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Existential Anxiety in Adolescents: Prevalence, Structure, Association with Psychological Symptoms and Identity Development

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Existential anxiety is hypothesized to be a core human issue in a great deal of theoretical and philosophical writing. However, little is known about the emergence of these concerns and their relation to emotional functioning in youth. The purpose of this study was to examine the phenomenon of existential anxiety in a sample of adolescents. Data on existential concerns, identity development and psychological symptoms were collected on a sample of 139 youth in grades 9–12. Results indicated that existential anxiety concerns have a theoretically consistent factor structure, are common among adolescents, and are associated with psychological symptoms, as well as identity issues. Results are discussed with regard to the importance of existential concerns in the lives of youth and the need for additional research.

KEY WORDS: existential anxiety; identity; adjustment.

INTRODUCTION

Much has been written about existential anxiety, which involves apprehension about the meaning of life and death, and research is emerging pointing to the importance of such concerns in the psychological well being of individuals, yet little is known about the phenomenon in adolescence. This is unfortunate since adolescence is likely a time for the emergence of such concerns. For example, Westenberg *et al*. (2001) and Warren and Sroufe (2004) have presented models that suggest that by adolescence, youth have the cognitive capacity for insight into mortality and broader world concerns that may give rise to existential concerns. The purpose of this study was to provide an initial examination of existential anxiety in adolescents. In the following, the conceptual background for understanding existential anxiety in adolescents is presented and relevant research is reviewed.

Existential Anxiety

Existential anxiety is hypothesized to be a core human issue in a great deal of theoretical and philosophical writing (e.g., Kierkegaard, 1843/1954a, 1849/1954b; Sartre, 1957; Tillich, 1952a,b; Yalom, 1975). Our conceptualization of existential anxiety draws primarily from the work of Tillich (1952a) who provided an integrative view of existential concerns. Tillich wrote extensively on these topics; however, his view of existential anxiety is most definitively articulated in his 1952a work *The Courage to Be*. This text is thus used as the primary source for this paper (also see Tillich, 1952b, 1961). Tillich (1952a) defines existential anxiety around 3 related domains of apprehension. The first domain is fate and death. Anxiety about fate and death concerns the absolute threat to one's being in

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death and the relative threat to the self in our personal fate. The second domain is emptiness and meaninglessness. Anxiety about emptiness and meaninglessness concerns the fear that there is no "ultimate concern," and hence no ultimate importance in life that gives meaning to one's existence. The third domain is guilt and condemnation. Anxiety about guilt and condemnation involves perceived threats to one's moral and ethical identity. Although little research has examined Tillich's theorizing directly, a number of studies speak to the various domains outlined in his theorizing.

The first of Tillich's (1952a) 3 domains concerns anxiety about fate and death. Anxiety about fate and death has received considerable empirical attention by researchers particularly in surveys of children's specific fears and phobias, in adult surveys of death anxiety and also in the context of terror management theory (see Fortner and Neimeyer, 1999 for a review of death anxiety and Pyszczynski *et al*., 1999 for a review of terror management theory). Most germane to the study of adolescents, the literature using surveys of youth's specific fears and phobias suggests that when assessed via fear surveys and clinical interviews, the fear of death is one of the most commonly reported fears in youths (Ollendick *et al*., 1985). This finding has been replicated in several studies employing American samples (Ollendick, 1983; Ollendick *et al*., 1985, 2001), as well as, in studies of British (Ollendick *et al*., 1991), Australian (Ollendick *et al*., 1989; Ollendick and King, 1994), Chinese (Dong *et al*., 1994, Ollendick *et al*., 1995), and Nigerian/Kenyan (Ollendick *et al*., 1996; Ingman *et al*., 1999) samples of youth.

Emptiness and meaninglessness is the second of Tillich's domains and is typically what has been at the core of the definition of existential anxiety in past writing in the existentialist tradition as well as previous research (e.g., Crumbaugh and Maholick, 1969; Good and Good, 1974; Sartre, 1957). For Tillich (1952a) the anxiety of emptiness is relative and is apprehension that specific beliefs no longer have the meaning that they were once believed to have by the individual. In other words, that a belief has been threatened by non-being. Meaninglessness is an absolute concern and is about the loss of the significance of life, the future, the world, and everything. Emptiness and meaninglessness have been the primary focus of existential anxiety scales. However, this is the least studied aspect of existential anxiety in youth.

Anxiety about guilt and condemnation, Tillich's third domain, is anxiety resulting from threat to our moral and ethical self-affirmations (Tillich, 1952a) and has received some research attention in youth. For Tillich, guilt is the relative anxiety that your behavior has not lived up to your standards. Condemnation is the ultimate concern that you or your life has not met certain universal standards. The development of guilt has been explored and the association between guilt and psychological symptoms has been investigated. This research suggests that guilt is associated with fear in young children, that it is present in children as young as 22 months of age, and is associated with a fearful temperament (Kochanska *et al*., 2002).

Although studies have examined aspects of existential anxiety few studies have examined existential anxiety as conceptualized by Tillich (1952a). Weems *et al*. (2004) reported data from 2 initial empirical studies of Tillich's model of existential anxiety and its relation to symptoms of anxiety and depression. A self-report measure of existential anxiety, the Existential Anxiety Questionnaire (EAQ) based on Tillich's conceptualization, was developed and data were collected from 2 socioeconomic and ethnically diverse samples of adults (Study 1, $N = 225$; Study 2, $N = 331$). Results indicated that the EAQ had good test–retest and internal consistency reliability and a factor structure consistent with theory (i.e., a 3-factor hierarchical model corresponding to the 3 domains outlined in Tillich's theorizing). The EAQ also demonstrated good convergent and incremental validity estimates. The data suggest that existential anxiety concerns are common in young adults and that they are associated with symptoms of anxiety and depression as well as psychological distress related to identity problems.

The Potential Importance of Existential Concerns in Adolescence

Adolescence is an important time to study the development of existential concerns. Models of social and cognitive development suggest that by the high-school years youth are able to comprehend the meaning of life and death and that broader life issues become salient (Warren and Sroufe, 2004; Westenberg *et al*., 2001). For example, research suggests that even by around 13 years of age fears of death and dying are a prominent concern (Weems and Costa, in press). In addition, psychosocial developmental theory (e.g., Erikson, 1963, 1968) suggests that adolescence is a critical period in the development of life goals and values as well as in the establishment of a sense of direction and purpose in life. While a person develops their sense of identity (who they are, what they believe in, and where they are going), existential concerns should become prominent.

Marcia (1966), whose work has been among the most influential in the identity literature has operationalized Erikson's concept of identity formation in terms of 4 statuses derived from 2 developmental continuums. The

statuses are defined relative to the degree that the individual has made progress toward achieving a satisfactory identity. The formation of an identity is conceptualized as involving two basic dimensions, exploration and commitment. Exploration is the process by which the individual actively searches for a resolution to the issues of choosing the goals, roles, and beliefs about the world that provide the individual's life with direction and purpose. Youth actively engaged in identity exploration may experience greater existential concerns. Commitment represents a positive outcome of the process of exploration. If commitments are made with respect to issues such as the selection of an occupation, gender role, friendship, group membership, moral issues, religion, etc., an assured sense of identity is achieved. Those with firm identity commitment may be less likely to have existential concerns.

Marcia's 4 identity statuses are defined with respect to the 2 dimensions of exploration and commitment. The 4 identity statuses are: diffusion (low in exploration and commitment), foreclosure (low in exploration, but high in commitment), moratorium (high in exploration, low in commitment), and achievement (high in exploration and commitment). The moratorium status is thought to precede identity achievement. Individuals in this status experience a "crisis" due to their active exploration or consideration of the different options but have not yet chosen from the available alternatives or committed themselves. These individuals may also display high levels of identity distress (Berman *et al*., 2004). Individuals in the moratorium status are likely to be grappling with core issues and thus should be likely to have elevated existential anxiety concerns.

This Study

The literature reviewed suggests that understanding the prevalence of existential anxiety and its association with clinical symptoms and identity development may provide important insight into the development and clinical significance of existential anxiety. Cognitive models of emotional disorders further highlight the potential importance of examining existential anxiety. For example, cognitive models of emotional disorders suggest that emotional disturbances such as anxiety and depression stem from negative ways of thinking (Beck, 1976). Existential apprehension may be associated with depressive and anxiety disorder symptoms by similarities in maladaptive thinking about the self, future, and the world. In other words, existential apprehension may be linked to depression and anxiety symptoms by similar apprehension and concern about the self (guilt/condemnation), future (death/fate) and the world (meaninglessness/emptiness).

In this study, descriptive data (e.g., test–retest, internal consistency reliability estimates, factor structure, and prevalence of existential concerns) from the Existential Anxiety Questionnaire (EAQ), a measure of existential anxiety based on Tillich's conceptualization, in a sample of adolescents is presented. We examined factor structure with confirmatory factor analysis and hypothesized that the data from the EAQ would be hierarchical (i.e., 1 higher order factor of existential anxiety) with 3 lower order factors corresponding to the 3 domains in Tillich's (1952a) conceptualization of existential anxiety (i.e., fate and death, emptiness and meaninglessness, and guilt and condemnation). We believed that it would be hierarchical based on our previous work with young adults and theoretically because although composed of three domains, existential anxiety is a holistic concept in Tillich's theorizing. We also tested if similar associations found with young adult samples would be evident in adolescents. We examined the hypothesis that existential anxiety is associated with clinical symptoms, in particular, depression and anxiety. We examined the specificity of associations between EAQ scores, depression and anxiety by examining unique associations among EAQ scores, depression, and anxiety. We predicted that EAQ scores would be related to symptoms of depression even when controlling for symptoms of anxiety and also would be related to symptoms of anxiety even when controlling for symptoms of depression. Finally, the association of EAQ scores with identity was also examined. We predicted that youth classified as being in the moratorium status would have elevated existential concerns and that EAQ scores would be positively correlated with identity exploration and negatively correlated with identity commitment.

METHOD

Participants

Data were collected from a sample of 140 adolescents, aged 15–18 years (mean age = 16.7 years, SD = 0.9 years) in grades 9–12 (grade 12, 45%, grade 11, 39%, grade 10, 13%, and grade 9, 3%). Participants were mainly Euro-American (78%), 5% were African-American, 4% were Hispanic, 1% Asian, 3% mixed or other ethnic backgrounds, and 9% did not endorse a racial/ethnic identifier. Seventy percent of the samplexs was female.

Measures and Procedures

Participants were recruited from a high school in East-Central Florida. All students enrolled in the school's psychology classes were asked to participate. Students were provided with an informed consent sheet approximately 1 week before the assessment. Students with consent forms signed by a parent or a legal guardian and returned by the assessment date participated in the study. Participation rate was over 90%. Participants completed the EAQ, a demographic questionnaire, the Ego Identity Process Questionnaire and the Brief Symptom Inventory in a group setting and were assisted as necessary by the authors or trained research assistants. The demographic questionnaire assessed age, gender, and ethnicity. Six participants had missing or incomplete data and pair or analysis (when more than 2 variables) wise deletion of missing cases was used to handle missing data in the analyses (Tabachnick and Fidell, 2001).

The *Existential Anxiety Questionnaire* (EAQ; Weems *et al*., 2004) is a true–false rating scale designed to assess the critical domains and sub-concepts outlined in Tillich's (1952a) work. Initial scale development resulted in a 13-item scale with 2 questions for each of the 6 concepts (3 items for "fate"), half positively worded and half negatively worded (for "fate" 1 is positively scored, 2 are negatively scored). Example items are "I know that life has meaning," "I never think about emptiness," "I often think about death and this causes me anxiety." Results of reliability analyses in samples of young adults have indicated that the EAQ had adequate internal consistency (coefficient $\alpha = 0.71$) and a 2-week test–retest reliability ($r = 0.72$, $p < 0.001$) and a factor structure consistent with theory (Weems *et al*., 2004).

The *Brief Symptom Inventory*-18 (BSI-18. Derogotis, 2000) is a self-report measure that consists of 18-items 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 ranging from 0 (*not at all*) to 4 (*extremely*) to reflect the level of distress an individual has experienced by each of the symptoms during the previous month. Designed to be brief and easy to administer, the test measures 3 primary symptom dimensions (depression, anxiety, and somatization) as well as global severity and is designed to provide an overview of a patient's symptoms and their intensity at a specific point in time. The scale has good reliability and validity. Dimension and global scores form the BSI-18 test correlate highly (i.e., >0.90) with analogous scores from the SCL-90-R test based in a large community population ($N = 1{,}122$; 605 males and 517 females).

The *Ego Identity Process Questionnaire* (EIPQ; Balistreri *et al*., 1995) was used to identify participants' identity status. The EIPQ has 2 subscales, identity exploration and identity commitment. Cronbach's α for the exploration subscale has been reported to be 0.86 with test–retest reliability of 0.76. Cronbach's α for the commitment subscale has been reported to be 0.80 with test–retest reliability of 0.90 (Balistreri *et al*., 1995). Median splits provided by Balistreri *et al*. (1995) were used to assign participants into 1 of 4 identity statuses as defined by Marcia (1966). Low scores on exploration and commitment are "diffused," low in exploration but high in commitment is "foreclosed," high in exploration but low in commitment is "moratorium," and high in both exploration and commitment is "achieved."

RESULTS

Preliminary Descriptive Analyses

Mean score on the EAQ was 4.56 (SD = 2.8) and scores had a fairly normal distribution with a slightly positive skew (skew = 0.56). Results of reliability analyses indicated that the EAQ had adequate internal consistency (coefficient $\alpha = 0.71$). No statistically significant associations were found between EAQ scores and age, grade level, gender, or ethnicity. The prevalence of existential anxiety concerns was examined by calculating the percentage of individuals positively endorsing apprehension about each of the 6 facets of existential anxiety in Tillich's conceptualization. The percentages were as follows: death 48%, fate 64%, meaninglessness 30%, emptiness 70%, condemnation 53% and guilt 59%. Ninety-six percent of the sample had at least 1 affirmatively endorsed existential anxiety concern.

Factor Structure

Confirmatory factor analysis (CFA) for binary variables using robust weighted least squares estimation was conducted with Mplus (Muthén and Muthén, 1998–2004) to test whether a single or a hierarchical 3-factor model best represents the data from the EAQ. This approach to CFA was employed because of the item rating scale (yes, no) and uses a tetrachoric correlation matrix to give unbiased estimates of the relationships among the variables and factors. The models were tested based on a priori hypotheses comparing a single factor model versus a 3-correlated-factors model (i.e., anxiety about fate and death items 1, 2, 10, 11, and 12, anxiety about emptiness

and meaninglessness items 3, 7, 8, and 13, and anxiety related to guilt and condemnation items 4, 5, 6, and 9) consistent with a hierarchical model of existential anxiety. Fit for a 3-correlated-factor model is theoretically identical to a hierarchical 3-factor model (Bollen, 1989). This is because the restrictions placed upon the model for 3-correlated factors and a higher order model with 3 lower order factors are identical and have identical implied covariance matrices. The Root-Mean-Square-Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Tucker–Lewis Index (TLI) were used to evaluate fit of the models. The CFI and TLI range from 0 to 1, with 0 indicating variation with no relation to the proposed factors and 1 indicating a perfect fit. In general, CFI and TLI between 0.80 and 0.90 are considered moderate fit, 0.90–0.95 are considered good fit. The RMSEA denotes a perfect fit with 0, with values less than 0.05 considered an exact fit, and those between 0.05 and 0.08 considered to be close fit, and those above 0.10 considered poor fit.

The results of the CFA indicated that the 3-factor model (CFI = 0.88, TLI = 0.89, RMSEA = 0.07) provides a better fit to the data than a 1-factor model (CFI = 0.76, TLI = 0.77, RMSEA = 0.10). A hierarchical model with 3 lower order factors and 1 higher order factor was also conducted and the fit indices were identical (CFI = 0.88, TLI = 0.89, RMSEA = 0.07) to the 3-correlated-factor model as expected (Bollen, 1989). The 3-correlated-factor model was also a better fit than a 3-uncorrelated-factor model (CFI = 0.52, TLI = 0.49, RMSEA = 0.15). Table I presents the standardized loadings on each of the items for the 3 lower-order factors (Fate and Death, Emptiness and Meaninglessness, and Guilt and Condemnation). As can be seen in Table I, none of the items had a standardized loading below 0.40 and the 3 factors were fairly highly correlated. Fate and Death correlated 0.50 with Emptiness and Meaninglessness and 0.62 with Guilt and Condemnation. Guilt and Condemnation correlated 0.59 with Emptiness and Meaninglessness.

Table I. Items and Factor Loadings for the Existential Anxiety Questionnaire

Items	Factor 1	Factor 2	Factor 3
1. I often think about death and this causes me anxiety, (D)	0.77		
2. I am not anxious about fate because I am resigned to it, R (F)	0.55		
3. I often feel anxious because I am worried that life might have no meaning, (M)		0.99	
4. I am not worried about nor think about being guilty, R (G)			0.49
5. I often feel anxious because of feelings of guilt, (G)			0.65
6. I often feel anxious because I feel condemned, (C)			0.95
7. I never think about emptiness, R (E)		0.56	
8. I often think that the things that were once important in life are empty, (E)		0.63	
9. I never feel anxious about being condemned, R (C)			0.40
10. I am not anxious about death because I am prepared for whatever it may bring, R (D)	0.75		
11. I often think about fate and it causes me to feel anxious, (F)	0.55		
12. I am not anxious about fate because I am sure things will work out, R (F)	0.70		
13. I know that life has meaning, R (M)		0.58	

Note. R: Reverse scored item. Factor 1: Fate (F) and Death (D); Factor 2: Emptiness (E) and Meaninglessness (M); Factor 3: Guilt (G) and Condemnation (C).

Associations with Anxiety, Depression, and Identity

Next, the association between EAQ scores and symptoms on the BSI were examined. Results are summarized in Table II. Hypothesized associations between the EAQ, symptoms of depression and anxiety as assessed by the BSI were found. The specificity of the association between EAQ scores and anxiety and depression was also examined using a partial correlation strategy. Results are also summarized in Table II. Overall, anxiety and depression were significantly correlated with the EAQ when controlling for either anxiety or depression suggesting that the EAQ possesses incremental validity to predict depression beyond an existing measure of anxiety and to predict anxiety beyond an existing measure of depression.

The subscales prediction of anxiety and depression was examined using hierarchical regression. Two separate analyses were conducted, 1 with the BSI anxiety scale and the other with the depression scale as the dependent variable. In both analyses subscale scores on the Fate and Death, Emptiness and Meaninglessness, and Guilt and Condemnation scales were entered simultaneously as predictors. Results indicated that the overall model was significant [$F(3, 138) = 28.92$, $p < 0.001$, model $R^2 = 0.37$ for anxiety and $F(3, 138) = 20.71$, $p < 0.001$, model $R^2 = 0.32$ for depression]. Standardized βs for the model predicting depression were 0.14 for fate and death, 0.29 for emptiness and meaninglessness, and 0.31 for guilt and condemnation all p values were less than 0.01 except for fate and death ($p = 0.067$). Standardized βs for the model predicting anxiety were 0.07 for fate and death, 0.51 for emptiness and meaninglessness, and 0.16 for guilt and

Table II. Summary of Correlations Among Study Variables and Partial Correlations Among EAQ Scores and BSI Anxiety and Depression Scales

Variables	1	2	3	4	5	6	7	Mean (SD)
Zero order								
1. Existential anxiety								4.56 (2.8)
2. Fate & death	0.77**							1.63 (1.4)
3. Emptiness & meaning	0.71**	0.29**						1.44 (1.2)
4. Guilt & condemnation	0.73**	0.34**	0.32**					1.50 (1.2)
5. BSI anxiety	0.53**	0.27**	0.58**	0.35**				1.09 (0.9)
6. BSI depression	0.54**	0.33**	0.44**	0.45**	0.68**			0.92 (0.8)
7. EIPQ exploration	0.26**	0.18*	0.18*	0.22*	0.24**	0.32**		54.21 (9.5)
8. EIPQ commitment	− 0.25**	− 0.24**	− 0.29**	− 0.02	− 0.26**	− 0.23**	− 0.31**	54.58 (9.3)

Partial correlation analyses

Controlling for	BSI Anxiety and EAQ	BSI Depression and EAQ
1. BSI Anxiety	na	0.29**
2. BSI Depression	0.27**	na

Note. EAQ: Existential Anxiety Questionnaire, BSI: Brief Symptom Inventory, EIPQ: Ego Identity Process Questionnaire.
*$p < .05$; **$p < .01$.

condemnation all p values were less than 0.05 except for fate and death ($p = 0.341$).

Correlations among the EAQ and identity exploration and commitment as measured by the EIPQ are presented in Table II and indicated that exploration and commitment were related to existential anxiety in the hypothesized manner. To examine the association between the identity statuses and existential anxiety participants were first classified into identity statuses based on their EIPQ scores. Mean scores on the EAQ were [M(SD) = 4.56(2.6), 3.93(2.2), 5.93(3.6), 4.05(2.7) respectively for the diffused ($n = 47$), foreclosed ($n = 46$), moratorium ($n = 27$), and achieved ($n = 19$) groups] and were significantly different across the groups [$F(3, 138) = 3.36$, $p < 0.05$]. Tukey's contrasts indicated that the participants classified as being in the moratorium status had significantly higher EAQ scores than those in the foreclosed status.

DISCUSSION

Results support the viability of empirically examining Tillich's theory of existential anxiety in youth and suggest the importance of further exploring the relation between existential anxiety concerns and the symptoms of depression and anxiety. Existential anxiety concerns were highly prevalent in this sample of adolescents and thus it may be reasonable to consider them a normative phenomenon. Such findings add empirical support to the notions of philosophers and writers in the existentialist tradition such as Dostoyevsky, Kierkegaard, Sartre and Camus who have noted that existential concerns, as defined in this study, are core human issues. Similar to our findings with young adults samples (Weems *et al*., 2004) the "relative" existential anxiety concerns were more prevalent than the "absolute" concerns. This may be because relative concerns are more salient in the every day lives of people than the "ultimate" aspects of existential apprehension.

Results indicated that the EAQ has adequate reliability and validity estimates in youth. In particular, levels of existential anxiety were fairly evenly distributed across the sample and the EAQ had adequate internal consistency. In terms of convergent and incremental validity, the EAQ was correlated with symptoms of depression and anxiety in the theoretically predicted manner. Results thus provide initial support for the assessment of existential anxiety as conceptualized in Tillich's model and its relevance to the phenomenology of depression and anxiety and results were broadly consistent with previous research (e.g., Abdel-Khalek, 2000–2001).

Results were consistent with our hypothesis that the data from the EAQ would be hierarchical with 3 lower order factors corresponding to the 3 domains in Tillich's (1952a) conceptualization of existential anxiety. We believed that it would be hierarchical because although composed of 3 domains existential anxiety is a holistic concept according to Tillich's theorizing and preliminary findings in samples of young adults supported this hypothesis. Although the hierarchical 3-factor model provided the better fit to the data than a 1-factor model, the fit can only be considered moderate. The moderate fit indices may have resulted from the small item pool for the factors or from the dichotomous "yes" or "no" rating

system. The dichotomous "yes" or "no" rating system was used for ease of scoring and administration; however, future research may benefit from using likert-type ratings. Fit estimates and item loadings were very similar to those reported in Weems *et al*. (2004) but were slightly higher and this may have been the result of using the tetrachoric correlations in the analysis of factor structure in this study (see relevant discussion in Mislevy, 1986; Muthén, 1978). Finally, future researchers may wish to expand the item pool. This may be particularly important for research aimed at examining further the components of Tillich's conceptualization of existential anxiety.

Examining the associations demonstrated in this study between the EAQ and depression and anxiety closely, reveals some interesting differences between our previous findings in young adults and this sample. Examination of the standardized β's in the subscale regression analyses indicates that the meaninglessness and emptiness subscale had the largest β in the regression predicting anxiety but the guilt and condemnation subscale had the largest β in the regression predicting depression. The fate and death subscale was not significant in either regression. This contrasts to our previous findings in young adults (Weems *et al*., 2004) in that the meaninglessness and emptiness subscale had the largest β in the regression predicting depression for adults and the fate and death subscale had the largest β in the regression predicting anxiety. Such findings may represent developmental differences in the relative importance of various existential concerns.

Although the prevalence of existential anxiety concerns suggests that such apprehension may be normative, results also suggest that highly elevated existential anxiety may be associated with problematic levels of depression. Research to examine possible developmental associations between existential anxiety and symptoms of clinical depression and anxiety may thus be warranted. Theoretically, existential apprehension may influence the development of depressive and anxiety disorders by fostering maladaptive thinking about the self, future, and the world. In other words, existential apprehension may foster a negative view of the self, the world or the future. However, no causal or directional conclusions should be drawn from the results of this study. Prospective longitudinal designs are needed to better address these types questions.

Results were consistent with our hypothesis that individuals in the moratorium status would have elevated existential anxiety. Such individuals are likely to be grappling with core issues and thus should be likely to have elevated existential concerns because individuals in this status are exploring different options for their core beliefs but have not yet chosen from the available alternatives or committed themselves. However, post hoc tests indicated that they only significantly differed from the foreclosed group. Although no directional conclusions can be made from the design of this study, taken together with the correlational analyses the results are consistent with the idea that worry about finding appropriate life roles, goals, and values may lead to deeper concerns about the meaning of life and death but that commitment to identity may be protective. However, research is needed to explore if concern about one's ability to successfully manage identity issues (i.e., identity distress) is relevant to understanding the linkages between identity and existential anxiety. In other words, the exploration of identity options may not directly foster existential anxiety. Distress or confusion about identity related issues might be more important in fostering negative existential concerns (Berman *et al*., 2004).

Although the study contributes to an understanding of the phenomenon of existential anxiety there are several limitations. First, this study is limited by the cross-sectional nature of the investigation and thus longitudinal research is needed to clarify the developmental phenomenology of existential anxiety and its associations with emotional functioning. Second, because multiple self-report measures were employed there is the potential issue of source variance. Future research may benefit from employing interview schedules of depression and anxiety. Finally, the symptoms of anxiety and depression that were correlated with existential anxiety were not DSM-IV diagnoses of anxiety or depression. Future research could benefit from studying Tillich's model of existential anxiety in participants who meet the clinical criteria for anxiety and depressive disorders. In particular, the relationship between existential anxiety and panic disorder, in which the fear of death is a part of the diagnostic criteria, and post-traumatic stress disorder, in which the threat of death to one's self is a part of the diagnostic criteria, could be examined in an effort to better understand the role of existential apprehension in these disorders (Fortner and Neimeyer, 1999).

In summary, philosophers in the existentialist tradition have long commented on the role of existential apprehension in human emotional functioning. Intervention theorists such as Yalom (1975) have pointed out the importance of existential factors in the clinical domain and researchers (Debats *et al*., 1995) have called for increased scientific and clinical consideration of facets of existential anxiety. The literature reviewed and the results of this study point out that existential concerns are common and measurable phenomenon. Results also support the viability and utility of empirically examining Tillich's (1952a) theory of existential anxiety and highlight the importance

of further exploring the relation between existential concerns and clinical symptoms such as depression and anxiety in youth. Tillich's theory may also be a useful platform for additional theoretical work on the role of existential anxiety in youth emotional functioning.

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