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Coping Strategies and Integrative Meaning as Moderators of Chronic Illness

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Abstract

This study contrasted the moderating effects of deriving integrative meaning (a primary appraisal process) with the use of specific, cognitive-behavioral strategies (a secondary appraisal process) in confronting stressors involving harm or loss. Eighty young adults and eighty older participants with varying levels of chronic illness were assessed. Open-ended responses to recalled experiences with illness and death were coded for integrative meaning and use of specific cognitive-behavioral strategies. In young adults with higher levels of chronic illness, a greater tendency to use specific cognitive-behavioral strategies was related to higher morale. In older participants, a greater tendency to derive integrative meaning was related to increased morale, regardless of illness levels.

A chronic medical condition affects 50% of the general population at any given time (Taylor, 1991). Among individuals over the age of 65, approximately 88% are affected by some form of chronic impairment or disease (Hoffman, Rice, & Sung, 1996). Facing these challenges, some individuals will report anxiety, depression, and even rage, while others show little or no apparent distress (Cf. Cristman, et al., 1988; McCracken, 1998; Rodin & Voshart, 1986; Zautra et al., 1997). Clearly, such individual differences in reactions to health problems is an important issue for psychologists to explore.

When confronting any major life event, health related or not, personality factors will play a role, as will primary appraisals and reappraisals that involve assessments of the nature and meaning of the event, and future expectations. These more fundamental variables combine with secondary appraisal processes that involve consideration and deployment of specific coping strategies (e.g., problem-solving, seeking social support, distancing, etc.) to determine one's adjustment to a stressor (Lazarus & Folkman, 1984).

Most of the empirical work on the coping process has focused on the use of specific coping strategies that constitute the secondary appraisal process. There is evidence that such factors account for only a small portion of the variation in adjustment to a stressor (Anshel, 1997; Browne, et al. 1988; Folkman, Lazarus, Gruen, and DeLongis 1986; Rotenberg, Lauren, & Heiman-Stahl, 1998). As a result, investigators have begun to look more closely at personality factors and primary appraisal processes. The bulk of this research has focused on the ability of individuals with certain personality traits to cope with acute stressors (e.g., Kobasa, 1979; Scheier and Carver, 1987; Peterson and Seligman, 1987; and Snyder et al., 1991). What remains to be shown is whether these person factors can facilitate an individual's adjustment to an ongoing stressor, such as chronic illness. An alternative approach, and the one we adopted in

this study, is to focus on primary appraisal tendencies and the impact of such tendencies on the psychological well-being of different groups of individuals.

Meaning and the Coping Process

In Lazarus and Folkman's (1984) classic model of coping, primary appraisals are the most fundamental aspect of the coping process. Primary appraisals are used to determine what is at stake, or the meaning of a particular stressor. Nevertheless, when they turn to a more functional analysis of the coping process, Lazarus and Folkman (1984) do not emphasize this meaning-focused aspect of primary appraisals but instead concentrate on the management or alteration of the problem (problem-focused coping) or the regulation of affect (emotion-focused coping).

We believe it is important to highlight the third critical function of primary appraisals which is to facilitate the translation, assimilation, and integration of a stressful life event. In short, we need to better establish the presumed importance of meaning-focused coping.

Before we proceed any further, a question may be asked. Should meaning derived from a stressor be considered a coping process or a coping outcome? We believe that it is possible to conceptualize derived meaning as either a coping process or outcome, depending on one's point of reference or selected level of abstraction. Appraisals that constitute the process by which life events are interpreted and ultimately transformed and integrated involve cognitive effort and are properly called part of the "coping process" (Lazarus & Folkman, 1984). It is also possible to consider the result of deriving meaning as a "coping outcome" that in turn could serve to regulate other outcomes, e.g., morale or psychological distress.

Derived Integrative Meaning

Individual stress and coping theorists have acknowledged the importance of existential beliefs and meaning-based appraisals but very few have focused their investigations on these specific constructs. The work of Kobasa (1979) and Antonovsky (1987) are two notable exceptions. While she does not explicitly refer to meaning, Kobasa (1979) writes that "hardiness" includes "commitment", which consists of "involvement with others" and "to all social institutions" (Kobasa, 1979, p. 4). In contrast, Antonovsky (1987) suggests favorable life experiences may act as "generalized resistance resources" that allow individuals to view life events in terms of a sense of coherence (SOC). He further divides coherence into a) comprehensibility, b) manageability, and c) meaningfulness. In his view meaningfulness is a partly motivational construct that creates a sense "...that at least some of the problems and demands posed by life are worth investing energy in and commitment" (Antonovsky, 1987, p. 18).

Clearly one definition or sense of meaning involves purposes, intentions, or aims. In our opinion this goal-related approach to meaning has been overemphasized in the literature. For example Klinger (1998) has argued that the different forms of meaning discussed by theorists such as Baumeister (1991) and Joske (1981) can all be subsumed within his own framework, where meaning is viewed in terms of the reasons or purposes that underlie goal-directed activity. Klinger (1998) even suggests that because meaning in the sense of a purpose or goal appears essential to a motile being it could be considered an outcome of human evolution. What are the roots of this particular view of meaning? The simplest answer is that many of the classic writings on meaning have come from existentialists who believe that an authentic existence is ultimately about making choices (May, 1983), establishing commitments, assuming responsibility (Yalom, 1998), and exerting one's will (Rank, 1973). Even the concept of "being" employed by many existentialists, i.e., Binswanger's (1958) Dasein, implies action.

Yalom (1980) clearly reflects this existentialist bias when he cites a Japanese proverb "To know and not to act is not to know at all." (Yalom, 1980, p. 286). Indeed Yalom (1980), who acknowledges that meaning and purpose are not the same thing, argues that although cosmic meaning (the meaning of life) may involve a quest for coherence, the process by which an individual seeks terrestrial meaning (what is the meaning of my life), involves purpose.

In our view meaning and purpose are not identical concepts. More importantly meaning cannot be subsumed under purpose because the former (meaning) is the broader concept. In fact one could argue that in many cases, a sense of purpose is secondary to meaning; a derivative of first achieving a sense of coherence or understanding. How do we conceptualize meaning? Our view of meaning is perhaps described as more structural than functional. Our perspective is more in line with constructivists such as Kelly (1955), who emphasized the human need for order and predictability, and existentialists such as Frankl (1984) who acknowledged the role of life goals, but emphasized the challenge of making sense of human pain and suffering, and the struggle to integrate seemingly absurd experiences. In short, meaning-making is also about the processes by which people attempt to interpret, structure, integrate, and in some instances, even transcend, life events.

Let us return to Klinger's (1998) idea that a motile being needs to have a purpose. What sense of "purpose" is implied here? All animals are motile. Do they all seek a "purpose" in the classic existentialist sense? Specifically, do all animals seek meaning? No. Humans are the only meaning seekers. What makes humans special is not motility but reflective ability. From this perspective one could argue that the structural or integrative aspects of the meaning-making process are as important as the goal-related functions traditionally discussed. Moreover, in confronting specific stressors, such as a chronic illness, this structural-integrative function of meaning may be the most critical aspect. To distinguish this conception of meaning from the

more popular definition of meaning in terms of purposes or aims we shall hereafter use the term derived integrative meaning.

Meaning and Illness

In the context of Lazarus and Folkman's (1984) "harm/loss" category of stressful appraisals, a chronic illness is viewed as a unique form of harm, which often involves actual as well as symbolic losses (see also Shuman, 1996; Sidell, 1997). The harm suffered is ongoing, primarily internal in source, and likely to affect all aspects of the individual's being (physical, social, spiritual, etc.). For this reason one could argue that chronic illness is more likely than most acute and nonhealth related stressors to bring one into contact with life's so-called ultimate concerns": freedom; isolation; death; and meaninglessness (Yalom, 1998). With these differences between health and nonhealth stressors in mind, it is reasonable to ask if certain coping strategies or processes may be particularly helpful, or conversely, ineffective in dealing with illness.

A variety of sources suggest that an important factor in coping with illness is meaning. Classic anecdotes date back to the story of Job in the Old Testament. In the modern era compelling arguments relating meaning and illness were developed by David Bakan (1968) in Disease, Pain, and Sacrifice, and Susan Sontag (1978) in Illness as metaphor (see also Murphy, 1987). These literary efforts were followed by more focused investigations of meaning and coping (Barnard, 1984; Browne, et al., 1988; Cioffi, 1991; Marshall, 1988). Now a number of studies are showing that meaning may play a critical role in coping with specific illnesses such as asthma (Adams, Pill, & Jones, 1997) AIDS (Cohan, 1997) and breast cancer (Ford, Barrow, and Stohl, 1998).

Chronic illness is a particular problem for older adults. Nearly half of all visits to the doctor by an elderly person involve a chronic condition (Kart, 1985). Problems with arthritis, rheumatism, or hypertension afflict fifty percent of all individuals over the age of seventy. Nevertheless more than one investigator has found older adults in poorer physical condition who have reported doing psychologically better than healthier young adults (Folkman, 1986; Kart, 1985). Is it possible that such age differences in morale are due to differences in the way younger and older adults cope with life events?

Previous research by Folkman (1986) suggests that development strongly impacts the coping process. In her study Folkman found that older adults relied on more indirect forms of coping while younger adults utilized more confrontative techniques. We do not know if this age difference is maintained across all forms of stressors, including chronic illness. We also do not know if "less confrontative techniques" includes meaning-making. For example, is it possible that older adults will be more apt to derive meaning from illness? Are younger people living with chronic illness less likely to derive integrative meaning from illness and consequently more vulnerable to experiences of anxiety, depression, or anger?

Focus and Hypotheses

The purpose of the present investigation was to study the consequences of deriving integrative meaning from harm/loss situations in individuals with varying levels of chronic illness, and secondly to contrast the impact of derived meaning with the impact of using specific coping strategies. We asked individuals to write about past experiences involving a serious personal illness and the death of someone close. These two events served as harm/loss samples from which we generated a measure of their general tendency to derive meaning or to use active coping strategies. This approach is similar to the one used by Lazarus (1991) to derive a

dispositional (versus situational) ways of coping measure. While we view all three life experiences; a personal illness, the death of someone close, and chronic illness, as examples of what Lazarus and Folkman (1984) call “harm/loss” events, in this study we did not assess the degree or nature of meaning derived directly from chronic illness. Rather we were interested in the general disposition to derive integrative meaning from harm/loss situations in individuals with varying levels of chronic illness. Moreover we wanted to assess this general tendency in a manner uncontaminated by background levels of illness. By varying age and level of chronic illness, the present investigation was also designed to assess the relative moderating effects of specific coping strategies versus derived meaning at two points in the life cycle and in the context of low or high levels of chronic illness.

We predicted the following; first, we expected that older adults would derive more integrative meaning from personal experiences of illness and death than young adults. Secondly, we expected that among individuals with lower levels of chronic illness, either a greater tendency to derive integrative meaning or a greater tendency to deploy specific coping strategies would be associated with a favorable outcome (higher morale and less distress), regardless of age. Thirdly, among subjects with relatively higher levels of chronic illness, we expected that a greater tendency to deploy specific coping strategies would not be associated with a favorable outcome, but that greater derived meaning would be associated with better morale and less distress.

Method

Subjects and Procedure

The sample consisted of two age groups, eighty young adults (38 males and 42 females) who ranged in age from 25 to 40 years ($\underline{M} = 31.56$, $\underline{SD} = 4.83$), and eighty older adults (24 males and 56 females) who ranged in age from 65 to 87 years ($\underline{M} = 74.09$, \underline{SD}

= 6.20). The participants were recruited through a newspaper advertisement and paid 20.00 for their time and effort. We adopted a liberal policy of inclusion. We accepted every subject between the ages of 25 and 40, and 65 and 90, whose physical and mental health permitted them to complete simple paper and pencil tests and tasks.

Respondents were initially mailed a packet which contained a comprehensive health questionnaire that surveyed acute and chronic illnesses, major and minor health problems, and physical symptoms (Lachman, Weaver, Bandura, Elliot, & Lewkowicz, 1992), a standard symptom checklist which included subscales for depression, anxiety, and hostility (SCL-90R; Derogatis, 1992), and several measures, to be described below, which were adapted from standard measures of meaning and coping, and which were used to assess individual reactions to past experiences with illness and death. Approximately one week later the participants were gathered in groups of 10 to 15 individuals in a lab setting to complete additional standardized measures of optimism (LOT; Scheier & Carver, 1987), life satisfaction (Hoyt & Creech, 1983), social support (Moos, 1975) and purpose in life (Crumbaugh, 1968). Socioeconomic status was also assessed at this time using Hollingshead's (1975) two-factor formula: SES = (economic status x 3, + occupational status x 5). (U.S. Census guidelines are used to assign economic and occupational levels.)

Measure of Chronic Illness

The chronic illness measure consisted of 23 common and persistent conditions such as arthritis, diabetes, asthma, chronic bronchitis, and colitis. For each illness checked, subjects were also asked to rate the duration and severity of the illness (from 1-100, 1 = hardly noticed, 100 = you were very, very sick and nearly died). The number of chronic illnesses checked was our independent variable. Subjects were divided into high and low

chronic illness groups using a median split of scores obtained on the chronic illness measure.

We used separate medians, one for each age group, to preserve obtained significant age differences in levels of illness (see also table 2).

Measure of Derived Integrative Meaning

Integrative Meaning derived from experiences with illness and death was scored via content analysis of stories written to two open-ended questions. We selected this more time consuming process (versus a self-report measure) because we believed a measure of implicit meaning would be less biased (Cf. Council, 1993; McClelland, 1987). The criteria used to score the stories were taken from Guiliano and Mitchell's (1990) meaning for caregiving scale. This measure was selected because it contained a number of questions that dealt with integrative, rather than purposive meaning, i.e., value issues, life lessons, transcendent experiences, and relationships.

Two examples of the type of the items included in this scale are;

1. These experiences changed my ideas about what's really important in life.
2. Even though I don't fully understand these events, I believe they have been part of a larger plan for my life.

To elicit stories for content analysis respondents were asked to consider a time when they were seriously ill, and the death of someone close. The following specific directions were given:

1. Please think over a time in your life when you were seriously ill. Go over the experience in your mind and then describe in some detail below what happened-who was involved, how it felt, how you reacted, etc.

2. Please think over a time in your life when someone close to you died. Go over ... (as under item 1). The specific criteria used in scoring the two stories for integrative meaning were the following:

- Something positive emerged from the crisis
- I understood the crisis as part of a larger plan
- I made sense of the experience via a belief system
- I became aware of life's priorities
- I found meaning through caring for another
- I learned a lesson about life.

Two judges, blind to other results, scored each of the written accounts by assigning one point for each criterion contained in the response. The inter-rater reliability across the two meaning scores was .75. All discrepancies between the two raters were resolved via a review of the stories and the scoring criteria. Where no compromise was possible, scores from the two raters were averaged. A total integrative meaning score was obtained by summing across the two stories (death and illness).

Measure of Coping (cognitive-behavioral strategies)

To assess the degree to which an individual relied upon specific cognitive-behavioral strategies, we asked participants to rate the extent to which they used 8 specific coping strategies in dealing with the illness and death experiences. We incorporated four items from Folkman and Lazarus' (1988) Ways of Coping Questionnaire(WOC) and four items from Pargament, et al.'s (1988) measure of religious coping. The Pargament et al. (1988) Scale is similar the WOC questionnaire but the items have been modified to reflect religious coping. The combination of eight items included two items (one religious & one nonreligious) from each of the following

categories; problem solving, focusing on positive aspects, use of support, and avoidance. For example, the "use of support" was couched in nonreligious terms by asking the subject to rate the extent of support provided by family, friends, etc., while they were dealing with the illness and death experiences. Pargament et al. (1988) rephrase this question and ask the subject to rate the extent to which support from the clergy and other religious personnel has been helpful. We chose to incorporate items from these two scales for several reasons. Both measures were psychometrically sound and the composite scale we formed demonstrated an adequate level of internal consistency ($\text{Alpha} = .79$). Secondly, we believed that religion based coping efforts needed to be included in a study which focuses on serious illness and death, and involved older adults, who might find religion particularly relevant. Finally, we are in general agreement with Pargament et al. (1988) and others (e.g., Jones, 1994) who argue that modern psychology tends to underestimate the importance of religious beliefs and attitudes in people's lives.

Measures of Mood

For empirical and pragmatic reasons, the two measures of positive mood states (optimism and life satisfaction) were combined after the data was collected to form an index of "morale", while the three measures of negative mood (anxiety, hostility, and depression) were combined to create a "psychological distress" index. These composite variables reduced the number of primary statistical analyses and reflected the obtained correlations among the individual mood measures. Optimism and life satisfaction were strongly related ($r = .53, p < .001$), as were anxiety, hostility, and depression (average $r = .60, p < .001$). In contrast the correlations between the negative and positive mood scores were more modest and in the expected direction (average $r = -.25, p < .05$).

Each composite variable was created by converting raw scores into T-scores, and then summing across the two positive mood scores and dividing by two to create the morale index

(Alpha = .83) , and summing across the three negative mood measures, and dividing by three to form the psychological distress index (Alpha = .93). The correlation between the morale and distress scores was modest but significant ($r = -.23, p < .005$).

Results

The first section of the results examines the correlates of derived integrative meaning, the potential impact of confounds, and the effects of age, gender, and illness on morale and distress, and coping and meaning. Section two focuses on coping and meaning, and the main effect of these variables on morale and distress. In section three we combine age and chronic illness, initially with meaning and then with coping, to assess potential interactive effects. The contrasts involving high illness/low meaning participants, high illness/high meaning participants, etc., which appear in this section are modeled, in part, after the high stress/low illness, high stress/high illness paradigm presented by Kobasa (1979). While frequently used, the practice of dichotomizing continuous variables can, under certain circumstances, inflate the type 1 error rate (Maxwell & Delaney, 1993). Thus, in section five, we present a series of regression analyses that reinforce the bivariate findings while examining whether specific coping strategies or derived meaning contribute more to the prediction of morale, after controlling for the effects of age and illness.

Integrative Meaning: Validation, Age, and Gender Effects

Validation and Correlates of Integrative Meaning

Table 1 presents the correlates of derived integrative meaning, including potentially confounding variables. Integrative meaning shows some overlap with purpose in life and both religious and nonreligious coping. More importantly, meaning was not significantly correlated

with number, duration, or reported severity of chronic illnesses. The other set of potential confounds involved the two harm/loss stimuli used to extract meaning scores (serious personal illness and death). Table 1 shows that degree of derived integrative meaning was not related to the timing of the illness or death, nor to the severity of personal illness described, nor the closeness of the deceased to the respondent. To evaluate the relationship between integrative meaning and severity of the personal illness described by each participant, two blind raters had assigned values of 1, 2, and 3 to mild, moderate, and severe illnesses respectively (interrater reliability for this task was .90, all discrepancies were resolved with a detailed review and discussion of the described illness). To assess the relationship between integrative meaning and the closeness of the deceased to the subject, raters assigned a value of 1 for the death of a spouse or lover, 2 = parent, child, or sibling, 3 = aunt, uncle, cousin, or grandparent, 4 = friends and acquaintances.

[Insert Table 1 about here]

Impact of Age and Gender on Principal Variables

Table two displays the means and standard deviations for the entire sample and for the younger and older participants separately. Older adults reported significantly more chronic illnesses, an average of nearly four per subject, as compare to just under two for the younger respondents. Five of the top ten illnesses reported by each age group were identical and included; vision problems, arthritis, and high cholesterol. Cancer and heart conditions were among the top 10 conditions reported (only) by the older adults. Surprisingly, older adults reported higher morale, less distress, and more ways of coping.

There were no significant differences in socioeconomic status between the younger and older groups and few gender differences. Females reported more chronic illnesses ($t(138) = 2.97, p < .01$) and the use of a greater number of coping strategies ($t(136) = 3.13, p < .01$). There were no significant gender differences in integrative meaning.

[Insert Table 2 about here]

Older adults were more likely to derive meaning from a personal illness. Approximately 21% (14/67) of the younger adults obtained meaning scores above zero, whereas approximately 41% (29/71) or nearly twice as many older adults incorporated references to meaning-making in their accounts of a personal illness ($X^2(1, N = 138) = 5.58, p < .05$). There were no age differences in meaning scores derived from stories regarding the death of someone close. In fact the number of younger and older adults who derived some meaning from this experience was exactly the same, approximately 38% (younger sample, 25/67; older sample, 28/73).

Relationship of Age and Illness to Morale and Distress

To assess the relationship between age and chronic illness, and morale and distress, two separate (2 x 2) ANOVA procedures were used. In the case of morale, only a main effect for age was obtained. As already noted, older adults reported higher levels of morale ($F(1, 136) = 5.64, p < .05$). Reported distress was significantly affected by both age and chronic illness. Greater distress was reported by younger adults ($F(1, 136) = 16.70, p < .001$), as well as those with higher levels of chronic illness ($F(1, 136) = 4.05, p < .05$). The age X illness interaction was not significant.

Secondary analyses using the distress variable further revealed that among younger adults, reported distress was not influenced by chronic illness level, but that among older adults, those with fewer chronic illnesses reported less distress ($t(71) = 2.29, p < .05$).

In summary, morale was impacted solely by age, whereas distress was affected by both age and illness.

Relationship of Integrative Meaning and Coping to Morale and Distress

To examine the relationships between integrative meaning and ways of coping, and morale and distress, a median split of meaning and coping scores was used to create high and low levels of each variable. As was suggested earlier, the creation of categories of "high" and "low" for meaning, coping, etc., is due to significant differences across age groups for these variables, which explains the use of t-tests and analysis of variance procedures in most of the subsequent analyses. Participants who were classified as either "high" in integrative meaning or "high" in use of coping strategies reported greater morale ($t(135) = 3.16, p < .005$; $t(130) = 3.51, p < .005$). In contrast, neither meaning nor coping levels were related to distress scores ($t(135) = .79, p > .05$; $t(130) = 1.06, p = > .05$).

Interactions Involving Age and Illness With Meaning or Coping Strategies

We assessed morale scores in relation to age, chronic illness, and integrative meaning. A 2 X 2 X 2 ANOVA was used. The age X meaning interaction approached significance ($F(1, 133) = 3.31, p = .07$). A secondary analysis which appears in Table 3, shows through individual t-tests, that integrative meaning was not significantly related to morale in younger adults with either low or high levels of chronic illness. However reported morale in older adults was significantly higher for those who derived greater meaning, regardless of illness level.

[Insert Table 3 about here]

We also examined the potential relationships between age, chronic illness, ways of coping, and morale. The findings, presented in table 4, revealed a distinct pattern. Under conditions of low chronic illness, coping was not related to morale in either younger or older adults. In contrast, when levels of chronic illness were high, reported use of a greater number of coping skills was not related to greater morale in older adults, but was related to higher morale scores in younger adults.

[Insert Table 4 about here]

Contrasting Coping with Functional Meaning

To more directly assess the relative importance of ways of coping as opposed to the derivation of meaning we employed hierarchical multiple regression analysis to address the following issue: After controlling for age and chronic illness, to what extent do coping and integrative meaning independently predict morale?

We initially used morale as the criterion variable, and forced the age and chronic illness variables into the equation. We then employed forward selection to allow the program to add one or both of the remaining predictors (coping and meaning), if they contributed significant unique variance. The results of this procedure were that only meaning was incorporated into the equation ($\Delta R^2 = .07, p < .005$), and coping was eliminated from the model.

We also employed a series of simple regression analyses to examine the relative contribution of the four predictors; meaning, coping, chronic illness, and age. For all respondents the regression coefficients were (in order): meaning = .23, illness = -.21, coping = .16, age = .16), suggesting that meaning and then illness were the two most important predictors of morale.

Among young adults the coefficients were (in order): illness = -.36, coping = .22, age = -.21, meaning = .15). For the sample of older adults the ordering of coefficients was as follows: meaning = .37, age = -.18, coping = .08, illness = -.07). In essence, these regression findings support the bivariate findings which showed that coping strategies are more strongly linked to morale in younger adults while integrative meaning was more critical for the older adults.

Discussion

Derived integrative meaning showed a modest correlation with purpose in life and was not confounded by background levels of acute or chronic illness, nor contaminated by characteristics of the recalled experiences with illness or death used to tap this variable. For these reasons we believe the measure of derived integrative meaning employed in this study is a valid index of a general tendency or broader predisposition to derive meaning from serious life challenges. At this point we do not know why certain individuals are more or less predisposed to derive meaning. In the case of a serious personal illness, one factor does appear to be age. Older adults were more likely to derive meaning from this stressor. Antonovsky (1987) has suggested there are "generalized resistance resources" or life experiences that accumulate and facilitate the process of rendering stressors meaningful. Among the resources that Antonovsky (1987) alludes to are socioeconomic status and social support. In the sample drawn for this study, derived integrative meaning was not significantly correlated with SES ($r = -.07$, $p > .05$) but did show a modest but significant relationship with social support ($r = .20$, $p < .02$). Future

investigations of derived integrative meaning might include a more detailed assessment of potentially related individual difference variables.

The results suggest that increased morale may be related to either the use of a greater number of coping strategies or one's capacity to derive integrative meaning; the outcome appears dependent upon the level of chronic illness as well as the age of the individual. Among younger participants morale was not related to derived integrative meaning.

The reported use of a greater number of coping strategies was correlated with increased morale in younger adults, but only those with higher levels of chronic illness. The use of coping strategies was not related to morale in the older sample. Instead older participants with greater derived integrative meaning showed significantly higher levels of morale, regardless of illness level. The multivariate analyses further showed that in older subjects meaning was more important than coping strategies, age, or number of chronic illness in the prediction of morale.

Was it possible that the meaning and morale relationship found among older participants (but absent in the younger sample) was due to the greater mean number of chronic illnesses in the older sample? To rule out this possibility we created another group of older participants, who were matched with respect to number of chronic illnesses (with the young, high illness group) and found again that higher meaning, older adults reported significantly more morale than lower meaning, older adults ($t(52) = 2.22, p < .05$). We also found, once again, that greater use of coping strategies was not related to increased morale in older respondents ($t(52) = 1.62, p > .05$).

Future studies might focus on whether this pattern of findings is maintained in young and old individuals who report varying levels of illness severity, as opposed to number of chronic illnesses. However investigators may find that the use of severity ratings as opposed to number of illnesses could introduce a greater level of subject bias that will need to be controlled.

It was interesting but not surprising to find older adults reporting higher morale and less distress. We noted earlier that other investigators have found a similar pattern. In the present study the higher morale of the older respondents was particularly intriguing for as a group they reported more than twice as many chronic illnesses as younger adults and the SES levels were approximately the same across the age groups. Although one would assume that health status is a major predictor of morale, consider the significance of having an illness from a developmental perspective. Illness is an anticipated event in old age whereas this is not the case for younger adults. Countless studies have shown that the predictability of a negative life event affects the perceived stressfulness of the event. Lazarus (1991) for instance has noted that the ability to anticipate harm can be a great advantage, particularly if the individual engages in anticipatory coping. Similarly, lower socioeconomic status has been related to decreased morale, particularly among the elderly (Klauser & Klauser, 1996). Perhaps when SES levels are equivalent, as they were in this study, the morale of older adults may equal or exceed the morale of younger adults.

Coping, Meaning, and the Life-span

How can we explain the greater importance of meaning for older individuals with chronic illness?. Why was meaning less relevant for younger subjects? One possible way to interpret this pattern is to consider Erikson's (1985) last two stages of the human life-cycle. According to Erikson, the psychosocial crisis to be faced in adulthood is generativity versus stagnation. This idea suggests that the greatest threats to morale posed by chronic illness in younger adults may be the functional limitations that can accompany physical impairment. Viewed from this life-span perspective it is understandable why the employment of specific coping strategies or more confrontative processes would boost morale. Conversely in older

adults, the remaining developmental task involves the maintenance of ego integrity, or the preservation of psychic or spiritual wholeness. Erikson believes that a philosophical process is needed in old age to maintain order and meaning. A sense of "I" must be retained even while there is disintegration of sensory and bodily functions. Again, recall that in terms of predicting morale, meaning was far more important than age or illness for older participants.

This discussion raises a more general issue. If wisdom is truly the virtue of old age, as Erikson suggests, does this mean that older people will be better at deriving integrative meaning? The results were mixed. There were no significant age differences in total derived integrative meaning (personal illness and death experience combined). However twice as many older adults derived integrative meaning from a serious personal illness. This finding may be partly attributable to the fact that older adults reported slightly more serious ills, coupled with a trend for respondents who derived more meaning to describe slightly more serious health problems. It is also possible that some of the variation could simply be due to greater experience in coping with a personal illness among older adults. Folkman (1986) for example, found that older adults spend more time coping with illness whereas young adults spend more time coping with family problems. Roszak (1998) also notes that a personal illness is processed in a different way by younger adults who are forced to quickly return to the world of work and achievement. "Where that does not happen", writes Roszak, "there is the possibility of wisdom, that deeper dimensions of knowledge born of suffering and self-examination" (Roszak, 1998, p. 238-239).

Older and younger adults derived the same amount of meaning from the death of someone close. There are several ways to interpret this finding. One might be tempted to muse that death is the same for everyone. However the bereavement literature suggests this is not true. The meaning of a death is affected by the circumstances surrounding the loss, and the nature of one's relationship to the deceased (Rando, 1984). For example, while there has been a great deal

of emphasis on the death of a spouse, some investigators have shown that death of a child can be far more devastating. Rando (1984) notes that loss of a child to a parent can mean: the loss of hope; the feeling that one has failed in one's fundamental role as parent to protect a child; a sense that the natural order of the world has been reversed, a parent must bury a child; a feeling that one has lost a part of themselves. In short, the meaning of a death or any stressor is an important factor that must be considered. The kind of meaning that is derived, and the ultimate benefits of deriving meaning, will depend upon the deeper significance of the event to be processed for the person involved, as well as the age or other characteristics of the person.

Overall, we should not conclude here that older subjects are better at meaning-making and that younger adults are better at more active forms of coping. Remember that the older respondents also reported using significantly more coping strategies. Other studies have found a similar age difference. For example Kausler and Kausler (1996) report one study of middle-aged and older adults that showed no age difference in the use of problem-focused coping. Another investigation by Folkman (1986) found that older subjects were more likely than younger subjects to rely on distancing, and positive reappraisal. Perhaps the most parsimonious conclusion is the one reached some time ago by Valliant (1977) and Pfeiffer (1977); that older adults, benefiting from more life experience, can draw from a wider repertoire of coping skills.

We found that meaning and coping were related to morale but not psychological distress. One could relate this finding to previous research demonstrating the potential independence of positive and negative affect (Diener, Larsen, Levine, & Emmons, 1985). This phenomenon allows for the logical possibility that a factor which boosts morale may not lower distress. But is there a more profound reason why meaning among older adults and coping in young adults could be associated with greater morale, but not less distress? A full answer to this question will require additional research that incorporates measures of both morale and distress as potential

outcomes of coping. For now, a tentative but intriguing interpretation of this result may be found in some of the recent wellness literature suggesting that good mental health may not mean the absence of distress but the presence of healthy relationships, values, and commitments (e.g., Lapierre, Bouffard, & Bastin, 1997). A more poetic presentation of essentially this same idea was made by Thomas Moore (1992) in his book, Care of the soul. In Moore's view there is a mythology surrounding the potential role of psychotherapy. Many assume that psychology and therapy can lead to "salvation", which is Moore's term for a state of complete happiness produced by curing the soul. Instead Moore writes that care of the soul is more about engaging life: " Its goal is not to make life problem-free, but to give ordinary life the depth and value that come with soulfulness. (Moore, 1992, p. 4.). Going further if we examine the morale variable we used in this study, we find that it was a composite variable, consisting of life satisfaction and optimism. In terms of etymology, "satisfaction" means one has received "enough". The term "optimism" refers either to a general expectation that things will go well, or the belief in the philosophical doctrine that this world is the best of all possible worlds (Davies, 1979). Returning to Erikson, he suggests that the individual who has acquired the necessary ego virtues to live a good life will not fear death, and will have a sense that life they lived was the life they had to live. There is no regret. Paradoxically, according to Erikson (1985), the individual who has not lived a good life, the one who has not experienced generativity as an adult, and is incapable of wisdom in old age, is the person who essentially remains unsatisfied. He or she is the one who cannot accept the reality that life must end.

The finding that coping was associated with higher levels of morale in younger subjects should not obscure the fact that our regression analyses showed meaning was more critical than coping for the entire sample, and for older adults. In younger adults, meaning and coping accounted for nearly identical levels of variance in morale. These results reinforce the general

thrust of this article which is that meaning is important. Additionally, the findings suggest that active and confrontative coping methods are not inherently better than less direct, meaning-oriented approaches, particularly in the context of chronic illness. Other investigators are also discovering that active coping is not always superior to passive coping. For example DeGroot, Boeke, Bonke, Benno, & Passchier (1997) found that passive coping was more adaptive when the situation was uncontrollable. These findings, along with the present results, raise a more general issue. Why has there been such a heavy emphasis on active coping and secondary appraisals? One answer is that it is far easier to operationalize secondary appraisal constructs and to develop related measures. But there is also a philosophical bias at work. American Psychology, embedded in an individualistic and success driven culture, has found it difficult to acknowledge variables and processes that are at odds with this tradition. For example, after thousands of studies, and two decades of work demonstrating the benefits of internal control, a few psychologists were finally ready to show that a more collaborative form of control could also be adaptive (Rothbaum, Weisz, and Snyder, 1982). We have already noted how difficult it has been for psychologists to move away from a narrow conception of meaning in goal-related terms.

Future Implications, and the Meaning of Meaning Revisited

Kleinman (1986) has forcefully argued that a major reason researchers have failed to capture the human experience of illness is their desire to avoid the difficulty of measuring a concept as abstract and seemingly elusive as meaning. We hope the present findings will be taken along with other recent investigations (Wong, 1998) that show meaning can be measured in a valid and reliable manner. The meaning-making process encompasses more than goals and

purposes. We have argued here that meaning is also about translation, transcendence, and integration.

Recently, Wong (1998) asked a large number of people to describe an "ideally meaningful life". From the findings these investigators concluded that the implicit theories of meaning held by lay people were broader than the theories of meaning held by theorists. The respondents did mention goals, but they also cited relatedness, and a third group of experiences that could be labeled instances of "self-transcendence", "self-extension", or "self-integration". Interestingly, over thirty years ago Frankl (1963/1984) argued that meaning could be achieved with creative accomplishments, through love, and by transcendence. More recently Baird (1985) suggested that meaning in life was a function of goals, the quality of one's relationships, and personal narratives. If we closely examine the eight virtues in Erikson's life-cycle we find in the middle four goal-related themes; will, purpose, competence, and fidelity; and three relational themes; love and care. At the beginning and end of life there may be hope and wisdom. Perhaps we will soon arrive at a more consensual but broader conception of meaning; a view of meaning in terms of goals and purposes, relationships, and transcendence through translation, assimilation, and integration.

Meaning is important, especially in the context of illness. This notion may seem to be a matter of commonsense to most lay people but science has been slow to acknowledge the impact of meaning and other psychosocial variables. Taylor (1991) has noted that until quite recently a person's quality of life was not even considered a relevant issue in the study of chronic illness; the major variables were survival time and the presence or absence of disease. Ironically, Taylor and Aspinwall (1990) found that even within the quality of life literature, the proportion of medical citations pertaining to mortality and morbidity as opposed to psychological ramifications exceeded ten to one. We view meaning as one critical psychological component of

the illness experience with enormous consequences for determining the overall of quality of life in individuals combating a chronic illness. We would agree with Cunningham (1993) who argues that in treating the chronically ill, "top-down" or spiritually focused therapies should be taken as seriously as "bottom-up" or more traditional medical interventions. In Cunningham's own words:

" Growing understanding may or may not be accompanied by physical healing, but it will bring comfort, and an awareness of our connectedness, a lessened fear of death..." (Cunningham, 1993, p. 68–69).

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Table 1

Integrative Meaning: Correlates and Potential Confounds

Correlates of Derived Meaning

Purpose in Life	.21*
Religious Coping	.26*
Non-religious Coping	.24*

Potential Confounds

(Questionnaire Data)

N. of Recent Illnesses	.16
N. of Chronic Illnesses	.07
Severity of Chronic Illnesses	.14
Duration of Chronic Illnesses	.10

(Open-ended Essays about Illness and Loss)

Severity of Reported Personal Illness	.15
How recent the Personal Illness	.02
Closeness of the Deceased	.06
How Recent the Loss	.01

Note. PIL = Purpose in Life (Crumbaugh, 1968).

* $p < .05$.

Table 2

Scores on the Principal Variables for Young and Old Cohorts and Total Sample

		Total	Young	Old	Difference (Old-Young)	t (df)
SES	<u>M</u>	46.34	45.43	47.24	1.81	1.05 (165)
	<u>SD</u>	10.77	9.91	11.58		
Chronic Illness	<u>M</u>	3.08	1.82	3.89	2.07	5.79 (138)*
	<u>SD</u>	3.02	1.81	2.35		
Integrative Meaning (Total)	<u>M</u>	.83	.75	.92	.17	.98 (145)
	<u>SD</u>	1.02	1.08	.95		
Ways of Coping	<u>M</u>	18.46	17.35	19.49	2.14	2.75 (136)*
	<u>SD</u>	4.75	3.58	5.43		
Morale	<u>M</u>	50.00	48.22	51.56	3.34	2.36 (144)*
	<u>SD</u>	8.71	7.87	9.15		
Distress	<u>M</u>	49.51	52.73	46.70	-6.03	4.08 (144)*
	<u>SD</u>	9.38	8.81	8.99		

* $p < .01$.

Table 3

Morale Scores as a Function of Age, Integrative Meaning, and Levels of Chronic Illness

Morale Scores						
<u>Low Illness</u>						
	Young Subjects			Old Subjects		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
Low Meaning	15	49.59	5.85	11	48.94	4.95
High Meaning	19	49.66	5.88	18	55.20	9.03
Difference (High - Low)		.07			6.26	
<u>t</u>		.03			2.11*	
<u>High Illness</u>						
	Young Subjects			Old Subjects		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
Low Meaning	19	46.29	8.54	12	44.40	8.54
High Meaning	13	48.18	11.17	25	53.16	8.20
Difference (High - Low)		1.89			8.76	
<u>t</u>		.55			3.00**	

Note. Cutoff scores for illness: Young, Low = 1 or less (below med.), High = 2 or higher (above med.); Old, Low = 3 or less (below med.), High = 4 or higher (above med.). Cutoff scores for meaning: Low meaning = score of 0 (below med.); High meaning = score of 1 or higher (above med.).

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

Table 4

Morale Scores as a Function of Age, Ways of Coping, and Levels of Chronic Illness

Morale Scores						
<u>Low Illness</u>	Young Subjects			Old Subjects		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
Low Coping	17	48.96	5.25	16	51.09	7.18
High Coping	16	50.82	5.81	16	54.64	10.36
Difference (High - Low)		1.86			3.55	
<u>t</u>		.96			1.13	
<u>High Illness</u>	Young Subjects			Old Subjects		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
Low Coping	18	43.18	9.00	17	47.79	10.05
High Coping	14	52.04	8.03	18	53.34	8.43
Difference (High - Low)		8.86			5.55	
<u>t</u>		2.89*			1.77	

Note. Cutoff scores for coping: Young/Low illness, low coping = 16 and less (below med.), high coping = 17 and higher (above med.); Young/High illness, low coping = 20 and less (below med.), high coping = 21 and higher (above med.); Old/Low illness, low coping = 18 and less (below med.), high coping = 19 and higher (above med.); Old/High illness, low coping = 18 and less (below med.), high coping = 19 and higher (above med.).

* $p < .05$.