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THE ALPHA-OMEGA SCALE: THE MEASUREMENT OF STRESS SITUATION COPING STYLES[1]

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ABSTRACT. Our paper discusses the use and validity studies of the Alpha-Omega Scale of coping styles for life stress situations. The validation of the Alpha-Omega Scale on a sample of student and non-student population illustrated the ability of this scale to differentiate between known groups. The evidence indicated that the Alpha-Omega Scale exhibits diagnostic potential to differentiate between groups related to their coping styles in stress situations. The relationship between the Alpha-Omega Scale and the Templer Death Anxiety Scale were also investigated psychometrically and conceptually. The Alpha-Omega Scale showed better psychometric properties and is conceptually more appealing than the Templer Death Anxiety Scale because it is more sensitive to individual characteristics and is multi-dimensional. Implications of further usefulness and research are also presented.

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INTRODUCTION

Elizabeth Kubler-Ross' work in the area of death and dying identified 5 stages, i.e., denial, anger, bargaining, depression, and acceptance, as adaptational approaches different individuals utilize to deal with death-related events. The concepts of these 5 stages may, however, be considered not just for death-related situations, but rather as a generalized crisis intervention model applicable to any stress situation.

METHODS AND PURPOSE

The Alpha-Omega scale was developed to examine the adaptational approaches a person might utilize in a life-threatening situation. We used Kubler-Ross' 5 psychological stages of the dying process as a starting point for developing items designed to assess an individual's adaptational approach(es) to stressful situations.

The items were developed by individuals involved in teaching and counseling for a number of years on death and related areas. A pool of 304 items to adequately assess the manner in which subjects would respond to the stressful event of dying and death was developed. Cronbach's Alpha (1951), a measure of internal consistency, was then used to determine which of the 304 items were most highly reliable. Then 3 independent expert judges were asked to rate the original pool of items into the 5 stages of the dying process presented by Kubler-Ross (1969). The 3 judges furthered the establishment of validity and reliability of the instrument with the added advantage of shortening the scale to 50 items while maintaining high internal consistency reliability coefficients. The Cronbach Alpha reliability measures for the subscales on the shortened form were as follows: Denial, $r = .81$; anger, $r = .82$; bargaining, $r = .75$; depression, $r = .72$; acceptance, $r = .86$.

We collected a sample of 122 subjects; 72 were students from a variety of undergraduate classes, and 50 were non-student subjects from nursing home personnel, nurses or people working in the area of bereavement. Table 1 presents the means and standard deviations of all variables used, based upon the total sample ($N = 122$). Tables 2 and 3 give the means and standard deviations of all variables for the non-student sample and the student sample, respectively.

The purpose of this validity study was to determine the ability of the Alpha-Omega scale to differentiate between 2 known groups (students and non-students) when compared to the Templer Death Anxiety Scale. It is believed that the Alpha-Omega Scale is psychometrically and conceptually superior

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TABLE 1

Means and standard deviations for total sample (students and non-students) of 122 individuals.

Variable Name	Mean	Standard Deviation
Age	29.15	10.99
Education	14.30	3.40
Templer Scale	6.45	3.18
Alpha-Omega Subscales		
1 Denial	3.04	2.43
2 Anger	2.85	2.77
3 Bargaining	4.77	2.17
4 Depression	2.73	2.49
5 Acceptance	4.54	3.40
Total Scale Alpha-Omega	17.72	7.86
Holmes Rahe Stress Scale	260.31	212.62
Physiological Stress (Self Eval.)	12.50	4.19
Psychological Stress (Self Eval.)	25.96	7.04
Total Stress (Self Eval. Form)	34.31	9.21

TABLE 2

Means and standard deviation for nonstandard sample of 50 individuals.

Variable Name	Mean	Standard Deviation
Age	37.36	11.85
Education	14.96	4.54
Templer Scale	6.72	3.16
Alpha-Omega Subscales		
1 Denial	2.18	1.86
2 Anger	2.36	2.48
3 Bargaining	4.14	1.89
4 Depression	3.14	2.13
5 Acceptance	3.66	3.46
Total Scale Alpha-Omega	15.04	6.22
Holmes Rahe Stress Scale	248.20	199.17
Physiological Stress (Self Eval.)	13.28	4.60
Psychological Stress (Self Eval.)	25.82	5.44
Total Stress (Self Eval. Form)	39.10	7.63

to the Templer Death Anxiety Scale since the Alpha-Omega Scale is multi-dimensional. The Templer Death Anxiety Scale is based on a unidimensional approach and is not able to tap the effects of the treatment as well as the Alpha-Omega Scale, which is more sensitive to the uniqueness of the person, and takes into consideration a variety of approaches

TABLE 3

Means and standard deviation for students sample of 72 individuals.

Variable Name	Mean	Standard Deviation
Age	23.45	3.19
Education	13.80	2.19
Templer Scale	6.26	3.18
Alpha-Omega Subscales		
1 Denial	3.65	2.59
2 Anger	3.19	2.91
3 Bargaining	5.22	2.24
4 Depression	2.45	2.68
5 Acceptance	5.15	3.22
Total Scale Alpha-Omega	19.58	8.33
Holmes Rahe Stress Scale	268.73	221.09
Physiological Stress (Self Eval.)	11.97	3.70
Psychological Stress (Self Eval.)	26.06	7.42
Total Stress (Self Eval.)	37.76	10.13

for coping with stress, fear, and anxiety (Smith et al. 1979). It was expected that there would be a relationship between the Alpha-Omega Scale's estimate of coping styles and age, sex, education, stress (Holmes and Rahe 1979, Klein et al. 1978) and marital status (Klein et al. 1978). Although the Alpha-Omega Scale initially included spiritual stress, this factor was measured by only 2 items, and it was decided to collapse this factor and include the 2 items with psychological stress.

Note that the stages are not fixed and that any individual is probably in more than one stage at any one time, but to differing degrees. One is required, therefore, to interpret the scale as profiles and not as separate subscale scores to assess a coping style. An adaptational approach to a stressful situation is conceptualized, and these styles or profiles are seen as fluid, not fixed. They are at least theoretically sensitive to new information, and, therefore, different approaches may change, based on training.

RESULTS AND DISCUSSION

Cronbach's Alpha reliability estimates for all the instruments used in this study are presented in table 4. Cronbach's Alpha (Veldman 1967) is the general case of Kuder Richardson 20, which measures internal consistency (reliability) of the scale to determine whether significant relationships exist and whether these relationships are different for various age groups.

It is important to note that the estimated reliabilities based upon this sample

were presented separately for students and non-students because virtually all of the previous work done on the Alpha-Omega was done on a student population.

As one can see from table 4, the reliabilities for the Alpha-Omega subscales were generally higher for the student's sample and were consistent with the previous reliabilities for student samples. The one exception was the bargaining subscale reliability coefficient, which was considerably lower for this study. The overall reliability for the Alpha-Omega and the subscale reliabilities, with the exception of bargaining, seemed to be quite acceptable for both subsamples.

Data indicated that the Templer Scale did not differentiate between the 2 samples (student and non-student) while the Alpha-Omega did. Specifically, 3 of the 5 subscales (denial, bargaining, acceptance) and the total were significant. It was also found that the Templer Scale was significantly related to 4 of the 5 Alpha-Omega subscales and highly related to the total score. The only scale it was not significantly related to was acceptance. These findings are highly consistent with unpublished data of one of us (Smith et al. 1979) and can be obtained by writing to the authors.

As one would expect, there was a significant relationship between the Alpha-Omega subscales of denial, bargaining, acceptance and total scale with age. All but acceptance were negatively related. No significant relationship existed between age and the Templer Scale. In terms of the stress indices of the Alpha-Omega Scale and the Templer Scale, a significant relationship existed between depression on the Alpha-Omega Scale and the Holmes-Rahe Scale. There was also a significant relationship between anger and bargaining on the Alpha-Omega Scale with physiological stress, psychological stress and total stress on the Self-Evaluation Stress Form. Depression on the Alpha-Omega Scale was significantly related to physiological and total stress but not psychological stress as measured by the Self-Evaluation Stress Form. There was no significant relationship between acceptance on the Alpha-Omega Scale and stress as measured by the Self-Evaluation Stress Form, but there was a trend for these 2 variables to be inversely related. The Templer Scale was significantly related to physiological, psycho-

TABLE 4

Cronbach Alpha reliability estimates.

Scale	Non-student (N = 50)		Student (N = 72)	
Templer Scale	(15 items)	.7559	(15 items)	.7334
Alpha-Omega Subscales				
1 Denial	(10 items)	.6383	(10 items)	.7892
2 Anger	(10 items)	.8022	(10 items)	.8294
3 Bargaining	(10 items)	.4272	(10 items)	.5828
4 Depression	(10 items)	.6779	(10 items)	.8294
5 Acceptance	(10 items)	.8343	(10 items)	.8642
Total	(50 items)	.6891	(50 items)	.7653
Holmes Rahe Scale	(43 items)	.8458	(43 items)	.8593
Physiological Stress (Self Eval.)	(8 items)	.5621	(8 items)	.7749
Psychological Stress (Self Eval.)	(15 items)	.8380	(15 items)	.8812
Total Stress (Self Eval. Form)	(23 items)	.8500	(23 items)	.9095

logical and total stress as measured by the Self-Evaluation Stress Form. One interpretation of the correlation between these scales and stress is that certain types of coping styles, like denial and acceptance, tend to be related to less stress.

One may think of the stages of Kubler-Ross' concept as coping styles or adaptational approaches. These coping styles may be considered as having survival value. It is relatively easy to give examples of how 4 of the 5 have survival value, but it is more difficult to do this with depression which is reflexive.

Denial may be thought of as a mechanism that allows one to buy needed time in which to get psychologically ready to deal with a stress situation. Anger can be a very strong motivator to get someone started to move in a direction instead of stagnating. The anger marshalled to "prove something wrong" can provide the impetus an individual needs to attempt to examine alternatives and use a different perspective. Bargaining, like denial and anger, can act as both time-buying and as a procedure that helps one begin to deal with the stress. Acceptance is theoretically a state an individual arrives at that allows acceptance of reality while being able to deal with stress in the most appropriate manner for that situation. Finally, depression, which is more difficult to see as a coping style, is a form of anger. Instead of directing this anger outward, the individual directs it inward. Another way of looking at depression is that it is reflexive, like an eyeblink. When someone loses a loved one, he becomes depressed to some extent. This may be part of the mechanism of being human. It may have a survival value in a cultural sense. When considering a kind of person who would not become depressed under any condition, we see that this characteristic would not be deemed highly desirable in our society.

Contrary to frequent interpretations, there is not one preferred coping style. That is, it would be very difficult to show any support for acceptance being better than denial. The best and most appropriate style depends on the person and on the specific situation.

Health care providers should realize that they should not believe it is best to move a person to acceptance as fast as possible but rather facilitate the client's or patient's movement as he or she becomes ready. It may be in the client's best interest to stay in the denial stage (or one of the other stages) until developing the resources to move on to another coping style or adaptational level. That is why it may not be appropriate to structure a workshop with the intention of moving a person or group to a given "stage" within a set period of time (like the end of the workshop).

It is possible one can reach an acceptance stage intellectually while remaining at a denial stage emotionally. The insight and sensitivity of the health care provider is most crucial for determining what is appropriate. No theory is capable of making these decisions.

The problem is how long does a health care provider allow an individual to stay in a stage with no movement and no progress. This decision depends to some extent on the situation, the culture, the personality, as well as the characteristics of the disease. For example, in certain cultures, a state of denial, depression or anger may be highly acceptable. The personality of the individual as well as the interaction of the personality with the situation and culture also must be considered.

Research and theory have plotted characteristic grief curves. These curves are based upon minimum data. The characteristic grief curves have not attended to individual differences, cultural concerns, or the progression of varying diseases. Therefore, these curves can be very misleading. They should be considered as having theoretical value and as gross bench marks.

For example, sometimes the disease will allow a person to deny for a long period of time. If a disease is in remission and the person is able to function in a normal manner, denial becomes easier and may

be more functional. If the disease progresses to where a person is bedridden and still maintains a state of denial, denial would be less functional. Again, the health care provider has to look at the multifaceted individual in deciding upon the best approach.

Our position is that Elizabeth Kubler-Ross' stages can more effectively be conceptualized as coping profiles that are fluid rather than fixed. These profiles can be used to facilitate communication and as an aid to help the individuals cope in whatever stage they are at or to help them when they are ready to approach another adaptational level. There is enough validity on the Alpha-Omega Scale to be used as an aid to identifying profiles. The approach (of examining profiles) we are suggesting can best be explained by examining the diagram in fig. 1.

The 2 profiles in this figure indicate that a person can be in more than one stage at a time, to differing degrees. For example, the solid line person is equally in the stages of anger and bargaining and is depressed and accepting to the same degree. Looking at the 2 individuals' profiles, the solid line person tends to be relatively high on anger and bargaining and low on denial, while the dash line person is very high on denial, has very little anger, is doing very little bargaining, and seems to show very little depression and very little acceptance.

The argument presented here is that communication with the solid line individual should be different than communication with the dash line individual. These types of profiles, like those derived from the Alpha-Omega Scale, can be very useful to the health care provider.

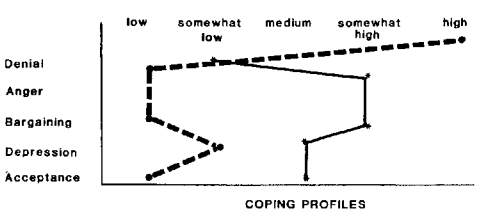

FIGURE 1. Example of possible coping profiles that could facilitate communication.

Like all measurement devices in the psychological domain, one has to be cautious of over reliance on a score. The measurement device can be a useful aid in helping the practitioner identify a variety of alternatives, but it is not appropriate to assume that these tests are highly accurate. At best, they measure what the individual is like at the moment of responding to the instrument. By the very nature of responding to the questions, the inventory may change the person's state. However, the data indicate that individuals responding to this instrument tend to respond in a similar manner (have similar types of profiles) for about 2 weeks, which makes the measurement procedure potentially useful.

We are also suggesting that the Alpha-Omega Scale can be given to the family of the terminally ill. This can help the health care providers identify the profiles of the family members and determine more effective ways to facilitate the family members' ability to communicate with the patient. For example, the family may be highly "denying" while the patient may be highly "accepting." If the health care provider can identify this type of situation, he can obtain valuable information to help the communication process.

It is important to be aware that in our measurement instrument, the "acceptance" scale may actually be measuring "resignation," and the "depression" scale is the least reliable of all of the 5 scales. As stated previously, at the very best, scales of this type can be an indicator suggesting a direction. They are not the total answer, but they can be a useful aid if one is aware of the limitations.

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