidence of reduced interpersonal support, as this would better fit the label of thwarted belongingness. No themes in relation to shame, guilt, and thwarted belongingness emerged.

Table 23. Summary of 1D Themes

Shame and/or Guilt	Predominantly Shame	Predominantly Guilt
•**Feeling like a burden in relation to a social role, linked to shame and/or guilt** *(63%)*	•**Shame associated with feeling like a burden within social roles** *(56%)*	•**None**

Shame and/or Guilt Themes

1D.1 Feeling like a burden in relation to a social role, linked to shame and/or guilt:

Ten of the 16 cases coded (62.5%) referenced shame and/or guilt in relation to feeling like a burden within a social role within the family and/or professional domain. Within the family domain, social roles referenced included being a parent, a spouse, a son (no reference to role of daughter), and a provider; within the professional domain, social roles referenced included being a military leader, a coworker/peer, and the role of employee. Examples are included below:

Table 24. Example Quotes for Research Question 1D, Feeling Like a Burden in Relation to an Important Social Role, Leading to Shame and/or Guilt

Participant	*Quote*
Participant 600	*"I would like to know I don't have to be a burden on society or a bum. I would like to be able to pull my own weight."*
Participant 012	*"Just at work being around the work environment, I don't do much. Because of you know I'm not exposed to the autopsies anymore because of my issues. So I just run around begging people to give me paper to shred or do mundane stuff which, kind of hurts my, my self-worth a little bit because I like to be, you know, an active part of my command and, and contribute, in an important way. And I just feel like I'm just like, less than a secretary, you know?"*
Participant 009	*"The first reason was financially we were having problems, so adding even more onto that, was adding more stress to the time bomb, so I knew she wouldn't, she wasn't going to like it and […] inside, I knew that she knew that I was doing it even though I told her I wouldn't. So I knew that*

	was happening. Another thing that I knew that was going to be hard that came out was after she had kicked me out of the house and we decided to start living apart I ended up having a relationship with the second girl that I met, the one that wasn't talking to me. I kind of thought after we left that was it, I was done with the relationship, it was over, so I guess I was already at that point, I had made up my mind that, "Hey, that's it. The marriage is over, it's done." But for some reason my wife, she was temporarily at that stage and then as time went on she kind of, I guess, changed and had a change of heart and started to want me back and to kind of patch things up and work on things. And I had already went out of my comfort zone and kind of already ventured on to like a different area. And that had been weighing on my mind for quite some time."

Predominantly Shame-Specific Themes

1D.2 Shame associated with feeling like a burden within social roles: Nine of the 16 cases coded (56.25%) referenced feeling like a burden within a social role, and that this burdensomeness was specifically associated with their feelings of shame. Guilt was sometimes referenced as well, though not often enough for a separate theme to emerge. Notably, while some participants described shame-inducing incidents that eventually led to feeling like a burden, others stated their feelings of shame came *from* feeling like a burden. Examples are provided below:

Table 25. Example Quotes for Research Question 1D, Shame Associated with Feeling like a Burden within Social Roles

Participant	Quote
Participant 600	*"I want to go back to school. I want to be productive, but I feel like it's myself keeping me from doing that. I deal with a lot of anxiety and a lot of worry. Of guilt and shame."*
Participant 514	*"When I would say certain things, like to my mom, going to high school that would make her frustrated or upset or angry, you could tell that it didn't make my step-dad happy because she was frustrated or upset or angry. So he didn't deal with it the right way in saying 'Why would you*

tell her something like that?' 'Cause then that just makes someone who doesn't wanna burden people, not wanna burden people. And then when they tell you, 'yeah, we started smoking cigarettes again' and they were a 20 year smoker and you know what smoking does to people. And you're just like, 'that's why I don't tell you anything.' I don't want you to die because I'm going through something."

Predominantly Guilt-Specific Themes. No predominantly guilt-specific themes were noted for this research question.

1E. How does the experience of <u>hopelessness</u> relate to the emotions of shame and guilt?

Our team coded 16 cases in total for this research question (i.e., until group consensus that saturation was reached). *Hopelessness* was coded when participants explicitly referred to feeling "hopeless," "without hope," or having "no hope," or when they described feeling that a stressor or source of pain in their life would not improve (e.g., "Nothing was ever going to change/get better," "I will never be happy," or, "I was tired of trying, it was pointless").

Table 26. Summary of 1E Themes

Shame and/or Guilt	Predominantly Shame	Predominantly Guilt
•**Hopelessness about being able to change a maladaptive behavior** *(44%)*	•**None**	•**None**

Shame and/or Guilt Themes

1E.1 Hopelessness about being able to change a maladaptive behavior: Seven of the 16 cases coded (43.75%) described experiencing hopelessness about being able to change a maladaptive behavior for which they expressed shame and/or guilt. Notable examples of the

specific behaviors include: their tendency to ruminate; a gambling or sex addiction; their pornography use; and coping with stress through suicide ideation or hospitalization. Example quotes are provided below:

Table 27. Example Quotes for Research Question 1E, Hopelessness about Being Able to Change a Maladaptive Behavior

Participant	Quote
Participant 145	*"I've often described it as having a TV or two or three or four in there. It's a bit of a blessing and a curse. On one hand, it's led me to be a very creative person on the other hand, since I was a child I remember struggling in school because even if I was interested in whatever was being taught or the assignment that needed to be done I could feel myself just being kind of sucked into my own mind, I'd be trucking along and realize I hadn't moved my pencil in ten minutes. I always thoughts that's just how I was. […] I was, I guess you could say, it was hopelessness. Not in the sense that I didn't think the future didn't have anything to hold for me but I was hopeless in the sense that no matter what amazing life I built for myself I knew I wouldn't be able to enjoy it with my mind being the way it was."*
Participant 046	*"I would never change, but even if-had I changed at all? I felt pretty good before all of this, for a little while that I was making progress, I wasn't re-enraging on people, I wasn't mad. But I just felt like such a failure when I did get into this fight and I didn't realize how much I was bottling up, to make me want to hurt myself."*

Predominantly Shame-Specific Themes. No predominantly shame-specific themes were noted for this research question.

Predominantly Guilt-Specific Themes. No predominantly guilt-specific themes were noted for this research question.

1F. What strategies are used to regulate feelings of shame and guilt during a suicidal crisis?

Our team coded 16 cases in total for this research question (i.e., until group consensus that saturation was reached). This study identified and defined *emotion regulation strategies* using a theoretically-driven approach. Specifically, this study utilized the conceptualization first developed by Gross (205), which has now been extensively used and refined in the literature (for a review, see 207). This conceptualization categorizes six different emotion regulation strategies: avoidance, acceptance, problem-solving, reappraisal, rumination, and suppression.

Avoidance was coded when participants referenced strategies that helped them to avoid thoughts, emotions, and/or experiences as a way of avoiding or reducing emotional distress, such as utilizing distractions, eating, isolation/withdrawal, outward displays of anger, self-harming, sleep, and/or substance use to avoid an unwanted emotional experience. Acceptance was coded when participants referred to strategies that helped them engage with the emotion, such as crying, journaling, writing letters, and/or talking with others about their emotions. Problem-solving was coded when participants showed a conscious attempt to change or manage an emotionally distressing situation, such as asking others for help, brainstorming solutions, repair behaviors (e.g., apologizing), and/or engaging in another emotion regulation strategy as a problem-solving strategy (e.g., engaging in distraction to calm down before a difficult conversation). Reappraisal was coded when participants generated benign or positive reinterpretations of a situation as a way of reducing emotional distress, such as reappraising a stressful interaction, situation, thought, or worry. Rumination was coded when participants described repetitively focusing on the experience of an emotion and its causes and consequences, without evidence of effective problem solving. Finally, suppression was coded when participants

described voluntarily suppressing a distressing emotion and/or thoughts associated with increased emotional distress. No themes emerged relating shame and/or guilt with the emotion regulation strategies of acceptance, problem-solving, reappraisal, or suppression.

Table 28. Summary of 1F Themes

Shame and/or Guilt	Predominantly Shame	Predominantly Guilt
• **Strategy 1: Avoidance** *(63%)* • **Strategy 2: Rumination** *(50%)* • **Strategy 3: Self-Directed Injury** *(44%)*	• **Strategy 4: Sensation-Seeking & Addictive Behaviors** *(44%)*	•**None**

Shame and/or Guilt Themes

1F.1 Emotion Regulation Strategy 1: Avoidance: 10 out of the 16 cases coded (62.50%) referenced the use of avoidance strategies at approximately the same time within their narrative that they had described experiencing shame and/or guilt. Of note, our team was unable to confirm that these avoidance strategies can be directly tied to the participant's shame and/or guilt in all of these cases, since many participants did not explicitly verbalize the associations between their thoughts, feelings, and behaviors (e.g., "I felt ashamed and therefore I slept all day"). Only 4 of the 10 cases where this theme was coded contained clearly stated evidence of a connection among shame, guilt, and avoidance strategies. Nonetheless, our team reached a consensus that the temporal association among shame, guilt, and avoidance strategies among the 10 cases was sufficient to document a potential pattern. Examples are provided below:

Table 29. Example Quotes for Research Question 1F, Emotion Regulation Strategy 1: Avoidance

Participant	Quote
Participant 012	*"I struggle with shame, guilt, self-hatred, I'm really hard on myself, I don't particularly welcome compliments, I always kind of steer clear of them or they make me feel uneasy whenever they're given to me. And I was just a lot of self-loathing and I became to, I started becoming very anxious and I had already been for almost a year on Effexor.[…]I began to drink in the morning on my way to work. And I'd buy those big 24-ounce cans which, which would equal two regular size beers. And I wouldn't get intoxicated but I would get at that comfortable level where I could be comfortable in my own skin"*
Participant 032	*"I felt guilty that I was this weak mother this weak wife and it was just guilt you know you see people who are actually physically hurt and you have this pain that you can't explain. […] My husband tried to keep me busy and then I just got to a point where I was dying I just didn't want to do anything else."*
Participant 600	*"I think by staying away from them I'm trying to protect them from myself. I like I'm trying to protect myself from myself. Isolating is a defense mechanism and I would rather not get to that point, but at this time of my life it's all I know. I don't feel comfortable around people. I get the sense that they don't feel comfortable around me. And I guess I've sort of always been that way, but it seems to be getting worse."*

1F. 2 Emotion Regulation Strategy 2: Self-Directed Injury: Seven of the 16 cases coded (43.75%) described engaging in self-directed injury (with or without intent to die) in relation to the distress of shame and guilt. Examples are provided below:

Table 30. Example Quotes for Research Question 1F, Emotion Regulation Strategy 2: Self-Directed Injury

Participant	Quote
Participant 009	*"I think it's more along the lines of 'I've lost that marriage.' I failed at it. I've destroyed it, out of my actions. And that's what's so upsetting. […] And that was a point in time where 'okay, let me just cut myself and relieve the pain,' or 'let me just sit here and start hitting my head against the wall because eventually I know I'll snap out of it and I'll start feeling better.'"*
Participant 012	*"I would cut, like some nights I would go over ten times you know, like making lacerations with a box cutter on my chest. And I would enjoy the pain. Because I felt something for once, I felt like I was so dead inside and I was like at least I can still feel pain you know. And I was also using that as a method to punish myself for the pain I've caused my wife."*

1F.3 Emotion Regulation Strategy 3: Rumination: Eight of the 16 cases coded (50%) described, explicitly or implicitly, ruminating about one or more circumstances in their lives for which they also expressed feeling shame and/or guilt. Most often, participants described rumination about many problems, especially problems for which they felt responsible or they perceived as evidence of their failures. Examples are provided below:

Table 31. Example Quotes for Research Question 1F, Emotion Regulation Strategy 3: Rumination

Participant	Quote
Participant 600	*"Thoughts keep getting hung up on certain things. Like it's going in circles. It seems like – what are they called, 'ruminating thoughts?' […]"* *Therapist: What else?* *"Overwhelmed. Shame. Guilt. Out of control. Impulsive. Alone."*
Participant 009	*"The thoughts I ruminated about were the people at work and them achieving their goal, and score one for them, they're the victor. So I felt*

	like a super failure, I've put in a hard battle against these people for a full year and, of course, they won."
Participant 032	*"I just didn't want to think anymore I just didn't want to feel anything else I didn't want- I was tired of pretending on keeping the smile on my face because I perfected that so well over the years that I just think I couldn't do it anymore."*

Predominantly Shame-Specific Themes

1F.4 Emotion Regulation Strategy 4: Sensation-Seeking and Addictive Behaviors:

Seven of the 16 cases coded (43.75%) referenced engaging in sensation-seeking (i.e., excessive video gaming, driving well above the speed limit, overdosing with intent of "going numb") and addictive behaviors (i.e., gambling, alcohol, opioid, or nicotine use) in relation to managing emotional distress, including feelings of shame. Some participants referenced guilt as well, but shame was predominant across cases. Our team decided to group these constructs together with the assumption that the addictive behaviors mentioned could be considered a specific subcategory of sensation-seeking behavior (i.e., seeking to increase or decrease arousal through a behavior). Examples are provided below:

Table 32. Example Quotes for Research Question 1F, Emotion Regulation Strategy 4: Sensation-Seeking & Addictive Behaviors

Participant	Quote
Participant 009	*"I felt a little ashamed and embarrassed about it, but, came the next day I decided I was – I just forgot about all about it. I'm gonna go out and do it again. So the next week that came up, over the weekend, I started going to the casino and I started taking out money from my credit card, taking advances off it. […] I found myself going to therapy during the day. I would get off of therapy and I would drive straight to the casino and I would take out another amount of—now I was starting to push it up to $500. Of course at that time not winning, but spending the majority of my time there and again not caring. I found myself going to the groups and*

	even though it was a partial program and we discussed what we did, I found having a really hard time confessing to the other people in the group or the doctor that that's what I was doing with my time afterwards. I was, I guess I felt embarrassed about it and ashamed about it, but I was still feeling good."
Participant 145	*"And I can't remember the last time that I could tell you that I would look at myself in the mirror and remember who I was, like who I am as a man. And that just kept on sending me deeper into this like, self-loathing and self-pity and things like that and like, "Oh I'm a piece of crap," you know like, "My kids deserve better. My wife deserves a better chance." […]And then this one day I just became so obsessed with cutting, I was cutting like in the car before going to work, I would go to the bathroom, lock and the door and cut. You know, I was going back to the car to cut, and drink, and take my Valium. And I could just couldn't take that cycle anymore. I was like, like just I was caught up in this—I was just like a slave to the, to the alcohol and the Valium, my life revolved around that you know."*
Participant 605	*"I basically lived in my room. I was playing a game called RuneScape, and I put pretty much 16 hours a day into that game, and I would sleep the other eight hours. I only left my room to eat, and then I would go right back to my room, or I would bring the food back to my room. And I was getting really depressed, I didn't have any friends, really, except for my best friend and he had moved away […], and I felt really alone. […] So, with him gone I was just—I felt really depressed and lonely and I had done some things in college, I had gotten some pills, Vicodin at the time, but I hadn't used them yet, and I went to a store and got some sleeping pills, […] And I took them, I had some alcohol that I took from my grandpa's store and I drank it. Got a little tipsy and then I took the pills and I went to bed. I was feeling, like, you know, "Fuck this, it's not worth living like this anymore. My life sucks, I'm pretty lonely and I don't have anything going for me. I dropped out of college, I'm pretty worthless." A lot of feelings of worthlessness and just self-hate going on, and, yeah, I woke up the next day I hadn't died, so."*

Predominantly Guilt-Specific Themes. No predominantly guilt-specific themes were noted for this research question.

1G. In what ways are shame and guilt related to social problem-solving strategies?

Our team coded 16 cases in total for this research question (i.e., until group consensus that saturation was reached). This study borrowed from the social problem-solving constructs developed by D'Zurilla & Goldfried (207), which also forms the foundation of the social problem-solving self-report measure (i.e., the SPSI-R:L [203]) used in the quantitative portion of this study. D'Zurilla & Goldfried's (207) model identifies three social problem-solving styles (i.e., rational, impulsive/careless, avoidant styles) and two orientations to problem-solving (i.e., positive or negative).

Our coding team first identified a "social problem" as a problem between the participant and any other person or group of people. Rational problem-solving style was coded when participants described approaching such a problem by engaging in adaptive strategies such as brainstorming solutions, thinking through potential consequences, perspective-taking, asking for advice, and/or waiting for an appropriate time to address the problem. Impulsive/careless problem-solving style was coded when participants approached the problem by utilizing a reactive, immediate response, such as not thinking through the problem beforehand, blurting out a response, not considering potential consequences, demonstrating carelessness in a delicate situation, or otherwise mentioning that they "acted without thinking." Avoidant problem-solving style was coded whenever participants demonstrated a passive or avoidant approach to the problem, such as avoiding specific people, places or situations, procrastinating on a problem, avoiding telling an important piece of information, changing the subject or walking away, and/or expecting others to solve the problem. Impulsive/careless social problem-solving style was the only theme that emerged for shame and guilt.

Finally, D'Zurilla & Goldfried's (207) model also identified two general problem-solving orientations: positive and negative. A positive orientation to problem-solving was coded when participants described a perception of their problems as solvable, and/or referred to their ability to solve the problem. Conversely, a negative orientation to problem-solving was coded when participants described their problem(s) as unsolvable and/or that they do not have the ability to handle the problem. No themes emerged for positive orientation to problem-solving.

Table 32. Summary of 1G Themes

Shame and/or Guilt	Predominantly Shame	Predominantly Guilt
• **Impulsive/careless problem-solving style in relation to emotional distress, including shame and/or guilt** *(44%)*	• **Negative problem orientation** *(44%)*	•**None**

Shame and/or Guilt Themes

1G.1 Impulsive/careless problem-solving style in relation to emotional distress, including shame and/or guilt: Seven of the 16 cases coded (43.75%) described engaging in impulsive/careless problem-solving strategies in relation to emotional distress, in which shame and/or guilt themes were included. Examples are provided below:

Table 34. Example Quotes for Research Question 1G, Impulsive/Careless Problem-Solving Style in Relation to Emotional Distress, Including Shame and/or Guilt

Participant	Quote
Participant 003	*"[I] let out a really bad outburst and I didn't really want – I started having thoughts of hurting him and myself at the same time. That's when they stopped with all their stupid jokes and everything, that's when they started backing off."*
Participant 012	*"He was disrespectful towards me so immediately I knew that, there was gonna be a problem. And the way he was talking and the agitation in his voice I knew that uh you know that it was gonna get physical, that it was inevitable. […] And thank god that the staff didn't let that happen. And then I just completely disassociated, it was almost like I was possessed. […] But when I came down from that and I finally like wrapped my head around what just had happened I just, I started sobbing uncontrollably, like a, like a child. I couldn't even speak I was sobbing so hard. And I just felt of course, embarrassment, I felt shame, you know."*

Predominantly Shame-Specific Themes

1G.2 Negative problem orientation: Seven of the 16 cases coded (43.75%) described a pattern of perceiving their problems as unsolvable and/or explained that they did not possess the ability to solve their problems. These 7 cases also tended to experience higher levels of shame than guilt, both in frequency and intensity. There was insufficient evidence to conclude a link between shame and negative problem orientation. Notably, none of the cases where guilt was more frequently and/or intensely felt than shame showed a negative problem orientation, and, in fact, those cases trended toward a positive problem orientation (though insufficient to include this as a separate theme). Examples of this theme are provided below:

Table 35. Example Quotes for Research Question 1G, Negative Problem Orientation

Participant	Quote
Participant 012	*"The thing is that, I knew what I had to do, in order to start making things better, be open and honest, you know really try to resist alcohol, reach out to her more. But I just didn't have the motivation inside of me to do it. I didn't have that push, I didn't feel it you know, I was just going through the motions in trying to please her, trying to be a better husband. […] I don't know I just lost desire I didn't have any, any kind of push to really get better. I knew what I was doing, I was well aware of the consequences, and the pain that I was causing but I just, I didn't really want to stop. And then I was like this is a serious problem if I don't want to stop, something's wrong with me. And if I'm not trying to stop then why are they in my life, I'm just going to keep on hurting them again and again."*
Participant 600	*"I felt inadequate, I felt rejected in society, like I didn't belong, that I was not able to live my life, that I couldn't get a job. I couldn't understand my school work. I felt like I was trying to break through a concrete wall and the world was doing everything it could to keep me out."*

Predominantly Guilt-Specific Themes. No predominantly guilt-specific themes were noted for this research question.

QUANTITATIVE RESULTS

Control variables for quantitative aims. A series of Pearson's correlations and independent sample t-tests were performed to determine whether to control for 1) Age and 2) Sex in relation to the dependent variables (i.e., thwarted belongingness, perceived burdensomeness, hopelessness, emotion regulation strategies, and social problem-solving strategies).

Age. Age was negatively correlated with the DERS Awareness Total Score (r = -.356, n = 58, p =.006), such that the younger a participant was, the more likely he or she was to

score higher on lack of emotional awareness. Age was not associated with any other dependent variables.

Sex. Sex was significantly associated with the DERS Awareness Total Score ($t(56) = 2.386$, $p = .020$), such that male sex was associated with higher scores on difficulties with emotional awareness. Finally, sex was associated with INQ Thwarted Belongingness ($t(56) = 2.144$, $p = .036$), such that male sex was associated with higher scores on thwarted belongingness. Sex was not associated with any other dependent variables.

Correlations of shame and guilt magnitude with select item-level responses. Prior to conducting the regression analyses, the shame magnitude variable and guilt magnitude variable were assessed for their validity through a series of Spearman's rho correlations with 2 items on the DERS (i.e., item 21 for shame magnitude and item 25 for guilt magnitude), and 5 items on the BDI-II (i.e., items 3, 7, 8, and 14 for shame magnitude and item 5 for guilt magnitude).

Shame magnitude. Shame magnitude was not correlated with item 21 on the DERS ($r_s = .133$, $p = .321$), nor was it correlated with the BDI-II item 3 ($r_s = .143$, $p = .284$), item 7 ($r_s = .132$, $p = .323$), item 8 ($r_s = .115$, $p = .391$), and item 14 ($r_s = .046$, $p = .734$).

Guilt magnitude. Guilt magnitude was not correlated with either item 25 on the DERS ($r_s = .043$, $p = .749$) nor item 5 ($r_s = .149$, $p = .265$) on the BDI-II.

Descriptive summary of selected variables. The table below provides the descriptive statistics (i.e., mean, standard deviation, standard error, and minimum and maximum values) for each variable selected in Aims 2-4 of this study.

Table 36. Descriptive Statistics for Variables Selected in Aims 2-4

Variable	*Mean*	*SD*	*Std. Error*	*Minimum*	Maximum
Magnitude Shame	2.60	1.58	.21	0	5
Magnitude Guilt	1.74	1.83	.24	0	5
BHS Hopelessness	11.30	6.17	.81	0	20
INQ Thwarted Belongingness	36.36	12.24	1.61	9	57
INQ Perceived Burdensomeness	19.84	10.03	1.32	6	42
DERS Nonacceptance	20.48	6.40	.84	8	30
DERS Goals	17.60	4.99	.66	5	25
DERS Impulse	16.23	6.03	.79	6	29
DERS Awareness	18.57	5.62	.74	6	30
DERS Strategies	25.66	7.25	.95	8	40
DERS Clarity	15.09	5.09	.67	5	25
SPSI Negative Orientation	107.93	18.04	2.37	80	154
SPSI Rational Problem-Solving	99.66	17.38	2.28	64	136
SPSI Impulsive/Careless Problem-Solving	103.47	17.34	2.28	77	141
SPSI Avoidant Problem-Solving	105.43	16.68	2.19	78	148

Specific Aim 2. To determine the extent to which shame and guilt are consistently associated with suicide-related cognitions (i.e., thwarted belongingness, perceived burdensomeness, and hopelessness) among psychiatric inpatients admitted to a military treatment facility following a suicide-related event.

Hypothesis 2a. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater thwarted belongingness as measured by the Interpersonal Needs Questionnaire (INQ).

Results of Hypothesis 2a. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with thwarted belongingness as measured by the INQ, with sex as a covariate. A model with shame (β =-.079, p =.650),

guilt (β =.069, p =.696), and sex (β =-.275, p =.048) was not significantly associated with thwarted belongingness (R^2 =.080, F(3,54) =1.560, p =.210).

Hypothesis 2b. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater perceived burdensomeness as measured by the INQ.

Results of Hypothesis 2b. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with perceived burdensomeness as measured by the INQ. Results indicated shame (β =.011, p =.953) and guilt (β = .003, p =.985) were not significantly associated with perceived burdensomeness (R^2 =.000, F(2,55) =.005, p =.995).

Hypothesis 2c. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with higher levels of hopelessness as measured by the Beck Hopelessness Scale (BHS).

Results of Hypothesis 2c. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with hopelessness as measured by the BHS. Results indicated shame (β = .253, p =.153) and guilt (β = -.245, p =.168) were not significantly associated with hopelessness (R^2 =.043, F(2,55) = 1.226, p =.301).

Table 37. Summary of Aim 2 Multiple Linear Regressions

DV	*Predictors*	R^2	*F*	df_1	df_2	*β*	*p*
INQ Thwarted belongingness	Full model[1]	.080	1.560	3	54		.210
	Shame					-.079	.650
	Guilt					.069	.696
	Sex					-.275	.048*
INQ Perceived burdensomeness	Full model	.000	.005	2	55		.995
	Shame					.011	.953
	Guilt					.003	.985
BHS Hopelessness	Full model	.043	1.226	2	55		.301
	Shame					.253	.153
	Guilt					-.245	.168

*Note: *p <.05; **p <.01; ***p <.001; [1]Sex included as a covariate*

Specific Aim 3. To determine the extent to which shame and guilt are consistently associated with emotion regulation difficulties among psychiatric inpatients admitted to a military treatment facility following a suicide-related event.

Hypothesis 3a. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater nonacceptance of emotional responses while distressed, as measured by the Difficulties in Emotion Regulation Scale (DERS).

Results of Hypothesis 3a. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with nonacceptance of emotional responses as measured by the DERS. Results indicated shame (β =.049, p =.782) and guilt (β =.103, p =.563) were not significantly associated with nonacceptance of emotional responses (R^2 =.020, F(2,55) =.551, p =.580).

Hypothesis 3b. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater limitations in effective emotion regulation strategies while distressed as measured by the DERS.

Results of Hypothesis 3b. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with limitations in effective emotion regulation strategies while distressed as measured by the DERS. Results indicated shame (β =.004, p =.983) and guilt (β =.013, p =.941) were not significantly associated with limitations in emotion regulation strategies while distressed (R^2 =.000, F(2,55) = .007, p =.993).

Hypothesis 3c. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater difficulty engaging in goal-directed behavior while distressed as measured by the DERS.

Results of Hypothesis 3c. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with difficulty engaging in goal-directed behavior while distressed as measured by the DERS. Results indicated shame (β =-.053, p =.766) and guilt (β =.121, p =.498) were not significantly associated with difficulty engaging in goal-directed behavior while distressed (R^2 =.009, F(2,55) = .253, p =.778).

Hypothesis 3d. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with greater impulse control difficulties as measured by the DERS.

Results of Hypothesis 3d. Multiple regression was used to test if magnitude of shame

and magnitude of guilt was significantly associated with impulse control difficulties as measured by the DERS. Results indicated shame (β =.116, p =.514) and guilt (β =.001, p =.996) were not significantly associated with impulse control difficulties (R^2 =.014, $F(2,55)$ =.382, p =.684).

Hypothesis 3e. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with limited awareness of emotions as measured by the DERS.

Results of Hypothesis 3e. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with limited awareness of emotions as measured by the DERS, including age and sex as covariates. A model with shame (β =-.153, p =.367), guilt (β =.131, p =.429), age (β =-.369, p =.005), and sex (β = -.284, p =.029) was significantly associated with limited awareness of emotions (R^2 =.221, $F(4,53)$ =3.762, p =.009).

Hypothesis 3f. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with lack of emotional clarity as measured by the DERS.

Results of Hypothesis 3f. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with lack of emotional clarity as measured by the DERS. Results indicated shame (β =.216, p =.208) and guilt (β =.138, p =.418) were not individually associated with lack of emotional clarity. A model with shame and guilt together, however, was significantly associated with lack of emotional clarity (R^2 =.104, $F(2,55)$ =3.209, p =.048).

Table 38. Summary of Aim 3 Multiple Linear Regressions

DV	*Predictors*	R^2	*F*	df_1	df_2	*β*	*p*
DERS Nonacceptance	Full model	.020	.551	2	55		.580
	Shame					.049	.782
	Guilt					.103	.563
DERS Strategies	Full model	.000	.007	2	55		.993
	Shame					.004	.983
	Guilt					.013	.941
DERS Goals	Full model	.009	.253	2	55		.778
	Shame					-.053	.766
	Guilt					.121	.498
DERS Impulse	Full model	.014	.382	2	55		.684
	Shame					.116	.514
	Guilt					.001	.996
DERS Awareness	Full model[1]	.221	3.762	4	53		.009**
	Shame					-.153	.367
	Guilt					.131	.429
	Age					-.369	.005**
	Sex					-.284	.029*
DERS Clarity	Full model	.104	3.209	2	55		.048*
	Shame					.216	.208
	Guilt					.138	.418

*Note: *p <.05; **p <.01; ***p <.001; [1]Age and sex included as covariates*

Specific Aim 4. To determine the strength and consistency of the relationship among shame, guilt, and social problem-solving difficulties among psychiatric inpatients admitted to a military treatment facility following a suicide-related event.

Hypothesis 4a. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with a negative problem-solving orientation as measured by the Social Problem-Solving Inventory-Revised, Long Form (SPSI-R:L).

Results of Hypothesis 4a. Multiple regression was used to test if magnitude of shame

and magnitude of guilt was significantly associated with negative problem-solving orientation as measured by the SPSI-R:L. Results indicated shame (β =.030, p =.867) and guilt (β =.127, p =.475) was not significantly associated with negative problem-solving orientation (R^2 =.022, F(2,55) =.618, p =.543).

Hypothesis 4b. Higher magnitude of guilt, compared to higher magnitude of shame, will be associated with a rational problem-solving style as measured by the SPSI-R:L.

Results of Hypothesis 4b. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with rational problem-solving style as measured by the SPSI-R:L. Results indicated shame (β =-.130, p =.463) and guilt (β = -.055, p =.754) was not significantly associated with rational problem-solving style (R^2 =.029, F(2,55) =.833, p =.440).

Hypothesis 4c. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with an impulsive/careless problem-solving style as measured by the SPSI-R:L.

Results of Hypothesis 4c. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with impulsive/careless problem-solving style as measured by the SPSI-R:L. Results indicated shame (β =.001, p =.995) and guilt (β =.263, p =.133) was not significantly associated with impulsive/careless problem-solving style (R^2 =.070, F(2,55) =2.054, p =.138).

Hypothesis 4d. Higher magnitude of shame, compared to higher magnitude of guilt, will be associated with an avoidant problem-solving style as measured by the SPSI-R:L.

Results of Hypothesis 4d. Multiple regression was used to test if magnitude of shame and magnitude of guilt was significantly associated with avoidant problem-solving style

as measured by the SPSI-R:L. Results indicated shame (β =-.082, p =.639) and guilt (β =.272, p =.123) was not significantly associated with avoidant problem-solving style (R^2 =.052, $F(2,55)$ =1.496, p =.233).

Table 39. Summary of Aim 4 Multiple Linear Regressions

DV	***Predictors***	R^2	***F***	df_1	df_2	β	***p***
SPSI-R:L Negative Orientation	Full model	.022	.618	2	55		.543
	Shame					.030	.867
	Guilt					.127	.475
SPSI-R:L Rational	Full model	.029	.833	2	55		.440
	Shame					-.130	.463
	Guilt					-.055	.754
SPSI-R:L Impulsive/ Careless	Full model	.070	2.054	2	55		.138
	Shame					.001	.995
	Guilt					.263	.133
SPSI-R:L Avoidant	Full model	.052	1.496	2	55		.233
	Shame					-.082	.639
	Guilt					.272	.123

*Note: *p <.05; **p <.01; ***p <.001*

CHAPTER 4: DISCUSSION

This dissertation study involved an examination of the association of shame and guilt with thwarted belongingness, perceived burdensomeness, hopelessness, emotion regulation, and social problem-solving using both qualitative and quantitative methods in an exploratory sequential design. The specific aims of this study were twofold: (1) to qualitatively explore personal experiences of shame and guilt in relation to suicidality among individuals psychiatrically hospitalized following a suicide related-event; and (2) to assess the extent to which shame and guilt were associated with suicide-related cognitions (i.e., thwarted belongingness, perceived burdensomeness, and hopelessness), emotion regulation difficulties, and social problem-solving deficits.

Data from 58 active duty, retired, Reservist, and National Guard service members and eligible adult dependents who were (1) admitted to the inpatient psychiatric units of WRNMMC, FBCH, or the DC VAMC due to a suicide-related event; (2) randomized into a cognitive-behavioral intervention condition; and (3) agreeable to the recording of their psychotherapy sessions was used as the basis for this dissertation study. Suicide narratives, obtained from psychotherapy sessions 1 and 2, were thematically analyzed to address the qualitative aim of the project. Next, a series of regressions were performed to address the second, third, and fourth quantitative aims of the project.

A review of the demographic characteristics of the sample as well as a separate discussion of the qualitative and quantitative findings, followed by an integrative commentary are provided in this section. Limitations and strengths of the study are highlighted. Furthermore, research and clinical recommendations are provided.

Demographic Profile of Selected Cases and Generalizability of Findings

A total of 58 individuals met this dissertation study's eligibility criteria and were drawn from the parent randomized controlled trial. The demographic characteristics of these individuals who consisted of approximately a quarter of the overall RCT sample were similar to all other RCT participants. Overall, the dissertation study sample was primarily active duty military (69%) and in general, closely resembled the 2017 DoD active duty military demographics. For instance, the study sample was primarily Caucasian (62.1% versus 68.9% in DoD), almost half married (48.3% versus 52.6% in DoD), and predominantly enlisted (75.9% versus 82.3% in DoD), with a similar average age (31.4 years versus 28.3 years in DoD). Three notable areas of difference (study sample vs. DoD demographics) were the following: (1) while the study sample consisted of 55.2% male military personnel, this was lower than the 2017 DoD reported estimate of 83.8% males serving in the U.S. military; (2) the study sample was primarily Navy (29.3%), whereas the U.S. Army is the largest branch of service in the DoD (36.5%; 208); and (3) the study sample was composed of approximately 82.2% of individuals with at least one lifetime attempted suicide - while DoD data in this domain is lacking, national U.S. estimates indicate a 0.6% prevalence of lifetime attempted suicide among adults aged 18 or older (209). Given such differences, the findings of this study may only be generalizable to psychiatric inpatients receiving care at military and/or VA treatment settings, due to suicide-related events.

It may also be worth noting that 37.9% of our sample did not identify as Caucasian, which is a relatively high percentage compared to many studies. Though the suicide rate among Non-Hispanic Caucasians has traditionally been higher than most other racial groups (except Native Americans; Goldsmith, Pellmar, Kleinman, & Bunney, 2002), some studies suggest

suicide rates among specific age groups within racial minorities are increasing (e.g., Bridge, Horowitz, Fontanella, Sheftall, Greenhouse, Kelleher, & Campo, 2018). Among Black/African American youth in the U.S., for example, suicide rates are increasing, and in some cases, surpass the age-equivalent rate among White/Caucasian youth (e.g., Bridge et al., 2018; Ballard, Cwik, Van Eck, Goldstein, Alfes,… & Wilcox, 2017). Suicide is the third leading cause of death among Black/African American adolescents and young adults (i.e., aged 15 to 24; Heron, 2016), and yet this demographic remains widely underrepresented in suicide research. Similarly, Hispanic populations have been widely ignored in suicide research (e,g., Wadsworth & Kubrin, 2007), probably in large part due to their historically low suicide rates (e.g., CDC, 2017). However, studying these and other demographic groups may be critical to understanding the cultural factors that have historically protected minorities from suicide, as well as how cultural assimilation, socioeconomic mobility, racial discrimination, and other unique stressors may influence the suicide trajectory within these socially disadvantaged groups. While this study did not have the sample size to run additional analyses based on demographic factors, the higher percentage of non-White/Caucasian participants of this study promotes the generalizability of our findings to psychiatric inpatients of differing racial/ethnic backgrounds.

Nonetheless, it is important to consider how demographic variables might influence the experience and expression of shame and guilt in psychotherapy narratives, which could affect our findings. Given the strong link between stigma and shame, for example, several studies have theorized that members of stigmatized groups (e.g., racial, ethnic, and sexual minorities, persons of low socioeconomic status) may be more likely to experience shame when the individual's self-perception is shaped by the social prejudices of the dominant group (e.g., Schmader &

Lickel, 2006). Furthermore, cultures differ somewhat with regard to which behaviors are likely to elicit shame, meaning that unobserved cultural differences within our sample (e.g., level of acculturation to military culture, racial/ethnic cultural differences) will influence our findings.

Finally, religious affiliation and religiosity may also meaningfully contribute to differences in how participants experienced and expressed shame and guilt. While studies of religion and moral emotions have rarely distinguished between shame and guilt, most have found a strong link between religiosity and guilt (Luyten, Corveleyn, & Fontaine, 1998). Furthermore, Ratanasiripong (1996) found that the specific religious belief of unconditional divine forgiveness (i.e., divine grace) was positively associated with shame-free guilt. Only a handful of studies have ever looked at differences in shame and guilt among different religious affiliations. Generally speaking, the Catholic religious tradition has typically shown higher levels of both "adaptive" and "maladaptive" guilt compared to other faiths (e.g., Braam, Sonnenberg, Beekman, Deeg, & Van-Tilburg, 2000; Albertsen, 2002). Two studies have also found that Protestants (London, Schulman, & Black, 1964) and Lutherans (Albertsen, 2002) have similarly high levels of guilt to Catholics, and higher than other religious traditions studied (e.g., Judaism, Buddhism). Given the extensive role that religion can have in shaping our language and culture, it is reasonable to assume that persons of different faiths may also be prone to using particular terms and expressions commonly used within their faith-based culture. A Catholic, for example, may be more prone to using terms for penance (e.g., "I should be punished") and contrition (e.g., "please forgive me") in line with the Catholic tradition of confession. These and other demographic differences should be considered when interpreting the results of this study,

especially given the critical role of language choices and expression in shaping our qualitative coding of shame and guilt.

Perceived vs. Actual Lethality of Suicide Attempt

Among participants who were admitted due to a recent suicide attempt, most believed the lethality of their chosen suicide method would lead to death (67.2%), though, from a medical standpoint, most suffered only minor physical damage (22.4%). Assessing the *perceived* lethality of the chosen suicide method can be helpful in gauging the person's intent at the time of the suicidal behavior, as it demonstrates the individual's desired outcome. Furthermore, it can be dangerous for providers to assume that low *actual* lethality can be used as a proxy for suicide intent, as nonfatal suicide attempts with a high level of lethal intent have been shown to predict eventual death by suicide (e.g., Suominen, Isometsa, Ostamo, & Lonnqvist, 2004). Individuals may have a high intent to die, but lack the medical knowledge necessary to understand the lethality of different suicide methods (Brown, Henriques, Sosdjan, & Beck, 2004). For example, studies have shown that adolescents often underestimate the dosage needed to fatally overdose on Tylenol (Myers, Otto, Harris, Diaco, & Moreno, 1992). Furthermore, first suicide attempts generally have lower lethality than subsequent suicide attempts (Reynolds & Eaton, 1986). While shame and guilt have been associated with self-injury both with (e.g., Wiklander et al., 2012) and without (VanDerhei et al., 2014) suicidal intent, neither emotion has thus far been investigated for their potential association to suicide lethality or intent.

Our sample may be biased toward persons with a lower level of actual lethality of suicide method for a variety of reasons: first, our sample leaned young, with an average age of 31 years, and studies have shown that young people are more likely to attempt suicide using lower

lethality methods (De Leo et al., 2001; Dombrovski et al., 2008). A little less than half (45%) of our sample was female, and women are less likely than men to use high-lethality suicide methods – though, notably, women in the military are more likely to use firearms as a suicide method than women in the civilian sector (Kaplan, McFarland, Huguet, 2009). Finally, our sample consisted of persons who were motivated to participate in a psychotherapy study, and may therefore represent individuals with a higher degree of hopefulness and help-seeking than persons who attempt suicide using high lethality methods. Studies show that persons who die by suicide and persons who attempt suicide using highly lethal methods show a similar, lesser degree of help-seeking behavior compared to individuals who attempt suicide using less lethal methods (Levi et al., 2008; Swahn & Potter, 2001).

Qualitative Findings: Understanding Shame and Guilt Themes as Described during Patients' Suicide Narratives as the Basis for Generating Hypotheses for Further Investigation

A systematic review of common themes expressed by patients during their suicide narratives resulted in 16 emerging patterns across research questions 1A, 1C, 1D, 1E, 1F, and 1G, with 10 (62.5%) relating to *both* shame and guilt, 5 (31.25%) relating *predominantly* to shame, and 1 (6.25%) relating *predominantly* to guilt. The noted frequencies of emerging themes highlight the interrelatedness of shame and guilt and the relative significance/relevance of shame compared with guilt in the context of suicide stories shared by patients. The discussion of qualitative findings that follows provides additional context for each of the 16 themes, organized in accordance with its corresponding research question.

Research Question 1A: Precipitants to Shame and Guilt

The co-occurrence of shame and guilt was most often precipitated (1) by a prior or recent incidence of attempted suicide and/or psychiatric hospitalization (75%); or (2) by a decline in academic and/or professional functioning (67%). Our findings pertaining to experiencing shame and guilt activated due to prior suicidal behaviors and/or psychiatric hospitalizations are somewhat in accordance with published qualitative reports, although most of these have emphasized shame over guilt reactions (166; 210; 211; 212). Given that this is the first study to examine self-reported themes of shame and guilt among military personnel, it is perhaps likely that such emotions are more often co-occurring within a military sample.

Our coding team noted a slight tendency for guilt to be expressed in relation to the perceived impact of the suicide attempt or hospitalization on the participant's career and significant others, which is well-aligned with guilt's tendency toward empathic concern for others (e.g., 6). Additionally, shame was slightly more likely to be discussed in relation to not dying by suicide as intended. However, neither of these associations occurred sufficiently to develop into separate shame-specific or guilt-specific themes. It is worth noting that persons who react negatively to surviving their suicide attempt are at significantly higher risk of eventual death by suicide (e.g., 213; 214), so this finding may have particularly salient clinical implications in the treatment of persons at risk for suicide. Future studies are encouraged to explore the potentially disparate roles of shame and guilt in relation to negative reactions toward surviving a suicide attempt.

Our findings pertaining to experiencing shame and guilt activated due to a decline in academic and/or professional functioning are well-aligned with epidemiological data showing

that up to 25.1% military suicide decedents experience administrative and/or legal problems, as well as financial and workplace difficulties, within the month leading up to their death by suicide (17). This common finding has also been the basis for the Air Force Suicide Prevention Program's Limited Privilege Suicide Prevention (LPSP) Program, which gives an added level of confidentiality to airmen receiving mental health services while undergoing legal and/or administrative punishment when they are deemed to be at higher risk for suicide (215). Given this study's finding that participants expressed shame and guilt in relation to workplace and academic struggles, and given the link between shame and difficulty with help-seeking (e.g., 216), it is possible that service members experiencing workplace difficulties may hesitate to seek help in a timely manner, a behavior that can potentially increase their risk for adverse career-related outcomes, which may subsequently escalate feelings of shame and guilt – and a desire to escape and/or to self-punish through the act of suicide.

It is also important to consider the ways in which individuals expressed guilt, specifically, in relation to their academic and workplace difficulties. Individuals often expressed guilt, whether or not they also expressed shame, as regret for specific actions they took that led to or exacerbated their academic and/or workplace difficulties. Research has shown that people tend to feel more responsible for their action than for their inaction (217), and are more likely to experience regret in relation to greater perceived opportunity (218). It makes sense, then, that individuals would express regret about actions that transitioned them from feeling successful in an important domain of their life (i.e., work and/or school) to feeling like a failure. Their perception of previously having been successful in this domain exacerbates their sense of responsibility and failure for actions they perceive as having worsened their performance in work

or school.

Research Questions 1A: Predominantly Shame-Related Precipitants

Shame was often precipitated by harsh negative self-appraisal due to multiple perceived failures (75%). Specifically, several individuals described shame, and not guilt, as stemming from overly harsh self-evaluations made in response to relatively minor wrongdoings, similar to the association between shame and negative, global, and stable self-appraisals described in the literature (e.g., 6). Furthermore, these precipitants highlight how a subset of individuals described a *tendency* to experience shame, due to their proneness toward harsh self-appraisals, as a contributor to their trajectory toward suicide. As previously discussed, a tendency toward making global, stable, negative self-appraisals is linked to suicide (33). Moreover, a study of neuroanatomical differences of persons who died by suicide (n = 9) compared to psychiatric patients who died of other causes (n = 30) found evidence of disruption in the von Economo neurons (VENs), a unique spindle-shaped cell type clustered in the rostral anterior cingulate cortex and anterior insular cortex (219) which have been implicated in emotion regulation (220), and disorders associated with difficulties in empathetic perspective-taking (220; 221; 222; 223). Brune and colleagues (219) suggest that their findings may point to an association among pathological levels of negative self-referential thoughts and emotions (including shame), neuroanatomical anomalies in the VENs, and suicide. Furthermore, studies have proposed that a high sensitivity to experiencing shame promotes the desire to avoid shame (i.e., shame aversion), and that shame aversion may have a greater association to depressive symptoms than the presence of shame experiences alone (224). It may be, then, that persons with a tendency toward global, stable, negative self-evaluations are more prone to shame, and that their high sensitivity

toward experiencing shame may promote the belief that shame is a painful emotion that should be avoided. Their attempts to avoid shame may promote an attentiveness toward potential shame-inducing situations, which, paradoxically, increases the salience of shame-inducing thoughts and thus increases their proneness to shame.

Research Question 1A: Predominantly Guilt-Related Precipitants

Guilt was often precipitated by concerns related to familial functioning. Individuals' experience of guilt, and not shame, in relation to perceived wrongdoings toward family supports previous findings that guilt can be an other-oriented emotion where concern is focused on one's effect on others (e.g., 6). Relationship difficulties within the month preceding suicide were noted in 39.5% of military suicide decedents in 2016 (17), and interpersonal conflict has been consistently associated with suicide ideation and attempts (e.g., 225). While guilt may promote prosocial behaviors like apology and perspective-taking, and some researchers argue that guilt only leads to psychopathology when it becomes context-insensitive and fused with shame (6), our findings show that guilt, and not shame, over specific wrongdoings in relation to family, can still become so painful and overwhelming that it contributes to one's trajectory toward suicide. Furthermore, our coding team was unable to find a connection between guilt and reparative *behaviors*, only that guilt was often expressed in relation to a desire to apologize or make amends (similar to previous qualitative studies; e.g., 174), which suggests participants may have had difficulty engaging in the prosocial behaviors associated with guilt despite their desire to do so. In fact, a major criticism of the Test of Self-Conscious Affect (TOSCA; 39), a widely-used quantitative measure of shame and guilt using Lewis' (21) conceptualization, is its focus on guilt-related behaviors. Specifically, critics of the TOSCA suggest that the focus on reparative

behavior confounds the emotion of guilt with interpersonal adjustment, and does not adequately measure the affective experience of guilt (53). Further research is needed to understand the factors that may determine when guilt leads to reparative action and when it does not. Our findings suggest that persons at risk for suicide often experience guilt in relation to their familial functioning, and experience the desire to engage in reparative action in connection with their guilt, but may feel too overwhelmed by the emotional distress to actually engage in the behaviors that could repair these family conflicts.

Research Question 1B: Frequency and Variations in Emphasis of Shame and Guilt in Suicide Narratives

Overall, shame was referenced more often than guilt (i.e., only 10.3% of cases did not reference shame, while 43.1% of cases did not reference guilt). Shame was also more often described with greater intensity than guilt (i.e., 74.1% of cases, referenced emotionally intense shame themes, versus 46.5% of cases with regard to guilt). Finally, shame, compared to guilt, was slightly more often described as important in the trajectory toward suicide (i.e., 46.5% of cases referenced shame as a reason for dying, compared to 37.9% of cases with regard to guilt). This finding supports prior research showing that psychiatric inpatients may be more prone to shame (e.g., 226), and supports the idea that shame may more frequently contribute to the trajectory toward suicide.

Approximately 43% and 18.9% of those who experienced shame or guilt, respectively, did not explicitly or implicitly describe a connection between these emotions and their desire to die by suicide. It is unclear whether these individuals may have had more difficulty relating these emotions to their suicidal thoughts and behaviors, had more difficulty expressing these

associations in session, or simply experienced shame and guilt emotions without having them meaningfully contribute to their desire to die by suicide.

Another group of individuals described shame (10.3%) and/or guilt (13.8%) experiences as one of many contributors to their desire to die by suicide, while two other groups of individuals described shame (36.2%) and guilt (24.1%) as a primary reason for dying (either self-reported or coder-reported based on statements made during psychotherapy). It is notable that there was only a slight difference in percentage of individuals who expressed guilt (37.9%), compared to shame (46.5%), as a reason for dying. This is yet another finding that supports a role of both shame and guilt in the trajectory toward suicide, which contradicts a common assertion in the literature stating guilt is primarily associated with positive outcomes and less likely than shame to contribute to suicide (e.g., 6). However, this research question was not designed to answer how many participants described shame and guilt *jointly*, as opposed to guilt-alone and shame-alone, in their suicide narratives, so it may be that participants who described guilt as a reason for dying often described shame as well, could have used these terms interchangeably, or could have felt more comfortable using the term 'guilt' to represent both emotions.

Research Question 1C: Shame, Guilt, and Motivations for Contemplating or Attempting Suicide

The following themes emerged for both shame and guilt: (1) intrapunitive motivation for suicide in relation to several perceived failures; and (2) suicide as an escape or relief from emotional distress of shame and guilt. There was one shame-specific theme that emerged, where self-hate and/or feeling like a failure was stated as an intrapunitive motivation for suicide.

Notably, the intrapunitive motivation for suicide in relation to several perceived failures

was described in relation to both shame *and* guilt, despite the overall tendency to describe "feeling like a failure" as a shame-related expression. This finding may help to elaborate how the trajectory toward suicide may be influenced by both shame and guilt. Specifically, our coding team noted that individuals often cited regrets and/or guilt in relation to specific wrongdoings, and referred to shame when expressing global, stable, negative self-evaluations resulting from *several* specific wrongdoings. However, our coding team was careful not to ascribe a chronological sequence to these emotions, and thus, it cannot be determined whether guilt preceded shame; instead, it was noted that guilt was the more salient emotion described in relation to specific wrongdoings, whereas shame was the more salient emotion described when participants reflected on what these specific wrongdoings may say about who they *are*. This finding demonstrates how guilt and shame can be meaningfully distinct emotions while remaining heavily interlinked (e.g., 3).

Similarly, both emotions were implicated in the intolerable emotional distress that some individuals cited as their reason for wanting to escape through suicide. This finding contradicts this study's conceptual framework, which proposed shame would have a stronger association to escape tendencies based on prior studies (6; 138; 18; 140; 141; 92). Notably, these studies used quantitative methods that promoted a fairly adaptive conceptualization of guilt, which may help to explain why this study's results differed. By allowing individuals to explain these associations in their own words through the course of psychotherapy, this dissertation study captured more emotionally distressing components of guilt that may be missing in some quantitative measures of guilt (e.g., 53).

Baumeister (131) proposed that suicide may be the ultimate escalation of a person's

desire to escape from others, from current life problems, and associated negative reflections on the self. As previously noted, shame and guilt were both implicated in the distress associated with individuals' several perceived failures in multiple domains of their lives (i.e., decline in academic and professional performance, family-related regrets, and multiple perceived failures in the trajectory toward suicide). As aversive, self-conscious emotional states, it makes sense that shame and guilt would contribute to a desire to die through the desire to escape emotional distress. However, the methodology used in this dissertation may also have introduced language and expressivity biases (e.g., using 'guilt' and 'shame' interchangeably, as previously discussed), so the finding that both shame and guilt were related to a desire to escape through suicide should be interpreted with caution.

A shame-specific theme emerged in relation to individuals' motivations for contemplating or attempting suicide: self-hate and/or feeling like a failure was stated by many as an intrapunitive motivation for suicide *in and of itself.* This finding demonstrates how these two specific cognitions, which are associated with feelings of shame, can be particularly painful experiences. No other shame- or guilt-related cognitions (e.g., regret, remorse, self-disgust, self-anger) were directly stated as a reason for dying. Prior studies have similarly found an association between low self-esteem (a similar construct to self-hate; 227; 228) and between perceived shortcomings or lack of success (229; 230) with suicide ideation and behaviors. The direct connection made by participants between these cognitions and their desire for suicide may have particularly salient treatment implications, which will be explored in the recommendations section later in this chapter.

Research Question 1D: Shame, Guilt, Thwarted Belongingness, and Perceived Burdensomeness

The primary theme noted was the link between shame, guilt, and feeling like a burden within a social role. This theme was also noted for shame specifically, where over half of cases coded described shame as associated with feeling like a burden within important relationships and social roles.

Unfortunately, no themes emerged regarding thwarted belongingness in relation to either emotion, as thwarted belongingness as a theme was relatively rare for this sample. Various quantitative and qualitative studies have found evidence of thwarted belongingness among military personnel experiencing suicidal ideation and behaviors (e.g., Anestis et al., 2015; Brenner, Gutierrez, Cornette, Betthauser, Bahraini, & Staves, 2008), and service members have reported feeling disconnected from others, especially civilians (Brenner et al., 2008), and especially after deployment (Bryan, 2010; Anestis, Bryan, Cornette, & Joiner, 2009). Nonetheless, this study did not find sufficient evidence of thwarted belongingness, with our coding only noting occasional references to transient states of feeling detached or lonely. This finding may demonstrate that shame and guilt, as socially-derived emotions, may be especially pertinent to the trajectory toward suicide among socially connected individuals. Individuals who do not experience lack of belonging during their suicide crisis may instead focus their interpersonal distress on their perceived wrongdoings towards meaningful others, and what these wrongdoings may say about them, rather than feeling disconnected from these relationships.

Our coding team decided to reference the theme of feeling like a burden within a social role both in relation to shame and guilt and in relation to shame-predominantly to recognize that, while shame was more often cited in relation to feelings of burdensomeness, there were a notable number of individuals who referenced both emotions at some point during their description of

feeling like a burden. This finding may be best understood in relation to our previously discussed themes of 'shame and guilt in relation to a decline in academic and professional functioning,' 'shame in relation to negative self-appraisals and several perceived failures,' and 'guilt in relation to family functioning,' as guilt and burdensomeness were most often referenced when individuals described regrets about how specific behaviors have affected their functioning in important domains of their lives (especially in relation to family). Shame was often described in relation to burdensomeness as a negative global, stable self-appraisal about what the participant's lack of contribution says about his/her worth within that social role.

Within the family domain, social roles referenced included being a parent, a spouse, a son (no reference to role of daughter, which may likely just be a factor of fewer women represented in this sample), and a provider; within the professional domain, social roles referenced included being a military leader, a coworker/peer, and the role of employee. Notably, guilt was referenced more frequently among participants who reflected on their social roles within the family domain, while shame was slightly more common among participants who reflected on their social roles within a professional domain. The trend between guilt and feelings of burdensomeness within the family domain may be best understood in light of previous findings that guilt is more often associated with empathic concern for others (22), and the evolutionary psychology construct of kin-altruism (231). Kin-altruism suggests that evolutionary processes have favored altruism when it provides benefits for recipients who share the same genes for this adaptation (i.e., family; 232), and helps to explain why individuals tend to be more altruistic toward family members than to friends (233).

The slight tendency for individuals to experience shame in relation to burdensomeness in

professional domains may stem from the more public nature of the workplace, in combination with the established structure of performance expectations and standards within a work environment, which may provide a foundation for participants to feel exposed when performance expectations are unmet (whether real or perceived) (234). Furthermore, military organizations deliberately instill and promote a sense of organizational identification, meaning service members can be particularly inclined to define themselves by their military role and performance (235). Military indoctrination practices are deliberately designed to teach service members to view themselves in collective terms and subordinate their self-interests in service of group goals (236). Therefore, when service members begin to falter in professional expectations they have now integrated into their own sense of identity and self-worth, they may be particularly prone to appraising their unmet standards as evidence of personal failure to uphold their obligations to their group, leading to burdensomeness and shame.

Research Question 1E: Shame, Guilt, and Hopelessness

For some individuals, perceived failures stemmed from specific and recurrent maladaptive behavior(s), and the perceived negative effects of such behavior on others. These perceived failures were linked with feeling increasingly guilty and ashamed – and as described, hopeless about change. This finding may reflect previous studies investigating the effect of hopelessness on the motivational system (237), where increases in hopelessness have been associated with decreased activation of the neural circuitry associated with approach systems, leading to decreased goal-directed behavior (238; 239). Specifically, Davidson and colleagues (e.g., 240) found that relatively less left-sided frontal activation "represents an impaired approach system and a vulnerability to depression" (p. 282, 241), and research conducted by

Haeffel and colleagues (241) expanded upon this concept by detecting a mediating effect of hopelessness in the association between cognitive vulnerability to depression and decreased goal-directed behavior.

One may speculate that as individuals encounter stressful life events for which they have learned to cope through a particular behavior (e.g., drinking alcohol excessively), they generate negative self-appraisals leading to feelings of shame and/or guilt. Over time, these negative self-appraisals may increase their vulnerability to thoughts of hopelessness about achieving their behavioral goals, and as their hopelessness increases, research suggests their approach system shuts down goal-directed behaviors (241). Their greater difficulty in engaging in goal-directed behaviors may exacerbate their tendency to engage in these behaviors (negative reinforcement loop) for which they feel guilt and shame, leading to greater hopelessness, which is robustly associated with increased risk of suicide (242; 243).

Research Question 1F: Shame, Guilt, and Emotion Regulation Strategies

Both emotions were described in the moments leading up to the use of avoidance emotion regulation strategies. Moreover, the distress in reference to one's shame and guilt was associated with self-directed injury. Finally, rumination about events linked to shame and guilt was noted. Regarding predominantly shame-specific themes, addictive and sensation-seeking behaviors were noted in the management of shame-related distress. One of the many challenges in studying emotional functioning comes from the difficulty individuals have in reporting the motivations underlying their behaviors accurately (244; 245), and the same concern seemed to be prevalent in this theme.

The relatively common use of avoidance strategies in this sample is well-aligned with

previous studies on avoidance tendencies and increased risk of suicide (e.g., low frustration tolerance, 246; poor distress tolerance, 247; distress intolerance, 248; affect phobia, 249; unbearability, 122; experiential avoidance, Hayes, Strossahl, & Wilson, 250). As was previously discussed in Chapter 1, shame is robustly associated with avoidance tendencies (e.g., 251), though research on guilt and avoidance has resulted in mixed findings (e.g., 252). A study by Schmader and Lickel (252) found that shame and guilt were highly correlated with avoidance tendencies in relation to self-caused wrongdoings, but not for other-caused wrongdoings, where shame showed a stronger association to avoidance. As the authors put it, "if I feel ashamed of who I am, I probably also feel guilty for what I do. However, I can feel ashamed of the actions of others without necessarily feeling guilty or responsible for their behavior" (p. 54, 252). Since most individuals discussed shame and guilt in relation to perceived self-caused wrongdoings, it may be less likely that this dissertation study would capture meaningful differences between shame and guilt in relation to the use of avoidance strategies for emotion regulation.

Furthermore, many individuals noted the use of self-directed injury in relation with the emotional distress of shame and guilt. The literature has been fairly consistent on the association between shame and self-directed injury (e.g., shame-proneness and NSSI, 160), while studies on guilt and self-directed injury have led to contradictory findings (e.g., 253; 160). Self-directed injury can be considered an avoidance emotion regulation strategy in that it allows the individual to avoid experiencing a negative emotional state by engaging in a behavior that elicits a different (and maybe even positive) emotional state, similar to distraction (254; 253). This finding appears similar to the previously discussed finding that shame- and guilt-related distress were both linked to a desire to escape through suicide, in that individuals may have sought to escape the distress of

shame and guilt through self-injury. Additionally, NSSI, shame, and guilt have all been individually linked to the desire for self-punishment (e.g., 255; 256; 257), suggesting that self-directed injury may be a response to a desire for self-punishment in relation to wrongdoings for which one is experiencing shame and/or guilt.

Finally, individuals described ruminating about events for which they also expressed feeling shame and/or guilt. Rumination is an emotion regulation strategy that involves prolonged, repetitive thinking about the circumstances producing emotional distress, without evidence of problem-solving (258), and has been associated with increased risk of depression (e.g., 259) and suicide (e.g., 259). Studies on shame and rumination have consistently shown a strong association (e.g., 261; 262). Though some studies have called the association between guilt and rumination into question when shame is controlled for (e.g., 261; 262), there is overall support for the relation between guilt and rumination (e.g., 263; 264). Our findings suggest this sample may be particularly vulnerable to ruminating on shame- and/or guilt-inducing situations, and that these experiences may be relevant to their trajectory toward suicide.

Addictive and sensation-seeking behaviors were noted in the management of shame-related distress. Sensation-seeking is considered a biological trait linked to a willingness to take risks for the sake of experiencing novel, intense sensations (265), and can include addictive behaviors (266; 267; 268). Research on shame and sensation-seeking is limited, though one study found shame to be associated with *less* sensation-seeking behaviors (269). It is possible that the sensation-seeking behaviors described in these suicide narratives may be better characterized as a desire to engage in distraction in combination with ambivalence about death (an often observed cognition among suicidal individuals [270]), which could explain why shame

was linked with these behaviors in this sample but has been associated with less sensation-seeking in the scientific literature. Nevertheless, several studies have supported a link between shame and addictive behaviors, both in predicting addictive behaviors and as a painful emotional consequence of having engaged in addictive behaviors (e.g., shame and alcohol and drug use, 80; shame and hypersexual behavior, 271; shame and gambling, 272).

Research Question 1G: Shame, Guilt, and Social Problem-Solving Orientation and Strategies

Both emotions were related to impulsive/careless problem-solving style, while shame was specifically related to a negative problem-solving orientation. Both negative problem-solving orientation and an impulsive/careless problem-solving style have been linked to greater hopelessness and suicidal behaviors (273; 274; 275). While no studies were found linking either shame or guilt to an impulsive/careless social problem-solving style or negative problem-solving orientation, a few possible explanations for this finding may be inferred from the literature.

First, impulsive behaviors, which can be defined broadly as rapid and unplanned behaviors without consideration of possible consequences (276; 277), have been robustly linked to borderline personality disorder (BPD; 87). Impulsive behaviors in BPD have been conceptualized to serve, at least in part, the function of managing negative emotions (255; 278). Specifically, impulsive behaviors may provide distraction or relief from the intense emotional distress being experienced, and may therefore be related to short-term reward-based decision-making approaches (279). Given the level of emotional distress described by individuals in relation to shame and guilt, it logically follows that our sample may have been particularly vulnerable to making immediate, unplanned decisions while experiencing this high level of distress in an attempt to experience emotional relief. This finding would also be in line with the

previously discussed theme of shame and guilt in relation to escape/relief motivations for suicide.

Second, a negative orientation to problem-solving refers to an individual's low motivation to solve a problem due to their perception that the problem is frustrating, threatening, and unsolvable (280). Given our previously discussed finding that shame (and guilt) was often expressed in relation hopelessness about changing a specific maladaptive behavior, it may be inferred that individuals expressed a sense of frustration and powerlessness in solving this problem for which they felt ashamed. Lastly, it may also be inferred that the link between shame and the tendency to appraise wrongdoings as resulting from stable (i.e., unchanging), global (i.e., pervasive) negative qualities about the self would promote a perception of futility in attempting to resolve problems for which one has made this appraisal.

Quantitative Findings: Understanding Associations among Shame, Guilt, Suicide-Related Cognitions (i.e., Thwarted Belongingness, Perceived Burdensomeness, and Hopelessness), Emotion Regulation Difficulties, and Social Problem-Solving Deficits

Overall, it was expected that shame, compared with guilt, would be more consistently associated with suicide-related cognitions (i.e., thwarted belongingness, perceived burdensomeness, and hopelessness), emotion regulation difficulties, and social problem-solving difficulties. However, none of the hypotheses evaluated in this part of the dissertation study were supported. More specifically, neither shame nor guilt magnitude were associated with thwarted belongingness, perceived burdensomeness, or hopelessness. Shame and guilt magnitude were also not associated with most emotion regulation difficulties (i.e., nonacceptance of emotional

responses while distressed, limitations in effective emotion regulation strategies while distressed, difficulty engaging in goal-directed behavior while distressed, impulse control difficulties, limited awareness of emotions).

Several notable findings, nevertheless, emerged. First, a model with shame, guilt, and age and sex as covariates was significantly associated with limited awareness of emotions, such that lower shame magnitude, greater guilt magnitude, younger age, and male sex were associated with lower awareness of emotions. Second, a model with shame and guilt was significantly associated with lack of emotional clarity, such that greater shame and guilt magnitudes were significantly associated with greater lack of emotional clarity. Notably, shame and guilt were never individually significantly associated with any of the dependent variables in any model.

Null Findings

There are many possible explanations for the several null findings in the quantitative portion of this study. First and foremost, it is important to consider that this study was slightly underpowered to detect a medium effect size, so the null findings may simply reflect that this study was not sufficiently powered to detect an effect of shame and guilt on suicide cognitions, emotion regulation difficulties, and problem-solving difficulties. It may also be true that there simply is not an effect of shame or guilt on the dependent variables, though existing research has found evidence for at least some of these associations (e.g., shame, guilt, and perceived burdensomeness; Rogers et al., 112), as previously discussed in Chapter 1.

The limitations of this study may also have impacted our findings: for example, the shame and guilt magnitude coding did not correlate with any of the item-level responses on the BDI-II and DERS about shame, guilt, or similar constructs. Moreover, an exploratory analysis of

possible collinearity found that, though multicollinearity was not detected, the shame and guilt magnitude ratings had a correlation of r=.65. This finding suggests that our methodology may not have sufficiently captured distinct differences between these two emotions, and/or may reflect the interchangeability within these two emotions in colloquial language. Though this correlation did not rise to a level in which multicollinearity was an issue, it may signify that only a sample size commensurate with detecting small effect sizes would have been capable of capturing statistically meaningful differences between these two very similar variables. Furthermore, there are several possible confounds that were introduced into the shame and guilt magnitude coding, such as the individual's degree of emotional awareness and expression. During the coding process, our coding team noted how most therapists used the terms 'shame' and 'guilt' interchangeably when discussing these emotions with the individual, with only one therapist offering a description of the differences between these emotions during session. The interchangeability of these emotions in colloquial language may have limited the study's ability to accurately capture the emotion being experienced versus the emotion that was described.

Thwarted Belongingness

A model with shame, guilt, and sex as a covariate was not associated with thwarted belongingness,. However, sex was individually significantly associated with thwarted belongingness, as was previously observed in the selection of sex as a covariate for this dependent variable. Some previous studies, however, have suggested that women may be particularly sensitive to experiencing thwarted belongingness compared to men (281), though other studies have found contrasting results (e.g., 282). For example, a study of suicide risk predictors among 994 college-aged men (n = 303) and women (n = 691) reported that men had

significantly higher thwarted belongingness scores, though thwarted belongingness did not predict suicidal ideation in either group (283).

Men typically report larger social networks than women, but are less likely to mobilize social support in times of stress (e.g., 284). Furthermore, women are more likely than men to invest in and provide social support within their social networks (e.g., 285), and may be more effective providers of social support (286). Previous studies have found a link between reciprocity and belongingness, such that persons' cooperative and accommodating behaviors increase social desirability and, over time, social inclusion (287; 288). Persons experiencing thwarted belongingness are more likely to engage in aggressive (289) and less prosocial (290) behaviors, which may lead to further social exclusion (291).

Cultural factors specific to male service members may also be at play in relation to this sample's significantly lower thwarted belongingness among males. Military culture has been described as a "cult of masculinity" (292), such that masculine social norms are rigidly emphasized and enforced within military society (293). While military culture heavily promotes masculine unity as a way to instill a high level of social cohesion (292), male service members experiencing mental health concerns may become especially vulnerable to perceived or actual social exclusion due to their subversion of the masculine ideal of emotional control (294).

Emotional Awareness

A model with shame, guilt, and age and sex as covariates was significantly associated with limited awareness of emotions, such that lower shame magnitude, greater guilt magnitude, younger age, and male sex were associated with limited awareness of emotions. However, it is

important to note that, once more, only the covariates (i.e., younger age and male sex) were individually significantly associated with limited awareness of emotions. It is not surprising that younger age was associated with limited emotional awareness, since several studies have shown a link between aging and greater emotional understanding, greater differentiation of emotional experiences, and greater emotional control (295).

Masculinity norms, and possibly military culture's previously discussed emphasis of masculinity norms, may be an important factor in understanding the link between male sex and lower emotional awareness. Specifically, socialization norms for men prescribe a limited role for emotional expressivity and accepted emotional responses (e.g., 296), which is linked to findings that men are generally less emotionally aware than women (297; 298). Emotional awareness can be divided into two dimensions: emotional clarity (i.e., the ability to identify and discriminate between specific emotions) and attention to emotions (i.e., the motivation to attend to and reflect upon affective experiences) (299). Low attention to emotions and low emotional clarity is suggested to play an especially important role in psychopathology among men (300). Though emotions are meant to be an adaptive source of information to guide cognitive processes, emotional clarity is a necessary component of accurately understanding and making use of emotional arousal (301). Men with low emotional clarity may therefore be more prone to "developing psychopathological beliefs because they do not have access to valid or accurate emotional information" (302, p. 2). Even when emotional information is valid or accurate, low attention to emotion decreases the likelihood that men will be cued to this information.

The interchangeability of shame and guilt in colloquial language may partly explain the finding that guilt, and not shame, trended toward lower emotional awareness. Guilt is considered

a more socially acceptable emotion to express in everyday language within U.S. culture, while the word ‘shame’ is generally avoided or used in conjunction with guilt (6). It makes sense, then, that participants with low emotional awareness may defer to the colloquial use of ‘guilt’ in referring to emotional arousal associated with perceived wrongdoings, without attending to distinctions between shame and guilt. Similarly, it may be that participants who explicitly used the term ‘shame’ have the greater emotional awareness that may be needed to differentiate these emotions, and would therefore receive a higher shame magnitude rating than those with lower emotional awareness.

Emotional Clarity

There are several potential explanations for the finding that shame and guilt magnitude jointly were associated with greater lack of emotional clarity. As previously discussed, individuals who scored higher on both shame and guilt magnitude may have been more likely to use ‘shame’ and ‘guilt’ interchangeably, or to describe their emotions without labeling them such that our coding team had to interpret the emotion being described. Individuals’ interchanging use of ‘shame’ and ‘guilt’ labels and/or their use of emotion descriptions may be representative of greater difficulties with emotion differentiation, and our coding scheme may have introduced this as a confounding factor. Emotion differentiation (also known as emotion granularity) has been considered by some as a facet of emotional clarity (e.g., 303; 304).

Additionally, studies have found a link between shame and alexithymia symptomatology, such that persons who exhibit greater difficulty in describing their emotions are more prone to fear of negative evaluation (e.g., 305). Furthermore, many individuals in our sample described traumatic experiences (e.g., childhood and adulthood sexual trauma, car accidents, combat-

related deaths) in relation to their feelings of shame and guilt. Studies have shown a robust link between posttraumatic symptomatology and difficulties in emotional expressivity (for a meta-analysis, see 306), as well as among posttraumatic symptomatology, shame, and guilt (i.e., moral injury; 307). As previously discussed in Chapter 1, the tendency to use 'shame' and 'guilt' interchangeably has been a major obstacle in the study of how these emotions may differentially relate to psychopathology. Nonetheless, it is also important to recognize that, given the high number of analyses run for this study, any one of our quantitative findings may have been found by chance (e.g., 308).

Conclusions

A common finding of this and other studies was the interchangeability (e.g., 6) and interconnectedness (e.g., 3; 252) of shame and guilt experiences, though subtle differences were noted. First, shame was a more often experienced emotion in suicide narratives, or more often contained references to its emotional intensity. While most qualitative themes that emerged related to both shame and guilt, guilt was more often described in relation to specific wrongdoings and regrets, while shame was experienced more globally, in relation to the amalgamation of many small moments that were perceived as failures and personal shortcomings. Both were described as psychologically painful leading to a desire to escape through suicide, though only shame-related cognitions (i.e., self-hate and feeling like a failure) were directly cited as reasons for dying. Furthermore, guilt experiences more often contained references to how the individual's behavior impacted family, while shame commonly referenced

failure to meet expectations within more culturally-ascribed social roles (e.g., breadwinner/provider, military leader, worker).

Several similarities were noted in associations of shame and guilt with suicide-related cognitions and behaviors. Shame and guilt experiences often served the role of both the inciting event for an undesired behavior (i.e., addictive behavior, self-directed violence, suicide attempt) and its painful consequence, which suggests these emotions may create a vulnerability to developing an additive cycle of emotional distress among persons at risk for suicide. While some individuals described a longstanding tendency to experience negative, overly harsh self-appraisals, others cited specific events and circumstances that contributed to acute feelings of shame and guilt. Often, these circumstances included comparing their current performance to past performance in domains of their lives that may be especially likely to challenge their sense of competence and worth to society at large (i.e., academic and professional domains).

However, most individuals did not express a subsequent perception of nonbelonging, as social psychology theories may suggest (309; 310); instead, the circumstances for which individuals experienced shame and guilt were more directly tied to their sense of becoming a burden, both to family and in relation to societal roles. As Hjelmeland & Knizek (311) suggested in their critique of Joiner's (8) IPTS model, "because perceived burdensomeness might require a feeling of being integrated with others, we find it difficult to see how these two components can be present simultaneously to such a high degree as must be required to constitute a suicidal desire. If you think no one cares about you, how can you perceive to be a burden (to them/whom)?" (p. 3). Our findings suggest shame and guilt may be more pertinent in the trajectory toward suicide of individuals who feel a sense of social connectedness and belonging,

such that they experience a strong desire to reciprocate within these social roles, and their perception of not adequately doing so contributes to feelings of burdensomeness and a desire to die (312; 313).

Regarding emotion regulation and social problem-solving strategies employed, our findings suggest individuals experienced considerable difficulty managing shame- and guilt-related social situations and emotional distress. Specifically, the most commonly employed emotion regulation strategies, avoidance and rumination, have both been extensively linked to psychopathology (e.g., 314; 200; 315; 316; 317). Rumination has been proposed to activate and exacerbate negative thoughts, memories, and mood, to interfere with problem-solving and implementation of adaptive regulation strategies (e.g., reappraisal; 318), and to promote loss of social support through increased alienation (319). Furthermore, rumination can itself be considered an avoidance strategy, since worry can serve as a distraction to avoid thinking about other stressors, and provide a false sense of control over one's emotions and circumstances (317). Several studies have linked a tendency toward avoidance (or similar constructs, such as low frustration tolerance, poor distress tolerance, affect phobia, unbearability, and experiential avoidance) with an increased risk of suicide (e.g., 250). This association may be at least partly explained by the fact that avoidance can often have the paradoxical effect of increasing the salience of avoided material (320; 321), which has become an essential conceptualization of exposure treatments for anxiety-related disorders, obsessive-compulsive related disorders, and PTSD (e.g., 322). Furthermore, avoidance of distress in social situations contributes to interpersonal problems (323; 324), explained in part by a greater tendency to react impulsively for the short-term reward of escaping emotional distress (324). Furthermore, avoidance

tendencies are considered "inconsistent with broader values of interpersonal intimacy, altruism, and cooperation," since tolerating emotional vulnerability is an important component of effective interpersonal communication and increasing interpersonal connections (250).

Limitations & Strengths

The proposed dissertation study was limited by a number of factors. First, the data used for this study was not originally collected to address the aims of this project, which therefore limited this study's sample size, ability to compare against a control group, ability to make applicable modifications to the measurements used, and provide longitudinal information on shame, guilt, and the trajectory toward suicide. The limited sample size prevented this study from exploring interaction effects to better understand the role of covariates in our findings (e.g., understanding how age or sex may have influenced the effect of shame and guilt), and prevented analysis of possible mediators (e.g., depression symptomatology, borderline traits). Additionally, selection bias may be possible, since persons experiencing high levels of shame and guilt may presumably be less likely to consent to participate in the study or to consent to audio-recording of sessions. The individuals' discussion of emotional content during their suicide narratives may also have been biased and/or inaccurately recalled, especially given consideration that this study's sample is derived from those undergoing an experimental psychotherapy intervention. As would be expected of any therapist-patient interaction, each therapist in this study provided slightly different instructions, reflections, summaries, and interruptions throughout the psychotherapy sessions, which may have created meaningful distinctions in each patient's interpretation of how to provide their suicide story (e.g., when and how much emotional content to provide throughout the story). Participants also likely differed in

their willingness to disclose within the first and second psychotherapy session compared to later sessions, may have differed in their willingness to discuss relevant military cultural issues within a military hospital setting, and likely had differing skill levels in labeling and expressing their emotions. This study was slightly underpowered and findings may represent at Type 1 error, especially considering the multiple number of analyses to be performed. Furthermore, the qualitative measurement used for shame and guilt was not counterbalanced by quantitative assessments of shame and guilt, which limited its validation. Finally, the cross-sectional nature of this study limited interpretation of the results, and the sample used for the study (i.e., a clinical, highly symptomatic inpatient sample) limited the study's generalizability.

Nonetheless, this study offered a number of strengths in its methodology and contribution to the scientific literature. The mixed methods approach used in this study, which included the personal suicide narratives of service members and their beneficiaries, provided a unique opportunity to learn about the association of shame, guilt, and suicide thoughts and behaviors from the patient's lived experience and perspective. Since these narratives were provided as part of a psychotherapy session, patients were more likely to be open and forthcoming with their experiences of shame and guilt compared to other contexts. Furthermore, our study was able to capture the suicide narratives of participants within as little as 24 hours after their most recent suicide-related crisis. The acute nature of the suicide-related crisis in our sample presents a major strength compared to retrospective studies of suicide, which are often the norm within the suicide literature. While the study may have been slightly underpowered, the novel, exploratory nature of this study provided a rich context for evaluating the proposed conceptual model, generating hypotheses, and guiding future studies. The qualitative methods used to measure shame and guilt

offered the advantage of limiting bias and concerns posed by current quantitative measurement tools, and also made a novel contribution to the literature on the assessment and measurement of these emotions. Finally, the specificity of this sample (i.e., suicidal military members and dependents receiving inpatient care) was expected to provide actionable clinical recommendations for inpatient psychiatric care of service members at risk for suicide.

Applying Lessons Learned to a Clinical Conceptualization

As previously discussed in Chapter 1 of this dissertation study, a major goal of this project was to apply lessons learned from qualitative and quantitative findings to a clinical conceptualization of how shame and guilt may influence the trajectory toward suicide, using Beck's (182) CBT model as a framework. Grounded theory methods were selected for the qualitative portion of this study in part due to their emphasis on theory advancement and hypothesis generation (325). Though the original conceptualization hypothesized was not supported, this study's qualitative findings are particularly well-suited to constructing new hypotheses for how the associations among shame, guilt, suicide-related cognitions, emotional

distress, and interpersonal functioning contribute to suicidal desire and action. The following model is offered based on our findings:

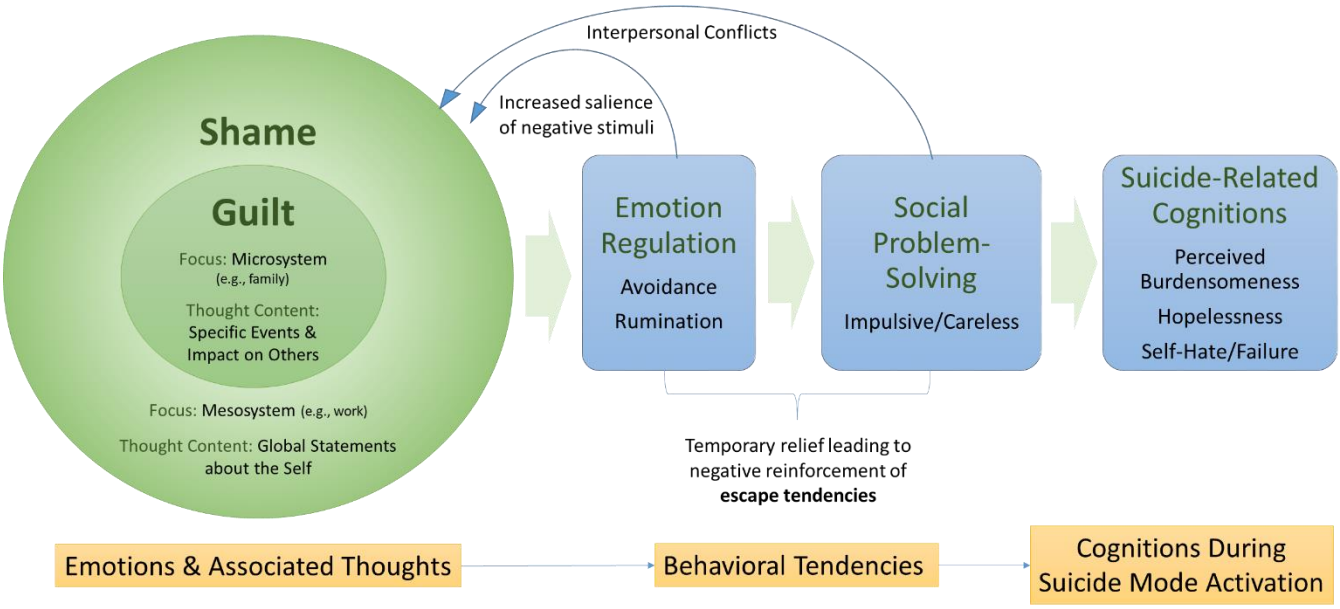

Figure 10. Proposed CBT Model of Shame, Guilt, and Suicide

Shame and guilt are interconnected yet distinct emotions, with differing thought processes that focus in different aspects of the individual's social environment. Specifically, when an individual perceives him/herself to be responsible for a wrongdoing, his/her feelings of shame focus thoughts on the individual's mesosystem (e.g., work, school; 326), where the content includes global statements about the self (e.g., "What does this say about me?"). The individual's feelings of guilt, however, focus thoughts on the individual's microsystem (e.g., family), where the content includes the specific event(s) and how the individual's behavior impacted others. When the individual uses avoidance and/or rumination strategies, these strategies are negatively reinforced by temporarily relieving emotional distress and providing a sense of control over his/her emotions. In the longer term, avoidance and rumination strategies

increase the salience of the negative stimuli that first induced shame and guilt feelings, which increases the likelihood of re-experiencing shame and guilt, whether in relation to the same (i.e., through rumination) or different event. Furthermore, the use of avoidance and rumination strategies, especially when reinforced over time, increase the likelihood of engaging in an impulsive/careless social problem-solving strategy out of a desire to avoid emotional distress during uncomfortable social interactions. Again, the temporary relief experienced reinforces the use of impulsive/careless social problem-solving strategies in future interactions, which promotes interpersonal conflicts. This cycle of shame and guilt leading to these emotion regulation and social problem-solving strategies may activate the suicide mode in the individual through an acute event or through prolonged distress. This cycle may not be the individual's only motivation to die by suicide, though it will still contribute to their desire to die through the suicide-related cognitions that may develop over time. Specifically, the individual's global self-statements, thoughts about how his/her behavior impacted others, emotional distress, interpersonal conflicts, and reinforced escape tendencies combine, and contribute to thoughts of being perceived as a burden, being hopeless to change his/her wrongdoings, and of self-hate and being a failure.

Recommendations

With this new conceptualization, a number of clinical and research ideas are recommended. During risk assessments, clinicians should be mindful to ask patients how they feel about living through their current and/or past suicidal crisis and/or hospitalization(s), as these may be particularly salient sources of shame and guilt and indicative of greater risk for future attempts. Safety plans should include identification of specific strategies to manage shame

and guilt when these emotions are identified as potential triggers. Burdensomeness and hopelessness may be especially important therapeutic targets in the prevention of future suicide crises among patients who express shame and guilt in their suicide narratives. Gaining a thorough conceptualization of the thoughts, feelings, sensations, and behaviors associated with shame and guilt will be the most effective strategy in identifying successful interventions.

Clinicians should consider developing a conceptualization that reflects the similarities and differences between shame and guilt, especially with regard to the differing thought processes for shame (i.e., focus on global statements about the self) versus guilt (i.e., focus on the specific behavior and how it has impacted others). When using this conceptualization to inform treatment planning, clinicians should be attentive toward cognitive distortions that may be particularly salient in the patient's daily experiences, as these may provide the foundation for restructuring a patient's tendency toward overly harsh self-blame (e.g., black-and-white thinking leading to the conclusion that he/she must be a "complete failure"). It may also be pertinent for clinicians to discuss specific instances where impulsive or careless strategies were used during a social interaction, and conduct chain analyses that identify opportunities for earlier awareness of escalating distress and effective emotion regulation.

Perhaps the most salient finding of this study was the level of emotional distress associated with shame and guilt. Participants described their struggle in regulating and managing these emotions, and the consequences of these difficulties. The association of shame and guilt to the emotion regulation strategies of avoidance and rumination suggests participants would have benefitted from learning new, more effective strategies in identifying, labeling, and regulating the intensity of these emotions. Clinicians are recommended to routinely describe the differences

between shame and guilt with illustrative examples, and to encourage patients to practice the deliberate labeling of their emotions. Furthermore, education on the adaptive and maladaptive functions of shame and guilt can help patients understand the function of these emotions and how to use emotional information more effectively. Teaching and practicing strategies such as acceptance (i.e., engaging with the emotion), problem-solving (i.e., finding a resolution to the situation in which one is feeling ashamed and guilty), and reappraisal (i.e., thinking of other possible interpretations of the situation) in session can serve functions of extinguishing learned patterns of behavior (e.g., escape tendencies), exposing the patient to these emotions in a safe, supportive environment, and ultimately, normalizing the idea that the patient has the skills to effectively regulate these and other painful emotions in the future.

Given our finding that shame and guilt were often discussed in relation to participants' suicide attempt or hospitalization, addressing feelings of shame, and possibly guilt, may be an important therapy goal among psychiatric inpatients admitted following a suicide-related crisis to increase help-seeking behaviors during future crises. A study on the use of mental health services in Sweden found that participants reported shame as the most common reason for not seeking help for psychiatric problems (327). Furthermore, the degree of shame individuals feel in relation to a personal disclosure predicts their willingness to disclose in a therapeutic setting (328), which suggests patients may struggle to discuss the shame, and possibly guilt, they experience in relation to previous suicide crises. Since regret for having survived a suicide attempt is one of the strongest predictors of eventual death by suicide (e.g., 329), clinicians are strongly encouraged to inquire about and address shame and guilt reactions in relation to the suicide attempt and/or hospitalization. Furthermore, clinicians are strongly encouraged to prepare patients to re-enter

their lives, and their life stressors, after hospitalization. Clinicians should promote communication skills that will help patients navigate complex discussions with family, friends, coworkers, and leadership regarding the circumstances of their hospitalization, their mental health needs, and ways that others can support them in their recovery. Similarly, clinicians working in military settings are required to communicate with the patient's leadership, and can use this opportunity to educate military leadership on strategies for providing support to their member, provide consultation on balancing the needs of their unit with the mental health needs of the member, and refresh their knowledge of warning signs and emergency procedures in case of a future suicide crisis. Clinicians working in military settings have a unique opportunity to go into the communities they serve and provide psychoeducation on confidentiality, misconceptions about career implications, and other common barriers to seeking mental health care. Clinicians working in military settings are especially encouraged to identify opportunities to promote a work environment that minimizes stigma related to psychiatric hospitalization, suicide, and mental health.

Regarding research recommendations, future studies should carefully consider strategies for measuring shame and guilt, as many options are available with differing strengths and weaknesses. Quantitative measures offer the advantage of efficiency and standardization, though are subject to the biases of differing theoretical conceptualizations of shame and guilt. Qualitative methods allow researchers to carefully consider the individual's lived experience with shame and guilt, though may introduce biases in relation to participants' skills in emotional differentiation, awareness, and expression. With either method, researchers are highly

encouraged to assess for both emotions in future studies, given their potential for differing associations with psychosocial variables.

More specifically, future studies are advised to further assess potential differences and similarities between shame and guilt in relation to emotion regulation and social problem-solving strategies and beliefs. The data for this study, for example, could be reanalyzed using qualitative groupings, where one could assess for differences in suicide-related cognitions, emotion regulation, and social problem-solving between persons whose suicide narratives referenced shame and guilt as linked to suicide compared to those who did not. Qualitative studies collecting original data on participants' views and beliefs about the role shame and guilt may have played in their trajectory toward suicide would provide greater clarity to the model proposed in this study. Future studies should consider identifying other emotions referenced in suicide narratives that may relate to shame and guilt, or that could potentially better explain differences in the multiple trajectories toward suicide. Furthermore, the findings of this study need to be replicated in quantitative studies assessing the strength of associations among shame, guilt, emotion regulation strategies, social problem-solving strategies, and suicide-related cognitions. Quantitative studies can also help to confirm and modify, as needed, the model proposed in this study.

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