Development and Preliminary Evaluation of the Existential Meaning Scale

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Purpose: *The aim of this study was to develop and examine the psychometric properties of the Existential Meaning Scale (EMS).* ***Findings:*** *Construct validity of the EMS was examined through factor analysis and correlational analyses with theoretically related instruments. After several weak items were deleted, the 20-item scale had a Cronbach's alpha coefficient of > .80 in an overall sample of 418 individuals. Scores on the EMS were significantly lower in a sample of persons with HIV-1 infection than in the general population samples.* ***Conclusion:*** *Although its initial psychometric properties were satisfactory, additional validation of the EMS is necessary in other clinical populations to examine further the psychometric properties of the EMS. In addition, further examination of the responsiveness of the EMS over time is needed to evaluate its potential utility in longitudinal trials.*

Keywords: *existential; instrument*

Although the overall meaning and purpose of human's lives have been of interest to philosophers throughout the ages, existential concerns are arguably the least studied aspect of human responses to

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health and illness. Because of the abstract nature of existential concepts, it is difficult for researchers to precisely define and, yet more difficult, to operationalize these concepts into variables. Existential meaning is, by definition, intrinsically assessed and individually perceived, leading some to question whether existential concerns are a valid domain of research in human health and illness. However, there is an accumulating body of scientific evidence that supports the importance of an individual's meaning or purpose in life for salutary health outcomes and quality of life. Studies have linked a positive sense of meaning or purpose in life to multiple positive health outcomes (Fry, 2000); and, conversely, lack of meaning has been associated with multiple adverse outcomes. Even though existential meaning is integral to health and wellness, there are few existing instruments that adequately measure the concept. Because the importance of existential meaning to health outcomes is becoming increasingly apparent (Berg & Sarvimäki, 2003; Reker & Chamberlain, 1999; Whitehead 2003), there is a need for further development and refinement of a measure of existential meaning that may provide a means of examining human responses to health and illness from a more holistic perspective. Therefore, we have developed and tested a measure of existential meaning based on the works of Frankl (1959, 1986) and present the preliminary psychometric results in this article.

Review of the Literature

The existential domain of human health has been the least studied in health-related literature. However, there is accumulating evidence that having a strong sense of existential meaning is associated with salutary health-related outcomes in physical, mental, and physiological domains (Zika & Chamberlain, 1992). Existential concerns have been shown to be associated with positive outcomes in psychological, physiological and symptom-related domains. Meaning in life has been associated with increased life satisfaction in the general population (e.g., Fry, 2000; Reker, Peacock, & Wong, 1987) and in better quality of life in persons with serious illness. The relationship between meaning and purpose in life and positive adaptation to illness has been demonstrated in diverse clinical populations. In a qualitative study of nine women with ovarian cancer, finding meaning in life was identified as necessary for dealing with an early death: If women were not able to find meaning in life, despair resulted (Bowes,

Tamlyn, & Butler, 2002). In a study of 74 people with recurrent cancer, Taylor (1983) found that a sense of purpose was significantly negatively correlated with symptom distress and social dependence. In cancer survivors, meaning in life was associated with positive psychological adjustment and positive psychosocial outcomes (Schnoll, Knowles, & Harlow, 2002). Similarly, having a strong sense of meaning in life has been associated with self-transcendence in persons with advanced breast cancer (Coward, 1991) and HIV-1 disease (Hall, 1998). Conversely, lack of purpose in life was a stronger predictor of depressive symptoms in persons with HIV-1 infection than severity of HIV-1 disease (Lyon & Younger, 2001) and has been associated with drug use and dependence (Nicholson, Higgins, Turner, & James, 1994). One study (Bower, Kemeny, Taylor, & Fahey, 2003) reported that meaning in life may be related to a positive change in physiological parameters. In 43 women who had lost a close relative to breast cancer, positive changes in meaning-related goals during the study period resulted in increases in natural killer cells, suggesting that meaning in life may have an immunologic correlate (Bower et al., 2003).

Existing Instruments to Measure Meaning in Life

Although support for the importance of existential concerns to positive health outcomes is accumulating, it is currently difficult to generalize study results and make conclusions about findings because of the use of multiple instruments to measure existential concepts. Several existing instruments incorporate existential meaning as part of a more complex construct (e.g., Sense of Coherence, Antonovsky, 1993; Spiritual Well-Being, Ellison, 1983; and Life Attitude Profile, Reker et al., 1987). However, there are no published instruments that measure existential meaning as a single conceptual entity. Only one instrument measures a closely related unidimensional concept: purpose in life. The Purpose in Life (PIL) Scale, constructed by Crumbaugh (1968), has been used in many different settings and has well documented reliability (e.g., Crumbaugh & Henrion, 1988). Even though the PIL has been used in many different settings and has well documented reliability and validity, it has several limitations. Battista and Almond (1973) noted its unequal distribution of items, the straightforward manner in which they are presented, and the failure to control for social desirability or denial. In

addition, it has an item concerning retirement, which may not be a relevant concern for individuals with life-threatening illness.

Because of the limitations of current instruments and the importance of existential meaning in health-related outcomes, we developed the Existential Meaning Scale (EMS) (based on the works of Frankl, 1959, 1986). We conceptualized existential meaning as an individually defined perception that life has meaning that is independent of external or contextual influences such as employment and physical health status. The EMS is based on the premise that one's sense of meaning may change, either increase or decrease, in response to life events and increased awareness associated with serious illness. McQuellon and Cowan (2000) described *mortal time* as the temporal state that human beings enter into when confronted with the prospect of death. This temporal state may lead to a transition in which transcendence (Coward, 1991), mastery of illness (Younger, 1991), or experiences of meaning may occur (Steeves & Kahn, 1987). Clearly, with a focus of nursing science on promoting health within illness and chronic disease, and the current emphasis on integrative health that includes not only physical and psychological but also existential health promotion, there is a need for an instrument to measure existential meaning, viewed from a personal, internal perspective, independent of current or future life situation and with relevance for culturally and ethnically diverse populations (e.g., Dyck, 1987). In response to this need, we developed and tested the psychometric properties of the EMS. The EMS is designed to measure existential meaning as a single conceptual entity that is not confounded by contextual variables such as physical health, vocation, or other external sources of meaning.

Method

The current study was undertaken, in part, as the pilot work and background for a dissertation study that included 123 persons with HIV-1 infection. An iterative process was used to develop the items and assess the psychometric properties of the EMS in general population samples before administering it to the clinically designated sample. The current study was approved by the Investigational Review Board, Virginia Commonwealth University, and written informed consent was received from all patient-related individuals in the sam-

ple and verbal consent was received by individuals from the general population (no identifiers were collected in the general population samples).

Item Development

First, we reviewed existential meaning as described by a variety of philosophical and health-related sources. Frankl's (1959) works are the primary philosophical foundation for the EMS. Frankl pointed to the ability of human beings to find meaning in any circumstances, even when the choices are few and the future is temporally constrained. Frankl's own account of surviving the horrors of a concentration camp provided one of the first examples of the importance of a well-defined sense of meaning; he associated his survival with his ability to retain a sense that his life had meaning, in spite of his external environment. From the review of Frankl's works and other related existential philosophers, a pool of 30 items was generated for inclusion in the EMS. The items were assessed for relevance to the underlying construct and for clarity by a panel of 10 doctorally prepared nurses. The panel members were asked to judge each item against the conceptual definition of existential meaning and to decide whether the item fit the definition. From the pool of 30 items, 20 were selected by the panel that best reflected the conceptual definition. To enhance the cultural sensitivity of the instrument, two consultants whose expertise included culturally competent caregiving reviewed the 20 items and made suggestions to improve the cultural sensitivity and validity of each item. The readability of the instruments was verified using the Simple Measure Of Gobbledegook (SMOG) formula (McLaughlin, 1969). Social desirability in responses was minimized by constructing nine items in the negative direction to represent lack of existential meaning. An affirmative response to the item "Life has no inherent meaning" and "My life is empty" were indicators of a lack of existential meaning. The resultant initial EMS contained 20 statements (Table 1), and respondents were asked to rate the level of their agreement or disagreement with each item using a 5-point response scale (1 = *strongly disagree* to 5 = *strongly agree*). Seven items were negatively worded and were recoded for scoring. Higher scores indicated a more positive perception of existential meaning, and lower scores indicated lack of meaning or meaninglessness.

TABLE 1
Meaning in Life Instrument (Initial 20 items)

1. My life has not been what I hoped it would be.
2. I have searched for meaning in my life.
3. My future is bright.
4. I am not at peace with my God.
5. I accept my life as it is.
6. My day-to-day life has meaning.
7. I am pessimistic about my future.
8. I feel a sense of disconnection in my life.
9. I have struggled to find meaning in my life.
10. Life is futile (useless).
11. Others would say that my life has meaning.
12. Even if I lost that which means the most to me, my life would still be worthwhile.
13. There is no point to my life.
14. I am satisfied with my life.
15. I know why I am here on earth.
16. I have searched for meaning in my life.
17. Life has no intrinsic (inherent) meaning.
18. My life had meaning in the past.
19. My life is empty.
20. I am hopeful about the future of humankind.

Initial Testing

To examine its construct validity, the EMS was included in a psychosocial questionnaire that included the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) and was administered to a convenience sample of 141 respondents as part of a doctoral course assignment. As part of our multianalytic approach to develop a reliable and valid instrument (Nunnally & Bernstein, 1994), concurrent and divergent validity were assessed by administering the EMS with theoretically associated instruments. The EMS was expected to be negatively correlated with the CES-D (Radloff, 1977). The EMS was negatively correlated with the CES-D ($r = -.43$). The direction and strength of this correlation supported the inverse relationship between existential meaning and depressive symptoms. The factor pattern of the data was then examined using principal component axis factoring. The screen plot was consistent with an impression of one factor. Three items with an item-factor loading of less than 0.40 were deleted (Carmines & Zeller, 1979). Internal consistency of the

EMS was assessed by determining the coefficient alpha, a measure of the degree to which scale it measures a homogeneous construct (Carmines & Zeller, 1979). The resulting 17-item EMS scale had an alpha reliability coefficient of .83, indicating satisfactory internal consistency.

Qualitative Item Validation

After three new test items were developed by the authors to produce a twenty-item scale, a qualitative study was then conducted with a sample of oncology patients ($N = 5$) to provide further information about item clarity and content validity of the items. Respondents were asked to explain how they chose a response to the items and to discuss any problems they had in understanding individual items. The five patients all said that the items were understandable. Two of the respondents, who scored below 40 on the scale were asked to describe what factors led to their perception that their lives lacked meaning. One said that her son, who was her last child at home and in many ways her favorite, had been murdered 2 years earlier and the perpetrator of the crime had not been caught. The loss of her son had led her to question her belief in a loving God. The loss of meaning thus coincided with a loss of religious faith. The other respondent who scored low had also endured an act of violence, similar to that of the first respondent.

Further Pilot Testing

After the qualitative interviews were found to support item clarity, the revised instrument item was tested with a third convenience sample of 150 participants. The item-scale correlations ranged from 0.29 to 0.66, the item means averaged 3.5, and the coefficient alpha of the scale was .85. In the third administration, the EMS performed satisfactorily as a scale, and no further item additions or deletions were made.

Instrument Testing in a Population of Interest

As part of a larger study (Lyon, 1997), the EMS was then tested in a sample of persons living with HIV-1 infection. Scores on the EMS ranged from 20 to 58, (with a possible range of 20 to 60). The mean score was 36.87, with a mode of 36 and standard deviation of 9.45. The

TABLE 2
Demographic Characteristics of the Samples

Characteristic	*Sample 1 (N = 141)*	*Sample 2 (N = 5)*	*Sample 3 (N = 150)*	*Sample 4 (N = 123)*
Gender				
Female	114	3	126	25
Male	26	2	24	98
Age				
20 to 29 years	10	0	29	20
30 to 39 years	42	1	42	54
40 to 49 years	60	0	37	42
50 to 59 years	24	2	29	3
60 to 69 years	0	2	0	4
Ethnicity				
White	119	3	118	44
Black	13	2	17	79
Hispanic	0	0	1	0
Asian	4	0	7	0

distribution had a negative kurtosis (–.32) but very little skew (–.09). In this sample, the EMS was correlated with the PIL at .67 ($p < .01$) and the CES-D at –.58 ($p < .01$). The EMS scale mean was significantly lower for the sample of persons with HIV-1 infection than in the general population samples recruited for earlier testing.

Optimizing Scale Length

Confirmatory factor analysis (CFA) using LISREL 8.20 (Jöreskog & Sörbom, 1996) was performed to provide additional information about the structure, precision, and integrity of the scale. CFA was also used to identify items that were highest in face validity, that is, most clearly related to the theorized construct (Table 2). Because CFA characteristically produces more parsimonious results than other analytic techniques, we were guided in the assessment of future scale length using the theorized one-factor model. Using the modification indices in addition to the theoretical rationale, a 10-item scale was produced (Table 3). Construct validity was supported by the factor loadings and goodness-of-fit indices (GFI). The alpha reliability was .84. One factor explained 41.4% of the variance. The chi-square of the 10-item scale (with 27 degrees of freedom) was 89.64 ($p = .12$). Root mean square residual was .056. The GFI of the scale was .94, a satisfactory level. A

TABLE 3
Meaning in Life Instrument (Confirmatory Factor Analysis)

Item and Relative Ranking to Other Items	
I have struggled to find meaning in my life.	(9)[a]
My day-to-day life has meaning.	(6)
Life has no intrinsic (inherent) meaning.	(17)
My life had meaning in the past.	(18)
I know why I am here on earth.	(15)
I accept my life as it is.	(5)
I am satisfied with my life.	(14)
My life is empty.	(19)
My life has not been what I hoped it would be.	(1)
I feel a sense of disconnection in my life.	(8)

a. The number in parentheses is the scale item number.

repeat factor analysis again supported the unidimensional structure of the EMS. Although the CFA revealed that a 10-item scale was the most parsimonious result, because of the preliminary nature of the instrument testing, it may be advisable to further test the 20-item instrument before decreasing the items in the next stage of testing.

Conclusion

The quantification of existential meaning is important for researchers who are investigating human responses to health and illness. Consequently, the EMS was developed and tested in 418 individuals. The psychometric evaluation of the EMS supports that the EMS is a valid and reliable tool for assessing existential meaning. Construct validity of the EMS was demonstrated by statistically significant correlations of meaning in life with the theoretically relevant scales measuring depressive symptoms and purpose in life. The EMS is a measure of existential meaning that may be a useful instrument for examining existential meaning in so-called well individuals and in persons with serious illnesses. Because ethnic minorities and individuals older than age 60 years were underrepresented in our preliminary study (Table 2), further testing is needed to establish the reliability and validity of the EMS in these populations. In addition, examination of the responsiveness of the scale to individual changes in existential meaning over time has not yet been determined.

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