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Marital Discord and Suicidal Behavior

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Abstract

The present study was conducted to examine the association between marital discord and suicide ideation, suicide planning, and suicide attempt in a large, population-based sample of adults *(n* = 1,845). The study assessed whether the association between marital discord and suicidal behavior was incremental to demographic variables and the presence of current psychiatric disorders. Results indicate a statistically significant and positive association between marital discord and suicidal behaviors and that this association is incremental to demographic variables and psychiatric disorders. These results suggest that marital discord may be an important correlate of suicidal behaviors and support the need for future research on marital discord and suicidal behaviors.

Marital Discord and Suicidal Behavior

According to The Centers for Disease Control and Prevention (CDC), suicide was the tenth leading cause of death for all ages in the United States in 2010 (CDC, 2012). In addition, between 2008 and 2009, an estimated 3.7% of adults in the U.S. (approximately 8.3 million adults) reported having thoughts of suicide, an estimated 1.0% of adults (approximately 2.2 million adults) reported having made suicide plans, and 0.5% of adults in the U.S. (approximately 1 million adults) reported making suicide attempts (CDC, 2012). A study conducted by Rockett et al. (2012) found that in the U.S. between 2000 and 2009, suicide increased by 15%, making suicide the leading cause of injury mortality, resulting in more deaths than motor vehicle crashes, poisonings, falls, or homicides.

In the study of suicide, researchers often make a distinction between those who have suicidal ideation/thoughts, those who engage in suicide planning, and those who make a suicide attempt. Researchers have found a variety of predictors of such suicidal behavior, including gender, race/ethnicity, and age. For example, males are four times more likely than females to succeed at committing suicide, whereas females are more likely to report having suicidal thoughts (CDC, 2012). American Indians/Alaska Natives are among the groups with the highest risk of suicidal behavior, with significant increases in suicide rates among American Indians/Alaska Natives and whites between 1999 and 2010 (CDC, 2013). Suicidal thoughts, suicide planning, and suicide attempts are all significantly higher among those aged 18 to 29 than among adults aged 30 and older (CDC, 2012). Kessler, Borges, and Walters (1999) found an increased risk of all three suicidal behaviors in individuals who were female, in their mid-twenties, had been previously married, were born into a more recent cohort as opposed to an earlier cohort, and had a lower level of education.

Prior research has also shown that mental health problems are a risk factor for suicidal behavior. For example, Kessler et al. (1999) found that the presence of one or more DSM-III-R disorders assessed in the National Comorbidity Survey was significantly associated with suicide ideation and suicide attempt. Among these assessed disorders were mood disorders, anxiety disorders, substance use disorders, conduct disorder, adult antisocial behavior, antisocial personality disorder, and nonaffective psychosis, of which mood disorders had a markedly higher association with suicide ideation and attempt than other disorders (Kessler et al., 1999).

Nock, Hwang, Sampson, and Kessler (2010) found that approximately 66% of people who had seriously considered suicide, 77.5% of people who had a suicide plan, and almost 80% of people who had made a suicide attempt had a prior mental disorder. Specifically, anxiety, mood, impulse-control, and substance use disorders were found to be significant predictors of suicidal behavior. This study also found a strong positive association between suicide attempt and comorbidity of disorders (Nock et al., 2010). The researchers note, however, that the associations were more predictive for suicide ideation than for suicide attempt and they suggested that this could be due to the fact that some disorders correlated with suicide attempt (but are not independently associated with suicide attempt) could be comorbid with disorders that are independently associated with suicide attempt (Nock et al., 2010). Another possible explanation is that the association between mental disorders and suicide attempt could be a result of a common factor, such as distress or impairment (Nock et al., 2010).

Borges, Angst, Nock, Ruscio, Walters, and Kessler (2006) similarly found that 12-month DSM-IV psychiatric disorders were significantly correlated with 12-month suicide ideation. Not unlike the Nock et al. (2010) study, this correlation was found to be weaker for suicide planning and was not statistically significant for suicide attempt (Borges et al., 2006). The Borges et al.

(2006) and Nock et al. (2010) studies suggest that mental disorders are not as strongly associated with suicide planning and attempt as previously suspected, leaving room for other predictors of these behaviors. One possible explanation for this pattern is that the association between mental disorders and suicide planning and attempt is actually a result of a factor that is a covariate of mental disorders, instead of a result of the disorders themselves. A common factor researched in conjunction with suicide risk is the effect of stress.

A study conducted by Linda, Marroquín, and Miranda (2012) examined the association between negative life stress and suicidal ideation among both suicide attempters and non-attempters. They discussed that individuals who make suicide attempts report experiencing more recent negative life events than the general population, also finding that suicide attempters experienced more negative life stress prior to an attempt than depressed individuals do before the onset of depression (Linda et al., 2012). In addition, negative events, even if very minor, are associated with hopelessness, and high levels of stress were associated with hopelessness and suicide ideation (Linda et al., 2012). Because situational factors (life stress) are significantly associated with suicide ideation and attempts, Linda et al. (2012) proposed that life stress predicts hopelessness, which in turn can lead to suicide ideation and subsequent suicidal behavior.

Related to the Linda et al. (2012) study, Schotte and Clum (1987) identified the experience of negative life stress as one of three variables related to suicidal behavior, the other two being cognitive deficits in problem solving and hopelessness. After comparing fifty hospitalized patients on suicidal precautions with fifty nonsuicidal hospitalized patients, Schotte and Clum (1987) found that the level of negative life stress in an individual's life was positively correlated with both hopelessness and suicide intent, implying that one's confidence in their

ability to handle situations decreases as their negative life stress increases. Compared to individuals who were depressed, suicide ideators could only generate less than half as many potential solutions to interpersonal problems selected from their own lives as nonsuicidal individuals, and the suicide ideators focused more on the potential negative effects of such solutions (Schotte & Clum, 1987). The Linda et al. (2012) study and the Schotte and Clum (1987) study suggest that stress, and the negative effects of stress, serve as a potential explanation for suicidal behavior.

Bagge, Glenn, and Lee (2013), assessed negative life events within the forty-eight hours prior to the suicide attempts of a sample of 110 recent suicide attempting adults. Results not only showed that participants were more likely to attempt suicide soon after a negative life event, but that the most common type of negative life event experienced before a suicide attempt involved family/social and spouse/partner issues (Bagge et al., 2013). This type of interpersonal negative event was more likely to instigate a suicide attempt than negative life events concerning financial, crime/legal, work/school, or health issues (Bagge et al., 2013). The finding that spouse/partner issues may be a particularly salient aspect of the stress response among people who have attempted suicide is consistent with research on people who are not suicidal. For example, researchers have shown that the quality of one's intimate relationship is associated with perceived stress: people with higher relationship quality report lower levels of perceived stress (Funk & Rogge, 2007).

Prior research suggests that stress is correlated with suicidal behaviors, and also that interpersonal issues/conflicts are correlated with stress. Therefore, interpersonal issues/conflicts may be associated with suicidal behaviors. The Interpersonal Theory of Suicide, proposed by Van Orden et al. (2010), suggests that lethal and near lethal suicide attempts are made at the

intersection of two interpersonal concepts: thwarted belongingness and perceived burdensomeness, accompanied with the desire and capability for suicide. Although it is not feasible to include all variables associated with suicidal behavior into a single theory, Van Orden et al. (2010) examined a wide breadth of suicidal behavior literature and attempted to incorporate into the theory the most marked and consistent variables identified in the literature as being significant risk factors. These risk factors included family conflict (familial discord, domestic violence, familial stress, and the perception that one is a burden on their family), social isolation, presence of mental disorders (specifically major depressive disorder, bipolar disorder, borderline personality disorder, anorexia nervosa, schizophrenia, substance abuse, and conduct disorder were cited in the literature examined), previous suicide attempts, physical illness (particularly HIV-AIDS, brain cancer, amyotrophic lateral sclerosis and multiple sclerosis), and unemployment (Van Orden et al., 2010).

The Interpersonal Theory of Suicide combines these diverse factors and attempts to show how the factors can all relate to suicidal behavior by contributing to thwarted belongingness, perceived burdensomeness, and desire/capability for suicide. Thwarted belongingness is positively associated with loneliness and absence of reciprocal care (the support of others). Loneliness can be affected by living alone, having few social supports, or a non-intact family, among other factors. A sense of absence of reciprocal care can occur as a result of social withdrawal, family conflict, domestic violence, and loss through death/divorce, among other factors (Van Orden et al., 2010). Perceived burdensomeness can be a result of feelings of being a liability to others or feelings of self-hate (Van Orden et al., 2010). Feelings of being a liability may result from the belief that one is a burden to their family or that they are expendable or unwanted, among other factors (Van Orden et al., 2010). Self-hate can be influenced by low self-

esteem, self-blame, shame, and agitation (Van Orden et al., 2010). The acquired capability and desire to commit suicide occurs as a result of events, family history, personality traits, or biological factors that have created a decreased fear of death and increased tolerance to pain (Van Orden et al., 2010).

As is suggested in the Interpersonal Theory of Suicide, research has found an association between family functioning and suicidality. McDermut, Miller, Solomon, Ryan, and Keitner (2001) found results indicating that families of suicide attempting patients rated their families as more dysfunctional than families of patients with no history of suicide ideators or suicide attempters. McDermut et al. (2001) also found that poorer family communication was associated with prior suicide attempts within the family. Although causality cannot be inferred from correlational findings, family often has a large influence on individuals, and therefore the role of family functioning may potentially be an important contributing factor when determining one's risk of suicidal behaviors. Discord within a marriage can cause dysfunction within a family, or dysfunction within a family (for example, difficulties with children-parent relationships or child rearing stress) can cause discord within a marriage, proposing a potential connection between family dysfunction and marital discord and how they may increase the likelihood of suicidal behavior.

To date, there has been limited research on the association between relationship discord and suicide. Kaslow, Thompson, Brooks and Twomey (2000) conducted a study on suicidal and nonsuicidal African American women based on family functioning ratings and found that several family factors are associated with suicidal behaviors. This population is understudied, and due to differences in family support between European Americans and African Americans, this study has important implications. African American women place more value on extended family

support than European women because extended family may help protect against discrimination and oppression in American culture, and hence is a buffer against suicide (Kaslow et al., 2000). The importance of family support within this population also makes positive spousal relationships particularly important to African American women (Kaslow et al., 2000). African American women who attempted suicide compared to non-attempters reported that their family had fewer strengths, their intimate relationships were less satisfying, and they were more often involved in physical and nonphysical abuse (Kaslow et al., 2000). Notably, relationship/marital discord was the only variable pertaining to one's family that was predictive of suicidal behavior in this sample (Kaslow et al., 2000). This study is particularly noteworthy because it emphasizes the importance of focusing on family concerns and the importance of family support as forms of therapy and prevention of suicidal behaviors. More specifically, this study suggests that relationship/marital discord is a particularly important variable to analyze within the family, in as far as it influences suicidal behavior risk.

Arcel, Mantonakis, Petersson, Jemos, and Kaliteraki (1992) did a study looking at suicide attempts among Greek and Danish women based on their relationship or marriage quality. They suggest that the hopelessness and desperation present with suicidal behaviors are not necessarily a result of one's personality, but rather can arise from the stressful relationships individuals have with their significant others, including husbands and boyfriends (Arcel et al., 1992). Arcel et al. (1992) chose participants from among patients in the hospital for attempted suicide, dividing them into four groups (Greek and married, Greek and in a steady relationship, Danish and married, Danish and in a steady relationship). Based on structured interview responses, the thirty married women indicated that they perceived that they were excessively controlled by their husbands, suffered from restrictions of mobility and financial control, and suffered from physical

violence (Arcel et al., 1992). The Greek married women were all in arranged marriages and lacked emotional dependence, but had a considerable amount of familial pressure and financial pressure to stay in the marriages (Arcel et al., 1992). The Danish married women were not in arranged marriages and the majority reported emotional dependence on their husbands as well as housing dependence (Arcel et al., 1992). The steady relationships on the other hand were predominated by fear and psychological violence (Arcel et al., 1992). Although this study may appear to show the more extreme versions of marital and relationship discord, it also underscores the cross-cultural importance of relationship/marriage discord as it is associated with suicide attempt risk.

Whisman and Uebelacker (2006) examined the clinical importance of relationship discord, finding that individuals in discordant relationships are more likely to report suicide ideation. Furthermore, they examined whether the association between relationship discord and suicide was incremental to any shared association with psychopathology. This is important insofar as psychopathology is associated not only with suicide (as previously reviewed) but also with relationship discord. For example, Whisman (2007) found that marital discord was significantly and positively associated with anxiety, mood, and substance use classes of disorders, as well as with each specific disorder assessed in these categories, except for panic disorder. The strongest associations between marital discord and psychiatric disorders were found with bipolar disorder, alcohol use disorders, and generalized anxiety disorder. Consequently, because relationship discord is associated with psychopathology and psychopathology is associated with suicide behavior, any association between relationship discord and suicidal behaviors might be indirect, mediated through the pathway of psychopathology. Whisman and Uebelacker (2006) found that relationship discord was

correlated with impairment and psychological distress (social role and work role impairment, greater general distress, worse perceived health, and greater likelihood of suicide ideation), even while controlling for mood, anxiety, and substance disorders, suggesting that relationship discord plays a role in impairment and psychological distress independent of psychiatric disorders. However, the association between relationship discord and suicide ideation was not significant after controlling for psychiatric disorders (Whisman & Uebelacker, 2006). These findings suggest that the association between relationship discord and suicide ideation may be indirect, and mediated by the presence of psychiatric disorders. As measures of psychopathology were not included in the other studies that evaluated the association between relationship discord and suicidal behaviors, it is unknown whether the associations observed in these other studies would be incremental to any shared association with psychopathology. Furthermore, as the Whisman and Uebelacker (2006) study evaluated only suicide ideation, it is currently unknown whether relationship discord may be incrementally associated with other types of suicidal behavior, including suicide planning and suicide attempts.

The current study was conducted to build and expand on prior research on relationship discord and suicidal behavior. The current study improves upon the Kaslow et al. (2000) study and Arcel et al. (1992) study by evaluating these associations in both males and females in a population-based sample of adults. The current study also builds on the Whisman and Uebelacker (2006) study by including an assessment of suicide planning and suicide attempt in addition to suicide ideation. Also, the questionnaire used in the Whisman and Uebelacker (2006) study measuring relationship discord consisted of two items, whereas the current study uses a well validated measure of marital quality, which provides a better assessment of relationship discord.

In summary, the present study was conducted to examine the association between marital discord and suicide ideation, suicide planning, and suicide attempt in a large, population-based sample of adults. In addition, the study evaluated whether the association between marital discord and suicidal behavior was incremental to demographic variables and the presence of current psychiatric disorders. It was hypothesized that marital discord would be positively associated with suicidal behavior and that this association would be incremental to demographic variables and psychiatric disorders.

Methods

Participants

Data for this study come from the National Comorbidity Survey Replication (NCS-R), a nationally representative household survey of 9,282 English speaking respondents aged 18 years and older in the United States (for a more detailed description, see the paper by Kessler et al. [2004] and the Whisman [2007] study). Participants were selected on the basis of a multistage clustered area probability sample of households. Participants completed face-to-face interviews between February 2001 and April 2003 with an overall response rate of 70.9%. The survey was administered in two parts. Part 1 was comprised of a core diagnostic assessment given to all participants *(N* = 9,282). Part 2 included an assessment of additional disorders as well as questions about risk factors, consequences, and other correlates, which was administered to all Part 1 respondents who met lifetime criteria for any disorder plus a probability sub-sample of other respondents *(n* = 5,692). A randomly selected subset of married individuals *(n* = 2,237) were asked additional questions about their marriage, of which 2,213 (99% of the eligible sample) completed all the marital discord items. Out of these individuals, 1,845 completed the questions on suicidality and were included in the current analysis. On the basis of weighted data,

the final sample consisted of 49.9% women and 50.1% men. The racial/ethnic distribution of the sample was 82.6% non-Hispanic White, 6.3% non-Hispanic Black, 7.3% Hispanic, and 3.8% other; corresponding figures for married-couple households in the United States, on the basis of 2000 census data (U.S. Census Bureau, 2000), were 79% non-Hispanic White, 7% non-Hispanic Black, 9% Hispanic, and 4% other. Therefore, the racial/ethnic composition of the NCS-R compares favorably with the general population of married-couple households in the United States. Participants had a mean age of 49.6 years (*SD* = 15.14, range = 18 – 98).

Measures

Suicidal behaviors were assessed using the Suicidality Module of the World Mental Health Survey Initiative version of the Composite International Diagnostic Interview (WMH-CIDI; Kessler & Üstün, 2004). This module includes an assessment of the lifetime occurrence and age-of-onset of suicide ideation, plans, and attempts (Nock et al., 2010). The interview consisted of questions asking if the respondent has "seriously thought about committing suicide," has "made a plan for committing suicide," or has "attempted suicide" (Kessler & Üstün, 2004). If the respondent answered "yes" to any of these questions, they were asked how old they were the first time such experience happened, if it occurred at any time in the past 12 months, and if not, how old they were the last time the experience occurred (Kessler & Üstün, 2004).

Marital distress was measured with 14 items (1, 2, 5, 8, 12, 16, 18, 20, 21, 24, 25, 26, 27, and 28) from the widely used Dyadic Adjustment Scale (DAS; Spanier, 1976) (for a more detailed description, see the Whisman [2007] study). The scaling and response options, however, were modified from the original DAS: 9 items rated on a 6-point scale in the original DAS were rated on a 5-point scale in the NCS-R, four items rated on a 6-point scale in the original DAS were rated on a 4-point scale in the NCS-R, and one item rated on a 5-point scale in the original

DAS was rated on a 4-point scale in the NCS-R. Items were recoded as necessary so that higher scores indicted greater marital discord. Items were standardized and averaged to create a composite scale ($\alpha = .86$); a constant was added so that the minimum score was 0.

Psychiatric diagnoses were based on the WMH-CIDI (Kessler & Üstün, 2004), a fully structured lay interview that generates diagnoses according to the DSM–IV (for a more detailed description, see the Whisman [2007] study). The current analyses are based on 12-month diagnoses of anxiety disorders (panic disorder, agoraphobia without panic disorder, generalized anxiety disorder [GAD], specific phobia, social phobia, posttraumatic stress disorder), mood disorders (major depressive disorder [MDD], dysthymia, bipolar disorder I or II), and substance use disorders (alcohol and drug abuse and dependence); childhood disorders (e.g., conduct disorder) included in the NCS-R were not included in the current analyses because their assessment was limited to a subset of respondents (i.e., those between the ages of 18 and 44 years). The assessment of posttraumatic stress disorder and substance use disorders was limited to Part 2 respondents. DSM–IV organic exclusion rules were used in making diagnoses, and diagnostic hierarchy rules were used in making all diagnoses other than substance use disorders. Blind clinical reinterviews using the Structured Clinical Interview for DSM–IV (First, Spitzer, Gibbon, & Williams, 2002) with a probability subsample of NCS-R respondents demonstrated good agreement between WMH-CIDI and Structured Clinical Interview for DSM–IV diagnoses.

Analysis

The association between marital discord and suicide was evaluated using logistic regression analyses, in which each of the suicide behaviors was regressed on marital discord, with separate analyses for suicide ideation, suicide planning, and suicide attempt. For each outcome, three models were conducted. Model 1 evaluated the bivariate association between

suicide and marital discord, Model 2 examined the association between suicide and marital discord when statistically adjusting for demographics (age [<42 years, 42-55 years, >55 years], gender, race/ethnicity [White, not White]), and Model 3 tested the association between suicide and marital discord when statistically adjusting for demographics and the presence of any current mental disorder.

Logistic regression analyses were conducted on weighted data using SPSS Complex Samples, which incorporates the sample design into the data analysis, thus rendering acceptable standard errors of parameter estimates. For ease of interpretation, the exponential of each regression coefficient was computed and interpreted as an odds ratio (OR); the 95% confidence interval (CI) was also computed for each coefficient.

Results

The twelve-month prevalence for suicide behaviors was 1.5% for suicide ideation, 0.6% for suicide plan, and 0.4% for suicide attempt. Among the people who attempted suicide, 51% used a "razor, knife or other sharp instrument," 21% used an "overdose of prescription medications," 13.8% attempted "hanging, strangulation, suffocation," and 14.2% used alternate methods. The mean level of marital discord was 0.89 (*SD* = 0.61, range = 0 – 4.69).
The twelve-month prevalence of having any of the assessed psychiatric disorders was 18.5%.

The results from the logistic regression analyses are presented in Table 1 for suicide ideation, Table 2 for suicidal planning, and Table 3 for attempted suicide. As can be seen in these tables, results indicate that suicide ideation, suicide planning, and suicide attempt are all significantly associated with marital discord in the bivariate analyses: greater marital discord was associated with greater likelihood of a person reporting each of the suicidal behaviors (Model 1). Furthermore, the association between marital discord and each of the suicidal behaviors

remained statistically significant when adjusting for demographic variables (Model 2), and remained statistically significant when adjusting for demographic variables and the prevalence of one or more current (i.e., 12-month) psychiatric disorder (Model 3).

Discussion

The present study was conducted to examine the association between marital discord and suicide ideation, suicide planning, and suicide attempt in a large, population-based sample of adults. Consistent with the study hypotheses, results indicated that marital discord was positively and significantly associated with suicide ideation, suicide planning, and suicide attempt. An inspection of the results provided in Tables 1 through 3 indicate that for every one point increase in marital discord, the odds of a person reporting suicidal behavior increased by a factor of 83% for suicide ideation, 79% for suicide planning, and 152% for suicide attempt. Furthermore, the association between marital discord and each of the suicidal behaviors remained statistically significant when controlling for demographic variables and the presence of a current psychiatric disorder, suggesting that the association between marital discord and suicidal behavior was incremental to other well-established correlates of suicidal behavioral.

Supporting the results found by Kaslow et al. (2000), who examined an African American female population, and the results from Arcel et al. (1992), who looked at Greek and Danish suicidal female populations, the current study similarly exhibits a correlation between relationship/marital discord and suicidal behaviors. The results of this study are also consistent with the results of Whisman and Uebelacker (2006) in finding that suicide ideation is correlated with relationship discord. However, Whisman and Uebelacker (2006) found that when controlling for psychiatric disorders, the association between suicide ideation and relationship discord was no longer statistically significant. This finding is inconsistent with the results of the

current study which found suicide ideation, planning, and attempt to all be correlated with marital discord after controlling for psychiatric disorders. This inconsistency may be due to the differences in measures of relationship discord; the measure used in the current study was a validated 14-item measure of marital discord, whereas a two item questionnaire was used in the Whisman and Uebelacker (2006) study. Another possible explanation for the conflicting results between the current study and the Whisman and Uebelacker (2006) study is that the current study measures levels of discord in married couples, whereas the Whisman and Uebelacker (2006) study also included cohabiting couples who may not suffer from as severe relationship discord as married couples.

The results of the current study can be interpreted in light of the Interpersonal Theory of Suicide proposed by Van Orden et al. (2010), which references family conflict as one of the main variables recognized in the theory for predicting suicide attempt risk, as well as several specific factors related to suicide attempt risk that link directly to marital discord. Marital discord may cause individuals to have a sense of thwarted belongingness and perceived burdensomeness, both of which are positively correlated with suicide attempt risk in the Interpersonal Theory of Suicide. Feelings of loneliness and lack of reciprocal care, associated with thwarted belongingness, can be a result of feeling unsupported, lacking in connection to a spouse, withdrawal from a spouse, or domestic violence, all of which are potential outcomes of marital discord. Feelings of being a liability and of self-hate, both associated with perceived burdensomeness, can result from feelings of being unwanted, expendability, low self-esteem, self-blame, shame, and agitation, all issues that can arise from marital discord.

The current findings should be interpreted with consideration of the strengths and limitations of the study. Strengths of the study include the large sample size, the assessment of

suicide ideation, planning, and attempt, and the use of a reliable and valid measure of marital discord. One limitation of this study, however, is that causation cannot be determined from the cross-sectional design of the study, and therefore it cannot be confirmed whether suicidal behaviors led to marital discord or if marital discord led to suicidal behaviors. Additionally, the categorical, dichotomous variables used to assess suicidal behaviors in the current study have less statistical power than continuous variables. The use of a continuous measure of suicidal behavior, such as the Scale for Suicide Ideation (SSI; Beck, Kovacs, Weissman, 1979), would provide a more powerful test of the association between marital discord and suicide. Thirdly, due to the potentially sensitive nature of suicidal behavior, people may be uncomfortable answering the questions honestly or be influenced by social desirability biases. It is possible that individuals in couples with the most substantial discord or with the most severe suicidal behaviors are also the most prone to avoid such studies out of fear of exposing their situations or out of embarrassment.

Although past research and the current study suggest a correlation between relationship/marital discord and suicidal behavior, there has been limited research examining potential mechanisms for this association. According to the Interpersonal Theory of Suicide, potential mediators include a combination of thwarted belongingness, perceived burdensomeness, and desire/capability for suicide. Future research could evaluate whether the association between marital discord and suicidal behavior is mediated by these variables.

Stress seems to be a prominent and likely variable linking relationship/marital discord with suicidal behaviors. In addition, the studies examined recurrently mention two other possible mediators: hopelessness and abuse/violence. Linda et al. (2012), Schotte and Clum (1987), and Arcel et al. (1992) refer to hopelessness as a potential factor in suicidal behaviors, which is a

consequence of the stress caused by relationship/marital discord. Specifically, Schotte and Clum (1987) suggest that hopelessness may decrease one's ability to find solutions to interpersonal problems or even decrease one's belief that there is a potential solution to an interpersonal problem. Hopelessness may interfere with one's ability to see future improvement in one's relationship/marriage, or, in severe circumstances, in one's future ability to escape an emotionally or physically abusive relationship/marriage.

Both the Kaslow et al. (2000) study and the Arcel et al. (1992) study acknowledge that the people reporting suicidal behaviors also commonly reported abuse or violence within their relationships. Although the study by Whisman and Uebelacker (2006), as well as the current study, do not directly look at abuse/violence in relationships, it is possible that this variable played a significant role in the results of these studies. Possibly, the relationships/marriages with the highest levels of discord, and henceforth suicidal behaviors, are also those with the highest degrees of abuse and violence.

Future research could benefit from a longitudinal study to determine whether suicidal behaviors are a result of marital discord or if marital discord is a result of suicidal behaviors, and to possibly acquire more information about potential mediators. However, the base rate of suicide is so small that it would be extremely challenging to obtain a suitable sample size and compliance rates for a length of time long enough to acquire sufficient data. In addition, because relationship/marital discord is not a static variable, it would be important to evaluate whether changes in relationship discord are associated with changes in suicidal behavior over time.

In addition to the difficulties posed by doing a longitudinal study examining suicidal behaviors, research on suicidal behavior has several challenges pragmatically and ethically that could explain the relatively little research in this important area of study. One such difficulty is

the low base rate of suicidal behaviors, making it imperative that the sample size be quite large in order to obtain data from enough individuals who exhibit suicidal behavior (Van Orden et al., 2010). In addition, individuals who die as a result of suicide cannot be evaluated after the fact, excluding an important group of individuals from the analysis and restricting methods of study that can be used (Van Orden et al., 2010). There are also ethical and safety concerns with involving suicidal individuals in such studies due to the potential of emotional triggers or thoughts the study could inadvertently provoke (Van Orden et al., 2010).

Future research could seek to examine the association between relationship discord and suicide behaviors in other types of intimate relationships in addition to marital couples. These other couples could include cohabiting individuals, which as suggested by the Whisman and Uebelacker (2006) study, may differ in degrees of relationship discord in comparison to married couples. Perhaps this could lead into examining if duration or seriousness of a relationship/marriage has an effect on the strength of the association between relationship discord and suicidal behaviors.

Although this study focused on a representative sample of married individuals in the U.S., it would be constructive to expand upon the study by Arcel et al. (1992), who investigated Greek and Danish populations, to further see how cultural differences in marital expectations worldwide affect suicidal behavior.

In sum, the current findings suggest that marital discord is significantly associated with three indices of suicidal behavior, and that this association remains significant when statistically adjusting for demographic variables and the presence of psychopathology. There are a limited number of therapeutic methods currently used for suicidal behavior prevention, and this study suggests that couples therapy or perhaps an extension into familial therapy might be effective in

the prevention or treatment of suicidal behavior. If future longitudinal studies find that marital or relationship discord is predictive of subsequent suicidal behavior, then reducing marital or relationship discord may be targeted as a way to reduce suicidal behaviors.

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Table 1

Association between Marital Discord and Suicide Ideation

Predictor	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
<42 years old			1.11	0.42, 2.92	1.37	0.55, 3.40
42-55 years old			0.58	0.20, 1.64	0.92	0.28, 3.07
Gender			1.44	0.69, 3.01	1.90	0.86, 4.19
White			0.69	0.23, 2.09	0.63	0.20, 2.04
Any Dx					11.12***	4.05, 30.58
Marital Discord	2.49***	1.78, 3.47	2.34***	1.70, 3.22	1.83**	1.28, 2.62

Note. OR = odds ratio. 95% CI = 95% confidence interval.

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

Table 2

Association between Marital Discord and Suicide Planning

Predictor	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
<42 years old			0.55	0.10, 3.06	0.64	0.13, 3.26
42-55 years old			0.13	0.014, 1.19	0.22	0.02, 2.32
Gender			1.25	0.37, 4.23	1.65	0.52, 5.22
White			1.18	0.12, 12.02	1.07	0.12, 9.87
Any Dx					15.57**	2.23, 108.79
Marital Discord	2.61***	1.60, 4.26	2.40**	1.48, 3.90	1.79*	1.05, 3.04

Note. OR = odds ratio. 95% CI = 95% confidence interval.

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

Table 3

Association between Marital Discord and Suicide Attempt

Predictor	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
<42 years old			0.42	0.04, 4.19	0.49	0.06, 3.81
42-55 years old			0.21	0.02, 2.23	0.29	0.02, 3.75
Gender			2.65	0.60, 11.71	3.03	0.74, 12.38
White			0.79	0.06, 10.56	0.69	0.06, 8.51
Any Dx					8.43	0.93, 76.69
Marital Discord	3.43***	2.27, 5.18	3.25***	2.20, 4.80	2.52***	1.71, 3.72

Note. OR = odds ratio. 95% CI = 95% confidence interval.

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