
Natural Disasters and Existential Concerns: A Test of Tillich's Theory of Existential Anxiety

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Abstract

Existential anxiety is hypothesized to be a core human issue in a great deal of theoretical and philosophical writing. Fostering the empirical understanding of the expression of these concerns may be a valuable addition to the psychological literature on exposure to trauma. The purpose of this study was to test theoretical predictions about the association between different facets of existential anxiety and psychological symptoms (posttraumatic stress disorder symptoms, suicidal ideation) among individuals following a natural disaster. A sample of 386 Gulf Coast residents completed the Existential Anxiety Questionnaire, a posttraumatic stress disorder symptom checklist, and a measure of psychological symptoms that included an item on suicidal ideation in the months following Hurricane Katrina. The results suggested that existential concerns were prevalent in the sample and that the various facets of existential anxiety were differentially associated with psychological symptoms. These findings provide preliminary evidence for existential concerns as an important correlate of psychological distress following exposure to natural disasters and increment empirical understanding of the concept of existential anxiety.

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Exposure to a natural disaster can be a traumatic stressor affecting an individual's expectations about the future, challenging their existing world views, and triggering a number of cognitive and emotional reactions (Cherry, 2009). A salient concern that may be precipitated by traumatic stress exposure is existential anxiety, which involves apprehension about the ultimate meaning of life and death (Tillich, 1952, 1961). Existential concerns are a core human issue in a great deal of theoretical and philosophical writing (e.g., Kierkegaard, 1843/1954; Sartre, 1957; Tillich, 1952, 1961; see Shumaker, 2011; Weems & Berman, 2012, for reviews). Previous research has demonstrated that existential concerns are related to a number of emotional problems (e.g., Baldwin & Wesley, 1996; Chung, Chung, & Easthope, 2000; Martz, 2004; Mascaro & Rosen, 2006; Weems, Costa, Dehorn, & Berman, 2004). Most studies have tended to focus on one type of existential concern. For example, some studies have examined just the fear of death (Baldwin & Wesley, 1996; Chung et al., 2000; Martz, 2004; Pyszczynski, Greenberg, & Solomon, 1999; Rosenblatt, Greenburg, Solomon, Pyszczynski, & Lyon, 1989) or just the sense of loss about the meaning in life (e.g., Cheung, Law, Chan, Liu, & Yip, 2006; Harlow, Newcomb, & Bentley, 1986; Mascaro & Rosen, 2008). However, there are multiple forms of existential concerns (Muraven & Baumeister, 1997; Shumaker, 2011; Tillich, 1952, 1961) that may follow a natural disaster. Importantly, various existential concerns may have differential associations with psychological symptoms (Tillich, 1952). The purpose of this study was therefore to examine the expression of existential concerns and explore associations between different facets of existential anxiety and psychological symptoms (posttraumatic stress disorder [PTSD] symptoms and suicidal ideation) among individuals exposed to the effects of Hurricane Katrina.

In this study, we drew from past work (Weems et al., 2004) on Tillich's (1952, 1961) theory of existential anxiety. Tillich (1952, 1961) proposed that existential anxiety revolves around three broad (A-C) and six specific domains of existential concerns. Each of the specific domains is composed of an ultimate and a relative concern. The domains are (A) (1) fate and (2) death; (B) (3) emptiness and (4) meaninglessness; and (C) (5) guilt and (6) condemnation. The first broad domain of Tillich's model is composed of two highly related but distinct existential concerns. Anxiety about death,

similar to terror management theory (TM; Pyszczynski et al., 1999), is the “ultimate” fear in Tillich’s theorizing because it provides the context for the seriousness of all fears. That is, death anxiety arises from the realization of human mortality and is the “ultimate” existential concern because death signifies the end of one’s own existence in this world. Thus, from both theoretical and empirical positions (Chung et al., 2000; Martz, 2004; Pyszczynski et al., 1999; Tillich, 1952, 1961) death anxiety should be positively and negatively associated with PTSD symptoms and suicidal ideation, respectively. In comparison, the anxiety of fate is the more circumscribed “relative” concern (in Tillich’s view about death and fate) about the contingency of an individual’s life. It involves concerns about the individual’s role in the world brought on by the realization that their destiny is unknowable. This specific facet of Tillich’s first domain of existential anxiety may be unrelated to (given Muraven & Baumeister, 1997, theorizing) or negatively associated with both PTSD symptoms and suicidal ideation (based on TM theorizing; Pyszczynski et al., 1999).

The second broad domain of Tillich’s theory is composed of the ultimate concern of meaninglessness and is related to the loss of the significance of life, the future, the world, and everything. Theoretically and empirically, it is likely that meaninglessness would be the component of Tillich’s theory most strongly associated with suicidal ideation because the attributes associated with this concern are closely related to those concerns among severely depressed individuals who are prone for suicidal thoughts and attempts (e.g., Harlow et al., 1986). The anxiety of emptiness is the relative component of this second domain and refers to the apprehension over specific beliefs that no longer have meaning as once believed by the individual. In comparison to anxiety related to the meaninglessness of life, existential concerns related to emptiness are most likely to be associated with PTSD symptoms considering *DSM-IV* criteria for a diagnosis of PTSD includes feelings and behaviors such as emotional numbing, avoiding activities, and feelings of estrangement from other individuals (American Psychiatric Association, 1994). Furthermore, Tillich (1952) stresses that existential anxiety related to emptiness most likely occurs when “a belief breaks down through external events or internal processes and the contents of the tradition lose their power” (p. 47). For example, a person who is exposed to a traumatic event (external) may re-experience that event (internal) and such things as being loved or praised by others may lose their power. Thus, the person comes to believe that the world around him does not fill the void he feels inside and greater anxiety is evoked when he discovers this feeling of emptiness is inescapable.

The final domain of Tillich's theory is composed of both condemnation and guilt. Condemnation is the ultimate concern that you or your life has not met certain universal standards. Empirically, it is not clear if this facet of existential anxiety would be related or unrelated with PTSD symptoms or suicidal ideation. However, from a theoretical perspective, one would assume that the fear of ultimate condemnation might discourage an individual from suicide when taking into consideration that some religious views hold suicide to be an unforgivable sin punishable by an eternity of pain, suffering, and damnation (Kelleher, Chambers, Corcoran, Williamson, & Keeley, 1998; Tillich, 1952). On the other hand, guilt is the relative anxiety that your behavior has not lived up to your moral standards and is most theoretically and empirically likely to have a positive association with PTSD symptoms (Galea, Nandi, & Vlahov, 2005). Indeed, there is growing interest in the link between PTSD and moral injury in combat veterans (Litz et al., 2009), and so examining the links between these domains of Tillich's theory of existential anxiety and PTSD may help identify a broader link between trauma and the questioning of morality. In terms of suicidal ideation, however, there is not enough empirical evidence to propose whether a relationship does exist between anxiety related to guilt and suicidal ideation or the particular direction of such an association.

Empirical research examining Tillich's theoretical model using the Existential Anxiety Questionnaire (EAQ; Weems et al., 2004) has provided initial support for the model's theoretical structure, and EAQ scores have been associated with symptoms of anxiety, depression, and identity distress in both adolescent and adult samples (Berman, Weems, & Stickle, 2006; Weems et al., 2004). However, no studies to our knowledge have specifically examined Tillich's existential concerns among trauma-exposed individuals. We reasoned that exposure to disasters is a time of aversive self-awareness (Muraven & Baumeister, 1997) and thus existential concerns would be particularly salient and related to emotional problems in such individuals. Exploring the linkages between existential concerns, PTSD symptoms, and suicide ideation among individuals exposed to a natural disaster (e.g., Hurricane Katrina) provides a novel context for testing the theoretical predictions noted above.

In summary, the goal of this article was to examine existential anxiety in disaster-exposed individuals and test the theoretical predictions noted above. We examined the prevalence of existential anxiety concerns, and based on the theoretical and empirical evidence reviewed, we first hypothesized that existential death anxiety would be positively associated with PTSD symptoms and negatively associated with suicidal ideation (Chung et al., 2000; Martz, 2004; Pyszczynski et al., 1999). Second, we hypothesized that existential anxiety centered on the meaninglessness of life would be positively associated with suicidal ideation, even when controlling for PTSD symptoms

(Harlow et al., 1986; Mascaro & Rosen, 2008; Tillich, 1952, 1962). In contrast, we hypothesized that existential anxiety centered on both emptiness and guilt would be positively associated with PTSD symptoms given that emptiness seems to describe feelings and behaviors cited in the *DSM-IV* criteria for a PTSD diagnosis and other forms of guilt being consistently linked with PTSD symptoms (American Psychiatric Association, 1994). Finally, given that individuals with PTSD are at risk for suicidal thoughts and behaviors (e.g., Jakupcak et al., 2009; Pietrzak et al., 2010), we also hypothesized that PTSD symptoms would be positively associated with suicidal ideation. No specific predictions were made for the fate or condemnation domains of Tillich's (1952, 1961) theory considering the lack of theoretical or empirical evidence to take an a priori position. However, as noted above, fear of ultimate condemnation might also discourage an individual from suicidal thoughts in Tillich's view.

Method

Participants

A total of 401 individuals, aged 18 to 86 years (59% female, mean age 33 years), were surveyed for this study, and informed consent was obtained from each participant. Fifteen individuals either failed to report residence or reported residing in an area outside the three regions of interest and thus were not included in the final sample ($N = 386$). All participants were recruited in areas affected by Hurricane Katrina, and the recruitment strategy aimed to include a representative sample from each of the communities (i.e., those with or without resources would have an equally likely chance to be recruited). Data on the hurricane exposure experiences and posttraumatic stress outcomes for this sample are reported in Weems et al. (2007). Common disaster-related events reported included loss of part or entire home (45%), saw trees being damaged (45%), heard about tornados in the area (44%), witnessed debris breaking into windows and doors (24%).

Measures

The EAQ (Weems et al., 2004) is a true-false rating scale designed to assess the broad domains and subconcepts outlined in Tillich's (1952, 1961) work. The EAQ consists of 13 items with two questions per subconcept (three items for "fate") and has an overall factor structure consistent with Tillich's theory (Weems et al., 2004). More specifically, Weems et al. (2004) found that items loaded onto three factors that corresponded to each of Tillich's

three broad domains (i.e., [1] death and fate, [2] meaninglessness and emptiness, and [3] guilt and condemnation). In addition, the EAQ has shown good reliability (internal consistency $\alpha = .71$ and a 2-week test–retest reliability $r = .72, p < .001$). Some example items representing Tillich’s subconcepts are the following: “I often think about death and this causes me anxiety” (death), “I often feel anxious because I am worried that life might have no meaning” (meaninglessness), and “I often feel anxious because of feelings of guilt” (guilt). In this study, a total score for each of Tillich’s six subconcepts (i.e., death, fate, meaninglessness, emptiness, guilt, and condemnation) was calculated through summing endorsed items per subconcept.

The Brief Symptom Inventory–18 (BSI-18; Derogotis, 2000) is an 18-item self-report measure assessing psychological symptoms and is a briefer version of the Symptom Checklist-90-R (SCL-90-R; Derogotis, 1994). Items are rated on a 5-point scale (1 = *not at all* to 5 = *extremely*) to reflect the level of distress an individual has experienced for each symptom. The present study used a single item, which asks how much “Thoughts of ending your life” has distressed or bothered you, to assess suicidal ideation as has been done in several previous studies (e.g., Nilson & Conner, 2002; Preti et al., 2007). Suicidal ideation was dichotomized into those individuals who did experience distress related to suicidal thoughts (rating of 3 [*moderate*] to 5 [*extremely*]) or those who did not (rating of 1 [*not at all*] or 2 [*little bit*]). Previous research has used a similar dichotomizing protocol due to the low base rate of self-reported suicidal thoughts (Nilson & Conner, 2002; Preti et al., 2007).

The Posttraumatic Stress Disorder Checklist (PTSD Checklist; Amaya-Jackson, McCarthy, Newman, & Cherney, 1995) was designed to assess PTSD symptoms in youth and was modified for use in the current study to increase reading comprehension (i.e., items were edited for relevance to adults and items not assessing the *DSM-IV* [American Psychiatric Association, 1994] symptoms were not used). The modified version used in this study included 25 items assessing symptoms corresponding to each of the major PTSD symptom categories (i.e., reexperiencing, avoidance/emotional numbing, and hyperarousal) specified in the *DSM-IV*. The rating scale for the experience of symptoms consists of the following: 0 (*not at all*), 1 (*some of the time*), 2 (*most of the time*), or 3 (*all of the time*). The internal consistency reliability estimate (coefficient α) for the PTSD items in this sample was .93.

Procedures

Data were collected in individual and group settings between October 2005 and January 2006 from Federal Emergency Management Agency disaster

recovery centers, local shelters, the satellite campuses of University of New Orleans, the Gulf Coast campus of the University of Southern Mississippi, and public places in each of the communities (e.g., local parks, service establishments, public office waiting rooms, and other public areas such as community meetings). Researchers collecting the surveys were available to answer questions and provide referral information for needed further assistance in the aftermath of the storm. The surveys took less than 1½ hours to complete. Consent forms explained their answers were anonymous, and a list of resource phone numbers was appended to the end of the consent form and contained contact information for various aid groups and organizations (e.g., Red Cross). Participants were allowed to fill out the survey in the area where they were recruited or to return the survey in return-addressed stamped envelopes with no identifying information.

Results

Prevalence of existential anxiety concerns was examined by calculating the percentage of those individuals who positively endorsed apprehension for each of Tillich's (1952, 1961) six specific domains of existential anxiety. The percentages were as follows: death 50%, fate 71%, meaninglessness of life 25%, emptiness 74%, condemnation 60%, and guilt 62%. Ninety-four percent of the sample had at least one affirmatively endorsed existential anxiety concern. We also compared these percentages with those previously reported by a recently unexposed sample (see Weems et al., 2004; Study 1) using a one-sample chi-square. The results indicated the above percentages were significantly greater than the unexposed sample for overall existential concerns, as well as for the domains of death, fate, emptiness, condemnation, and guilt (see Figure 1). Twenty (5.2%) participants reported experiencing moderate to extreme suicidal ideation.

Descriptive analysis indicated four of the eight study variables (i.e., PTSD symptoms, anxiety related to guilt, anxiety related to the meaninglessness of life, and suicidal ideation) were positively skewed, and thus parametric and nonparametric analyses were used to test the study's hypotheses. First, examination of both Pearson's and Spearman's bivariate correlations indicated significant, positive ($p < .05$) associations between PTSD symptoms and existential concerns related to death ($r = .20$; $r_s = .18$), fate ($r = .18$; $r_s = .13$), meaninglessness of life ($r = .26$; $r_s = .20$), emptiness ($r = .36$; $r_s = .35$), condemnation ($r = .19$; $r_s = .13$), and guilt ($r = .27$; $r_s = .23$).

A multiple linear regression analysis was next used to test whether Tillich's (1952, 1961) six domains of existential anxiety were uniquely associated with PTSD symptoms after controlling for age, gender, family income,

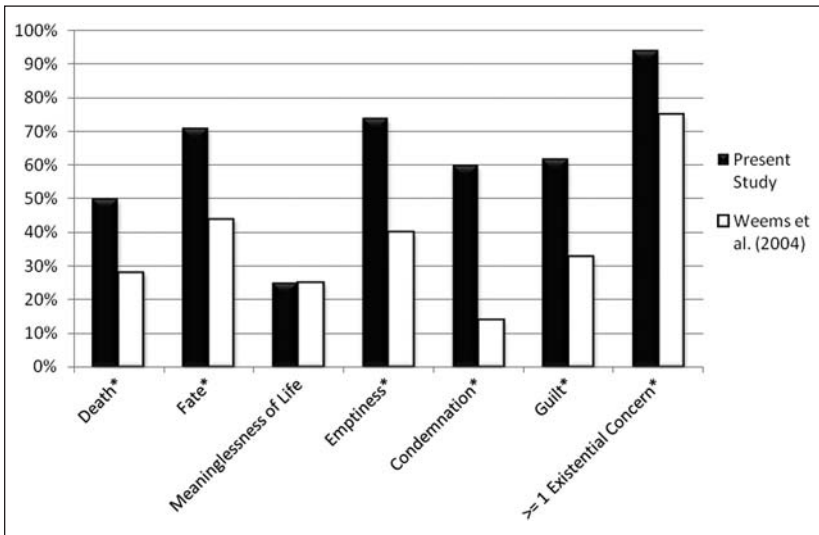


Figure 1. Percentage of existential concerns in this disaster exposed sample versus a nonexposed sample

Note: * $p < .01$.

ethnicity, and suicidal ideation. In this analysis, age (continuous variable), gender (0 = female, 1 = male), two dummy variables for family income (0 = all other values, 1 = less than \$20,000 or 1 = between \$20,000 and \$50,000), ethnicity (0 = White, 1 = minorities), and suicidal ideation (0 = none or little bit, 1 = moderate to severe), as well as each of Tillich’s six specific domains (i.e., fate, death, meaninglessness of life, guilt, emptiness, condemnation) were predictor variables with PTSD symptoms as the criterion variable. The results are summarized in Table 1 and indicated a significant model ($R^2 = .31$, $p < .001$) with males significantly reporting fewer PTSD symptoms than females ($\beta = -.33$, $p < .001$) and a significant positive association between PTSD symptoms and both suicidal ideation ($\beta = .18$, $p < .001$) and existential anxiety related to emptiness ($\beta = .25$, $p < .001$). In addition, there was a marginally significant positive association between PTSD symptoms and existential anxiety related to guilt ($\beta = .10$, $p = .063$).

Finally, a logistic regression analysis was used to test whether Tillich’s (1952, 1961) six domains of existential anxiety were uniquely associated with suicidal ideation after controlling for age, gender, family income, ethnicity, and PTSD symptoms. The results of the logistic regression predicting

Table 1. Summary of Linear Regression Analysis Predicting PTSD Symptoms With Existential Anxiety Subconcepts

Predictors	B	SE	β	t	p
Age	-0.001	0.002	-0.03	-0.57	.57
Gender	-0.31	0.05	-0.33**	-6.95	<.001
Ethnicity	-0.01	0.05	-0.01	-0.11	.91
Income (<20,000)	-0.01	0.06	-0.01	-0.13	.90
Income (20,000-50,000)	-0.07	0.05	-0.08	-1.45	.15
Suicidal ideation	0.40	0.11	0.18**	3.60	<.001
Fate	-0.01	0.03	-0.01	-0.20	.84
Death	0.02	0.04	0.03	0.43	.67
Meaninglessness	0.05	0.04	0.06	1.22	.23
Guilt	0.06	0.03	0.10*	1.87	.06
Empty	0.17	0.04	0.25**	4.79	<.001
Condemn	0.03	0.04	0.03	0.65	.52

Note: PTSD = posttraumatic stress disorder. Model $F(12, 332) = 12.54$ ($p < .001$).

* $p < .10$. ** $p < .001$.

suicidal ideation is summarized in Table 2 and indicated a significant model, $\chi^2(12, N = 345) = 49.18$. Age, gender, income, ethnicity, and each of Tillich's six domains (i.e., fate, death, meaninglessness of life, guilt, emptiness, and condemnation) were entered as predictors with suicidal ideation as the criterion variable. Results indicated a significant model with PTSD symptoms, anxiety related to the meaninglessness of life, and anxiety related to guilt being significantly associated with suicidal ideation. The PTSD symptoms odds ratio indicated that for every 1 unit increase of experiencing PTSD symptoms, individuals were 6.9 times more likely to report suicidal ideation. Second, the anxiety related to the meaninglessness of life odds ratio indicated that individuals were 5.6 times more likely to report suicidal ideation when endorsing anxiety related to the meaninglessness of life. Finally, the anxiety related to guilt odds ratio and negative unstandardized beta coefficient ($B = -1.03$) indicated individuals were .36 times less likely to report suicidal ideation when endorsing anxiety related to guilt.¹

Discussion

Past theory and research suggests that existential anxiety is a core human issue and is related to an individual's psychological well-being (Baldwin &

Table 2. Summary of the Logistic Regression Analysis Predicting Suicidal Ideation With Existential Anxiety Subconcepts

Predictors	Wald	Odds Ratio	<i>p</i>	Odds 95% CI	
Age	0.23	1.01	.63	0.97	1.06
Gender	2.20	2.87	.14	0.72	11.53
Ethnicity	0.95	1.90	.33	0.52	6.93
Income (<20,000)	0.90	0.43	.34	0.07	2.47
Income (20,000-50,000)	0.84	0.51	.36	0.12	2.14
PTSD	8.27	6.90**	<.01	1.85	25.74
Fate	0.23	1.21	.64	0.54	2.69
Death	0.24	0.78	.63	0.29	2.11
Meaninglessness	13.96	5.57**	<.01	2.26	13.73
Guilt	4.58	0.36*	<.05	0.14	0.92
Empty	1.94	2.03	.16	0.75	5.48
Condemn	0.74	1.48	.39	0.61	3.60

Note: PTSD = posttraumatic stress disorder; CI = confidence interval. Model χ^2 (12, *N* = 345) = 49.18 (*p* < .001); Overall classification = 95.9%.

p* < .05. *p* < .01.

Wesley, 1996; Chung et al., 2000; Pyszczynski et al., 1999; Rosenblatt et al., 1989; Tillich, 1952, 1961; Shumaker, 2011; Weems et al., 2004). While some level of existential concern is a normal developmental experience, existential anxiety may also be associated with several forms of psychological distress and be more salient following traumatic events (Muraven & Baumeister, 1997; Pyszczynski et al., 1999; Tillich, 1952, 1961; Weems et al., 2004). The present findings support this line of reasoning in that existential concerns were prevalent in this disaster-exposed sample. Moreover, different facets of existential concerns were shown to be related to both PTSD symptoms and suicidal ideation and so supports a multifaceted conceptualization of existential anxiety in relation to psychological distress (Muraven & Baumeister, 1997; Tillich 1952, 1961; Weems et al., 2004).

The results add to previous research showing that existential anxiety centered on the meaninglessness of life was positively associated with suicidal ideation and extends past findings (Harlow et al., 1986; Mascaro & Rosen, 2008) by demonstrating this association when controlling for PTSD symptoms. In addition, the findings provide support for Tillich's (1952, 1961) theorizing that existential concerns about the meaninglessness of life may drive one to seriously consider self-sacrifice or have "the desire to throw away one's ontic existence rather than stand the despair of emptiness

and meaninglessness” (Tillich, 1952, p. 51). In contrast, existential concerns centered on emptiness were related to PTSD symptoms in this disaster-exposed sample as expected. It is possible that emptiness may coincide with thoughts and behaviors associated with emotional numbing and estrangement from others though whether there is a direct relationship needs to be further investigated.

Existential anxiety centered on guilt was positively associated with PTSD symptoms and is consistent with previous theory and research that suggests individuals with increased PTSD symptomatology may appraise traumatic events as being their fault and thus experiencing distress related to feelings of guilt over the traumatic event occurring (Ehlers & Clark, 2000; Galea et al., 2005). Interestingly, however, individuals who endorsed existential anxiety in terms of Tillich’s (1952) guilt domain were less likely to report suicidal ideation. This finding may appear somewhat at odds with previous theory suggesting a positive relationship between guilt and suicidal ideation (Baumeister, 1990). There are two possible explanations for this finding. One explanation is that guilt in escape theory (Baumeister, 1990) is more closely related to shame. Past theory and research suggests that shame, not guilt, may be more often associated with psychological distress and escape-related thoughts and behaviors (e.g., suicidal ideation; Pineles, Street, & Koenen, 2006; Tangney & Dearing, 2002). Tangney and Dearing (2002) postulate that shame is a self-focused emotion that revolves around failed expectations leading to escape behaviors, whereas guilt involves regret of one’s actions that lead to reparative behaviors. Thus, existential anxiety over guilt may actually serve to encourage correcting mistakes and repairing relationships (i.e., as an alternative for suicide; Tangney & Dearing, 2005; Lucas, 2005) in order to alleviate distress. A second possibility is that existential anxiety related to guilt is an inescapable emotion because it transcends death and that most forms of religions believe that one will still suffer for moral transgressions committed during their days of living (Tillich, 1952). Therefore, Tillich (1952) suggests suicide does not seem to be a viable option for escaping guilt in most cases due to one’s belief about the “immortality of the soul” (p. 55). In Tillich’s view, meaninglessness results in the desire for suicide, but guilt (and condemnation, though this effect was not found) prevents it because in death there is no exit from guilt.

Close examination of the relationship found between each specific existential concern and both PTSD symptoms and suicidal ideation in this study raises some important questions regarding the exact role of existential concerns among various emotional and behavioral problems. An interesting finding (or nonfinding) in this regard was the lack of a clear relationship between death anxiety and both PTSD symptoms and suicidal ideation when

controlling for Tillich's (1952, 1961) other existential concerns. Based on previous theory and research one would expect to find at least a weak to moderate relationship between death anxiety and psychological distress (e.g., Pyszczynski et al., 1999; Martz, 2004). However, no other studies have actually examined or controlled for other facets of existential concerns when investigating the relationship between death anxiety and these two types of psychological problems. Thus, future studies may benefit from using a conceptualization similar to Tillich (1952, 1961) to fully delineate the relationship between existential anxiety and psychological distress.

Although the findings in this study do add to the empirical understanding of Tillich's theory of existential anxiety and to the role that exposure to natural disaster-related trauma may have on normal socioemotional development (Wiley et al., 2011), the present study was not without limitations. One limitation was that suicidal ideation was derived from a single item and had to be dichotomized due to the low base rate of suicidal ideation being reported. In line with this problem was also the fact that a few of the variables were severely skewed in this community sample. Indeed, a major limitation was reliance on all self-reported problems and the issue of method variance accounting for associations found. However, the EAQ subscales predicted suicidal ideation beyond reports of PTSD symptoms adding some level of confidence that the findings were not solely due to methodology. Future studies may need to include clinical populations that may have higher base rates of suicidal ideation to produce more normal distributions in terms of psychopathology and existential concerns. Nevertheless, the findings reported in this study are an initial step toward understanding the link between existential concerns and possible negative outcomes related to these concerns among individuals exposed to natural disasters.

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Note

1. Linear regression analysis with suicidal ideation as a continuous variable also produced similar results: PTSD symptoms ($\beta = .21, p < .001$), meaninglessness of life ($\beta = .30, p < .001$), and guilt ($\beta = -.14, p < .05$) were significant predictors.

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Bios



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