

# Hardiness and the Concept of Courage

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*The purpose of the present study was to develop a measure of courage in order to examine the relationship between hardiness and physiological functioning, as hardiness has been proposed to buffer the physical effects of stress on the body. An empirically derived instrument that measures courage was constructed. A pool of potential scale items was administered to 200 college students and reduced to an optimal grouping. Four main factors were identified. An additional sample of 80 college students was administered the reduced Courage Scale, the Personal Views Survey (S. Maddi, 1990), the Courage Scale (N. B. Schmidt & M. Koselka, 2000), and the Seriousness of Illness Survey (A. R. Wyler, M. Masuda, & T. H. Holmes, 1968). Results indicated that there were relationships among these various measures. However, courage did not add to the amount of the variance of physiological health accounted for by hardiness. Possible uses of the Courage Scale developed in the present study are discussed.*

The purpose of the present study was to develop a measure of courage in order to further examine the role courage plays in the construct of hardiness. Hardiness has been proposed to buffer the psychological and physical effects of stress on the body and was derived from the existential concept of the authentic personality. It was hypothesized that by adding a measure of courage (as a component of the authentic personality), hardiness would be better able to account for variations in physical health.

## Recent Developments in Hardiness

The most recent version of a scale to measure hardiness is the 18-item Personal Views Survey (PVS–IIIR; Maddi, 1990). It is a selection of the most reliable items from the previous 50-item version and is

currently being used in research. Research using the previous 50-item Personal Views Survey (PVS–III) supported the idea that hardiness contributed to mental health through coping and appraisal mechanisms (Florian, Mikulincer, & Taubman, 1995). These mechanisms include appraising the stressor in a manner that reduces perceived threat, viewing the self as capable to effectively cope, and relying on problem-focused and support-seeking strategies. Clark and Hartman (1996) also found that hardiness predicted psychological distress but not physical health. Appraisals partially explained this relationship, but the authors added that other personality characteristics and situation-specific perceptions were also at play. Brookings and Bolton (1997) reported similar findings, with modest support for hardiness buffering against depression but no support for hardiness affecting physical health. One might best summarize the research since 1990 as generally supportive of the hardiness–psychological health relationship and variably supportive of the hardiness–physical health relationship. However, had the original concept-

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Copies of the Courage Scale developed in the present study are available by sending a self-addressed stamped envelope to Cooper R. Woodard.

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alization of hardiness included courage (in addition to control, commitment, and challenge), the hardiness–physical health relationship might have been more robust.

### **Fear, Courage, and the Measurement of Courage**

Fear is a prerequisite for courage. Beck, Emery, and Greenberg (1985) suggested that fear is the result of a perception of vulnerability, which is established by the accurate or inaccurate evaluation of a threat as outweighing the personal resources of the individual. It can be displayed graphically as in Figure 1.

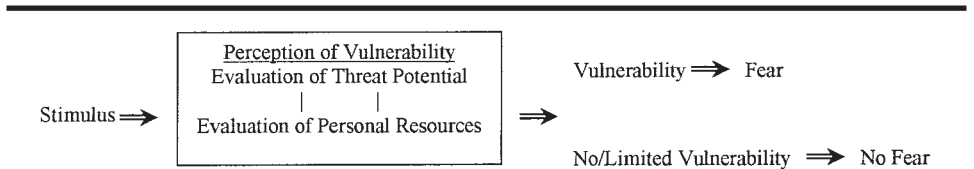
The cognitive appraisal concept of vulnerability as the basis for the fear response prepares a foundation for understanding the concept of courage. *Webster’s New Collegiate Dictionary* (1999) defined courage as “mental or moral strength to venture, persevere, and withstand danger, fear, or difficulty” (p. 266). From the cognitive appraisal perspective of fear discussed above, it follows that the courageous person is one who, despite perceiving a danger or threat beyond that which his resources are capable of effectively managing, moves forward and acts anyway. This conceptual base is represented in the literature on courage (e.g., Finfgeld, 1995). However, in addition to acting despite a perception of vulnerability, courage includes a quality of grace, nobility, credibility, sensibility, practicality, or meaningfulness. Without these qualities, an act that would otherwise be courageous would simply be reckless stupidity.

Courage is therefore defined as the ability to act for a meaningful (noble, good, or

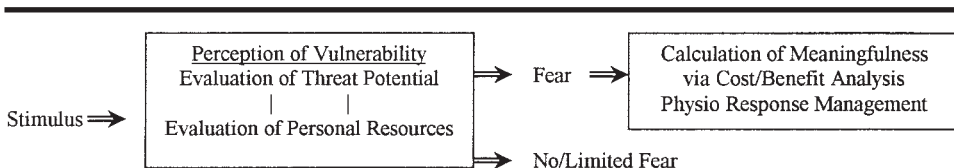
practical) cause, despite experiencing the fear associated with perceived threat exceeding the available resources. In addition to managing the physiological reactions to fear, this model would suggest that the benefits of engaging the threat without sufficient resources would need to outweigh the potential costs. It builds on the previous graphic representation as in Figure 2.

Once fear is established and meaningfulness is assessed, then the individual may have the opportunity to engage in courageous behavior. If meaningfulness is high, this situation presents the opportunity for courage, the component suggested to be missing from the current conceptualization of hardiness. The courage component does not moderate the elements of vulnerability but, rather, confronts and takes in the fear associated with acting for a meaningful cause despite that significant threat posed to the individual.

The only validated scale used to measure courage was recently produced by Schmidt and Koselka (2000). The Courage Scale used in this study was an author-constructed 7-item scale, with the first three items assessing general courage, and the last four items assessing panic-specific courage. The scale does not sample a number of situational domains, and the third item on the three-item scale asks participants if they are *fearless*. Despite fear being agreed upon as a prerequisite for courage, this question is rated in the same positive direction as the other items, resulting in two high scores indicating courage and one high score indicating a general *absence* of fear. Other efforts to measure courage have been sporadic, which is surprising given the



**Figure 1.** Vulnerability and fear.



*Figure 2.* Fear and meaningfulness.

potential applied benefit of being able to measure the likelihood of a person acting despite fear.

### ***Authenticity, Courage, and the Implications for Hardiness***

Existential theorists have attempted to address the complex relationships between existentialism, authenticity, and courage both directly and indirectly. Adler (1979), for example, described the courage associated with activity by stating, "But only the activity of an individual who plays the game, cooperates and shares in life can be designated as courage" (p. 60). Tillich (1952) suggested that fear and anxiety were interrelated, with the ultimate fear being represented in the nothingness associated with death. "The fear of death determines the element of anxiety in every fear. Anxiety, not modified by the fear of an object, anxiety in its nakedness, is always the anxiety of ultimate non-being" (p. 38). Maddi (1998a) stated, "The more recent concept of hardiness constitutes a sufficient concretization of the concept of courage to have led to relevant research in support of this existential formulation" (p. 9). Maddi identified the role of courage in hardiness, yet it is excluded from the hardiness equation.

If courage is a component of the authenticity from which hardiness is derived, a more inclusive conceptualization of hardiness that better reflects the concept of authenticity might account for more of the variance related to health. This set of ideas might be represented graphically as in Figure 3.

In summation, courage is an integral part of the existential concept of authenticity. To live in a truly authentic manner, the individual must not deny non-being but, rather, must accept the terror of non-being. This is a choice that necessitates courage, because being will always succumb to non-being. Hardiness is a construct based on the existential concept of authenticity, yet courage is not a component of the current hardiness equation. The reasons for such an obvious exclusion of courage may be that courage is rarely fully defined as in the present text, or that there are no commonly used, empirically derived measures of courage currently available.

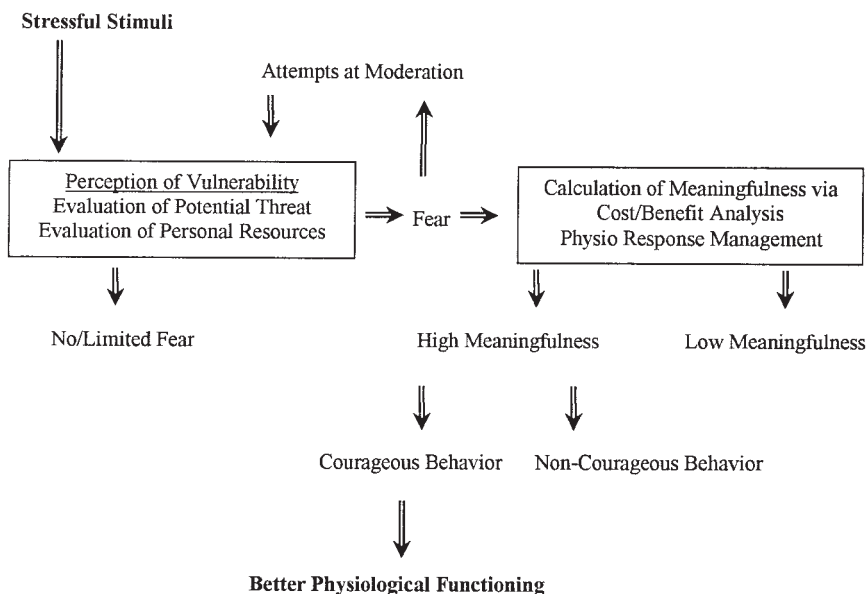
### **Method**

The purpose of this study was to construct and validate an instrument that measures courage as it has been defined in the present text and to explore the relationship of courage and hardiness to physical illness. This research study was divided into three parts: item collection and pre-test, the reduction of courage items (Phase 1), and the exploration of the relation of courage and hardiness to physical illness (Phase 2).

### ***Research Participants***

To create and collect a pool of items that would potentially be included in the Courage Scale, 10 experts with varied areas of specialty in the field of psychology were consulted. The pool of items was pre-tested with 10 research participants from varied educational levels, levels of socioeconomic status, ages, and types of employment.

The participants for Phase 1 were 200 college students, which is a participant number within the parameters set by experts in scale



**Figure 3.** Fear, meaningfulness, courage, and physiological functioning.

development (DeVellis, 1991; Stewart, Hays, & Ware, 1992). The research sample was 41% male and 59% female, and ages ranged from 18 to 54 years. The research sample was 20% African American, 68% Caucasian, 8% Asian/Pacific Islander, 3% Hispanic, and 1% mixed ethnic background. The participants for Phase 2 were 80 college students, a number selected to allow a reasonable level of power to detect a medium effect with two independent variables. The research sample for this phase of study was 33% male and 67% female, and ages ranged from 18 to 51 years. The research sample was 22% African American, 68% Caucasian, 4% Asian/Pacific Islander, and 6% Hispanic.

## Measures

**Marlowe–Crowne Social Desirability Scale.** The Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1960) was used to measure social desirability. This scale is a widely used 33-item, True–False scale, which measures social desirability unrelated to pathology. It has been shown to have good reliability, with an internal consistency coefficient of .88 and a test–retest correlation (1-month interval) of .89.

**Courage Scale.** For the purpose of validation, Schmidt and Koselka's (2000) Courage Scale was used. This scale was recently developed to measure general courage in the absence of any other such measure. The available research is encouraging, suggesting adequate internal consistency (General Courage subscale  $\alpha = .85$ , Panic-Specific Courage subscale  $\alpha = .96$ ). The General Courage scale scores were modestly but significantly ( $r = .18, p < .05$ ) associated with the degree of inhalation in a  $\text{CO}_2$  biological challenge. In this biological challenge, participants expected to experience high levels of physiological arousal and subjective distress as a result of inhaling the gas mixture.

**PVS–III.** Hardiness was assessed using the most current version of this test (i.e., the PVS–IIIR; Maddi & Khoshiba, 2000). This scale consists of 18 items related to the three hypothesized factors of hardiness: control, commitment, and challenge. Alpha coefficients have been documented between .77 and .81. The test from which the PVS–IIIR was taken (the PVS–III) correlated with earlier measures of hardiness, and Maddi suggested that previous research on the PVS–III applies to the PVS–IIIR as it is composed of the 18 most reliable items (Maddi & Khoshiba, 2000).

*Seriousness of Illness Survey.* The Seriousness of Illness Survey (Wyer et al., 1968) was used to measure health status. The Seriousness of Illness Survey is commonly used in the hardiness research to measure health (Kobasa, Maddi, & Kahn, 1982; Maddi, 1998b) and includes a collection of common illnesses weighted by medical and non-medical persons for level of seriousness. Use of this scale in research has demonstrated its validity, with agreement between self-report and physician diagnosis from medical examination ranging from 82% to 93% (Kobasa, Maddi, & Puccetti, 1982).

## **Overview of Procedure**

*Initial item generation and pretest.* Ten experts in the field of psychology were asked to generate 10 statements each that they would consider representative of assessing the construct of courage as defined in this text. Examples of possible statements were provided, as was the identified definition of courage. The pool of potential items was added to and altered until a total of 109 items was generated, ensuring that the type of threat sampled a number of domains, such as physical (general health concerns, injuries), social (family, friendships, personal relations, work situations), and psychological (self-image, psychological health). Items were chosen and altered to heighten the level of meaningfulness or importance of the situation. The pool of 109 items was prepared in a Likert scale format, with 1 being defined as strong disagreement with the statement and 5 being defined as strong agreement with the statement. Each item was also accompanied by a fear rating question to establish the level of fear that the respondent might associate with the situation presented. As with the courage rating items, the fear rating items were prepared in a Likert scale format ranging from 1 (*little fear*) to 5 (*very high fear*). In addition, each pair of response options (level of agreement or willingness to act and fear) was accompanied by a question asking whether or not the participant had experienced the situation posed in the item. There were three items that were worded negatively and reverse scored.

The 109 items were pre-tested with 10 research participants who were interviewed indi-

vidually. A number of items were altered and one item was deleted, mainly as a result of the items being confusing or offensive. A number of changes were made to the format of the test for clarity and ease of use. A total of 108 items was retained for the next phase of this study.

*Phase 1.* In Phase 1 of the present research study, the pool of 108 items was empirically reduced and refined. The pool of 108 items and the Marlowe–Crowne Social Desirability Scale were administered to 200 research participants, and the 108 items were reduced to a final pool of 31 items through a process of item analysis. Factor analysis was used to explore the structure of the scale, further eliminate items, and establish the factors. Correlation and reliability analyses were used to explore the relationships among the four factors as well as the internal reliability of the scale.

*Phase 2.* Phase 2 addressed the validation of the scale as well as exploration of the courage construct within the hardiness model. Eighty research participants were administered the 31-item Courage Scale, Schmidt and Koselka's Courage Scale, the PVS–IIIR, and the Seriousness of Illness Survey. Correlation was used to examine the relationship of the 31-item Courage Scale with other measures, and multiple regression analysis and correlation were used to examine the relationship between hardiness, courage, and health.

## **Results**

### ***Phase 1: Reduction of Courage Scale Items***

To begin the item analysis process, items were deleted where 60% or more of the participants rated the items as producing little or mild fear. This resulted in the deletion of 13 of the 108 items. The participant's total scores on the Marlowe–Crowne Social Desirability Scale were calculated, and scores were correlated with the willingness-to-act ratings of the remaining 95 items. Items that correlated significantly ( $p < .01$ ) with the total Marlowe–Crowne Social Desirability score were deleted. This process decreased the possibility of the final scale tapping excessively the

social desirability construct. Eighteen items were deleted, leaving 77 items.

The distribution of willingness-to-act responding was reviewed for each item, and items were deleted that had very low or unusual variation. For example, if nearly all research participants rated the item as *agree* or *strongly agree*, that item was removed from the pool. This resulted in the deletion of 22 items, and 12 items were retained where the distribution was questionable. Two remaining items that produced significantly different patterns of responding ( $p < .01$ ) based on gender for the willingness-to-act ratings were deleted. There were no items in the pool remaining for which patterns of responding were significantly different at the  $p < .01$  level for age, ethnicity, religion, or income. A total of 53 items remained in the pool based on these criteria.

### **Calculation of Courage, Internal Consistency, and Factor Analysis**

Courage was calculated by multiplying the agree or disagree rating (willingness to act) with the level-of-fear rating on the remaining items. Three of the remaining items were negatively worded and were therefore reverse scored. A reliability analysis produced a coefficient alpha of .94, indicating high internal consistency. A principal-components analysis with varimax rotation produced a 15-factor solution. This 15-factor solution did not rotate as the matrix would not converge. Additional items were removed from the pool that had been designated as having questionable variation as well as those that showed significant differences at the  $p < .05$  level (vs. the initially chosen  $p < .01$  level) for gender, age, ethnicity, and level of income or socioeconomic status. This revised pool of items produced a 10-factor solution, with six of the factors having only one item loading above .40 on that factor. The next factor analysis was constrained to pro-

duce a four-factor solution, which accounted for 39% of the total variance. The four factors each accounted for fairly even amounts of the variance, as represented in Table 1.

In the four-factor solution, three items did not load above .40 on any of the factors, and these items were deleted from the pool. A factor analysis of the remaining 31 items accounted for 41% of the total variance, with each factor accounting for between 8% and 11% of the variance. Only one of these items did not load on a factor  $> .40$ . The remaining factor loadings for each scale item were all positive and ranged from .400 to .670. A summary of this analysis appears in Table 2.

Pearson correlations demonstrated that each factor was significantly correlated with each of the other factors ( $p < .01$ , two-tailed). Table 3 summarizes these results. Reliability coefficients were alpha = .80, .80, .73, and .68 for the four factors, respectively. The level of alpha for each factor could not be improved with additional deletion of items, and the 31-item scale was not reduced further. Total courage scores were normally distributed, with a range of 119 to 560 ( $M = 325.1$ ,  $SD = 83.61$ ).

A total experience score was calculated by summing the experience responses of each participant. As noted above, participants could indicate whether they had experienced the situation posed in each item. Correlation of the courage scores with the summed ex-

**Table 1**  
*Percentage of Variance Explained by Four-Factor Solution and Cumulative Percentages*

Factor	% variance explained	Cumulative % variance explained
1	11.2	11.2
2	10.4	21.6
3	9.5	31.2
4	8.1	39.3

**Table 2***Factor Loadings From Varimax Factor Matrix for Four Factors and Percentage of Variance*

Item	Factor 1	Factor 2	Factor 3	Factor 4
70—Painful inoculations for health	.47	.26	.31	-.09
77—Act despite bullying as minority	.45	.35	.19	.21
79 <sup>a</sup> —Publish work despite criticism	.40	.14	.41	.34
82—Foreign country for perfect job	.56	.08	.25	-.09
83 <sup>a</sup> —Lost in the woods at night	.51	.00	.04	.44
99—Endure pain for childbirth	.53	.12	.00	.16
102—Work in emergency room if needed	.56	.26	.18	.02
103—Burning building for pet	.67	.11	.04	.21
106—Hiding Jews in Holocaust	.60	.08	.11	.33
9 <sup>a</sup> —Help grieving family	.07	.56	.44	-.20
10 <sup>a</sup> —Make fool of self on TV	-.08	.42	.44	.15
17—Rejection by others for goals	.28	.42	.28	.01
18—Go to war for country	.17	.58	-.02	.04
45 <sup>a</sup> —Risk life for world peace	.08	.48	.00	.46
46 <sup>a</sup> —Social pressure/right thing	.19	.47	.32	.41
47 <sup>a</sup> —Refuse officer if hurting other	.22	.51	.04	.44
54—Do without for others in need	.11	.61	.03	.22
55—Tell others I was gay	.38	.42	.10	.03
56—Confront an abusive parent	.04	.45	.22	.13
60—Confront father about abuse	.32	.47	.11	.14
1—Accept job despite criticism	.23	-.10	.48	.25
16—Avoid confronting my own pain	.21	-.02	.62	-.06
23—Make new friends in new place	-.08	.20	.52	.14
31—Take part in work conflict	.00	.21	.59	.34
32—Ask for a raise at work	.22	.18	.52	.10
33—Dental surgery to save tooth	.31	.08	.49	-.08
61—Walk across a high bridge	.36	.17	.43	.03
2—Intervene in domestic dispute	-.05	-.04	.38	.63
67—Physical pain for religion	.15	.22	.08	.49
86—Endure pain for political secrets	.11	.12	-.03	.49
63—Leave friends and family behind	.34	.36	.37	-.21
% variance	11.7	11.0	10.7	8.0

Note. Factor labels; Factor 1 = Endurance for Positive Outcome; Factor 2 = Dealings With Groups; Factor 3 = Acting Alone; Factor 4 = Physical Pain/Breaking Social Norms.

<sup>a</sup> Item loaded on more than one factor.

perience responses did not result in a significant correlation coefficient.

### **Phase 2: Courage, Hardiness, and Physical Illness**

Phase 2 of the present study addressed the concurrent validity of the Courage Scale developed in Phase 1 and the relationship of courage to hardiness and physical illness. Eighty research participants completed a general information sheet, the

reduced Courage Scale, Schmidt and Koselka's Courage Scale, the PVS-IIIR, and the Seriousness of Illness Survey.

Concurrent validity was explored by correlating the courage scores from the 31-item scale and the courage scores from the scale created by Schmidt and Koselka. The scales were not significantly correlated. Furthermore, there were no significant correlations between courage scores separated by loadings on the four factors described

**Table 3**  
Correlation Matrix for Four Factors

Factor	1	2	3	4
1	—			
2	.62**	—		
3	.63**	.59**	—	
4	.61**	.67**	.51**	—

\*\*  $p < .01$  level (two-tailed).

above and courage scores using Schmidt and Koselka's scale (see Table 4).

The total willingness-to-act rating (excluding the fear rating) was significantly correlated with Schmidt and Koselka's scale ( $r = .345, p < .01$ ). These results indicate a moderately positive relationship between the perceived likelihood of participating in the situations described in the 31-item Courage Scale and a participant's agreement with the two-question Courage Scale developed by Schmidt and Koselka.

### Courage, Hardiness, and Physical Illness

Multiple regression analysis and correlations were used to explore the relationships among courage, hardiness, and physical illness. Hardiness was not found to be a significant predictor of physical illness for the participant pool, and none of the courage score variations (willingness to act multiplied by the fear rating, willingness to act total, or Schmidt and Koselka's courage score) improved on the predictive relationship of hardiness to physical illness. Hardiness was found to be a weak predictor of physical illness for men ( $r^2$  change = .153,  $p < .05$ ). No other variables in the study were found to be significant predictors of physical illness, and the variations of the courage scores did not enhance the relationship between hardiness and physical illness when variance accounted for by gender was controlled.

Correlations among the various variables in the study found the three components of hardiness (commitment, control, and challenge) significantly correlated with

each other ( $r = .36$  to  $.52, p < .01$ ), and each of these components was correlated significantly with the total hardiness score ( $r = .73$  to  $.80, p < .01$ ). These results are included in Table 5. The courage score (willingness to act multiplied by the fear rating) was not correlated with any of the elements of hardiness or the total hardiness score, but there was a pattern of correlation among hardiness and its components and the courage score variations. These results are summarized in Table 5.

Schmidt and Koselka's two-question Courage Scale scores were significantly correlated with commitment ( $r = .26, p < .05$ ), control ( $r = .24, p < .05$ ), and the total hardiness score ( $r = .27, p < .05$ ); in addition, the willingness-to-act total on the Courage Scale developed in the present study was significantly correlated ( $r = .24, p < .05$ ) with the challenge component of hardiness. Whether participants had experienced the situation posed in each item was not related to the participants' courage score, nor was it significantly correlated with the willingness-to-act rating total.

## Discussion

In order to examine more fully the relationship between hardiness and physiological functioning, a 31-item scale assessing courage was empirically developed. This scale was created from a specific definition of courage: acting for a meaningful cause despite the fear that results from a threat

**Table 4**  
Correlations of Courage Scales and Factor Scores

	1	2
1. 31-item scale	—	
2. SandK Scale	.09	—
Factor 1	—	.14
Factor 2	—	.04
Factor 3	—	.07
Factor 4	—	.16

Note. SandK Scale = Schmidt and Koselka's (2000) Courage Scale.



**Table 5**

*Correlations Between Hardiness and Hardiness Components, 31-Item Courage Scale Scores, SandK's Courage Scale Scores, Willingness to Act (WTA), and Experience*

	1	2	3	4	5	6	7	8
1. Hardiness	—							
2. Commitment	.80**	—						
3. Control	.73**	.52**	—					
4. Challenge	.78**	.36**	.42**	—				
5. 31-Item scale	-.02	.01	-.03	-.03	—			
6. SandK scale	.27*	.26*	.24*	.20	.09	—		
7. WTA	.16	.10	.02	.24*	.384**	.345**	—	
8. Experience	-.07	-.01	.02	-.15	.11	-.10	-.03	—

*Note.* SandK Scale = Schmidt and Koselka's (2000) Courage Scale.

\*  $p < .05$  (two-tailed). \*\*  $p < .01$  (two-tailed).

exceeding personal resources. The courage scores from the scale developed in the present study were not related to the hardiness scores, and no measure or combination of measures used in the present study was predictive of physical illness. This finding may be the result of personality factors contributing only a limited amount to an already small stress-illness relationship. The correlation between stressful life events and illness is typically only in the .30 range (Rabkin & Struening, 1976), and there are many other factors that influence this relationship. Personality predictors of physical illness may therefore be destined to be perpetually weak and minimized when other contributors such as exercise, heredity, or lifestyle habits are considered.

Although there were some relationships found between Schmidt and Koselka's courage scores, the willingness-to-act scores, and hardiness scores, it is apparent that the 31-item scale developed is measuring a different construct than either the PVS-IIIIR or Schmidt and Koselka's Courage Scale. Schmidt and Koselka's courage score and the participant's willingness-to-act total score from Phase 2 were significantly correlated, and this correlation was moderate in size. These scores as a group correlated significantly with every element of the hardiness calculation and the overall hardiness score itself. This finding would suggest that more primitive calculations of

courage are related to hardiness, whereas empirically derived measures of courage that include an estimation of fear in the calculation of courage are not. The Courage Scale developed in the present study and that offered by Schmidt and Koselka are clearly measuring different constructs, and the difference between the two scales demonstrates how the inherent limitations of self-report instruments might affect research outcomes. Most people are likely to want to perceive themselves with the socially desirable quality of courage and will tend to respond consistently with this motivation. However, asking participants if they think they are courageous is very different from defining the construct of courage in a comprehensive way and accounting for the individual components of the construct identified by contributing areas of research.

### **Description of Factors**

The Courage Scale developed in the present study was constructed of 31 items that created four separate factors. The items of the first factor described the quality of endurance of stressful, painful, or dangerous events for some beneficial or positive outcome. For example, one of the items was "I would return into a burning building to save a family pet I loved dearly." The conceptualization of this factor was closely

related to the general definition of courage proposed for the present study: acting for a noble or meaningful cause despite the fear that results from one's vulnerability in a given situation. It is noted that each of the items was altered early in the development of the scale to ensure that the stress, pain, or danger involved in the items was not needless, reckless, or without purpose or importance. Agreeing to act or take part in the situations posed in the items meant making oneself vulnerable for a meaningful and commonly valued outcome.

Many of the items that created the second factor consisted of situations where there were interactions with groups of others. Either the threat was posed by a group of people, or the outcome benefited a group of people. Examples include "I would risk rejection by important others for a chance at achieving my life goals" and "I would risk my life if it meant world peace." The third factor consisted of items where the respondent needed to act alone, without the support of a group of people. An example includes "If I were in an unfamiliar place, I could make new friends." There are other possible interpretations of the first, second, and third factors discussed, because the items contained multiple components and ideas, some of the items loaded on more than one factor, and some items were not consistent with the conceptualization formed by the majority of the other items. For example, a number of the items that loaded on Factor 3 were related to a work environment. Another example, "I would confront my father about how his abuse had hurt me," did not fit the conceptualization of interaction with groups of others yet was an item of Factor 2.

The fourth and final factor also had a number of factor loadings above .40 on the second factor, dealing with groups of others. Many of the items that created the fourth factor were related to the endurance of physical pain ("I would undergo physical pain and torture rather than tell political

secrets") or involved standing up for what was morally right though this meant going against social norms or expectations ("Intense social pressure would not stop me from doing the right thing"). In the latter example, the components of the item make obvious why it loaded above .40 on both Factor 2 and Factor 4. In summary, important concepts made evident by the factor loadings and analysis include the purpose for which respondents are choosing to act in a manner that makes them vulnerable, whether they are acting for or against a group of people, whether they are acting alone, and whether acting involves physical pain or breaking social rules or widely accepted norms.

The concepts that are represented by these factors begin to illuminate the basic manner in which people conceive of the construct of courage. The first factor supports the basic concept of courage put forth in the present study, that it is a quality of personal endurance of a negative emotional or physical state marked by fear for a beneficial or positive outcome. The other three factors suggest that certain other conditions affect the experience of courage, including the presence or inclusion of groups of others, having to act in a feared situation alone, or breaking the rules. These factors add further complexity to the concept of courage suggested previously. Research by Finfgeld (1995, 1999) and Putman (1997) suggested that courage consisted of the strength or dynamic learning that took place when fear, threat, and/or vulnerability were perceived. These ideas are contained in the conceptualization of Endurance for Positive Outcomes (Factor 1), but in addition, courage has been defined as acting for a meaningful or important cause despite experiencing the fear that results from being somehow vulnerable. One important issue contributing to whether a cause is meaningful or important is reflected in Dealings With Groups (Factor 2), when people take into account the size of the

group that is benefiting from the act. Specifically, acting for the good of others is one way of creating meaningfulness or importance.

The Dealings With Groups factor also suggests people take into account the size of the group posing the threat, which is similar to Acting Alone (Factor 3) wherein the undertaking of a courageous task is partially determined by whether the person must act without the social support of others. These findings suggest that people examine the amount of social support present on both sides of a conflict or challenge when deciding whether or not to act courageously. These concepts are closely related also to Physical Pain/Breaking Social Norms (Factor 4), where a person examines the social norms or expectations present in a situation. All four factors demonstrate how pervasive and significant the influence of others is in determining if a certain task is worthwhile, doable, and socially accepted or appropriate under the given conditions. In addition, the factors were found to have strong correlations with each other, suggesting a significant relationship among the ideas that contribute to deciding whether to act in a courageous manner. Such findings are consistent with information reviewed on the development of courage in that social factors as a component of courage became increasingly evident as children aged (Szagun, 1992).

### ***Courage, Hardiness, Applications, and Future Directions***

The original hypothesis put forth by Kobasa (1977) was that there were personality constructs that buffered or functioned to protect against the detrimental physical effects of stress. She postulated the construct of hardiness, which was derived from the existential concept of authenticity. Control, commitment, and challenge, the components of hardiness, have been the focus of extensive research since 1977, much of which has been shown to vary in support of

the concept as a buffer. More recently, research has been redirected toward examining the role hardiness may play in maintaining psychological health by moderating coping and appraisal mechanisms. However, the present research sought to improve upon the predictive relationship of hardiness and physical illness by adding courage to the three original components, a construct that has been shown to be central to the existential condition. Although findings did add to the understanding of courage as a construct and its relationship to hardiness, the main hypothesis was not supported.

A possible interpretation of the finding that courage did not add to the predictive relationship of hardiness and physical illness is that courage as it has been defined and measured in the present study is not the same construct as the courage inherent in the existential condition. This may be true despite attempts to measure courage in a number of domains, including psychological. Existential courage such as that described previously by Tillich may be too abstract a construct to measure. We are only now beginning to understand what general courage is and what influences personal decisions to act courageously, and it is possible that this basic type of courage is not directly related to more abstract conceptualizations of courage as a construct. Other existing or new measures may or may not be better equipped to tap the courage associated with an authentic approach to life. Another possibility as to why courage did not add to the predictive relationship of hardiness and physical illness in the present study is that the study sample consisted of college students, mainly in the age range of 18 to 22 years. Compared with the general population, it is likely that this is a relatively healthy group with less variation of general physical health. It is possible that courage may add to the predictive relationship of hardiness and physical health when a greater variety of, or more serious, phys-

ical health issues are present. Future research could address this issue, as well as additional validation of the measure of courage created by this research. It has not been shown that this measure has any predictive validity.

Although the scale developed in the present study does not add to the limited predictive attributes of hardiness, it may be this lack of relationship that creates value for the consulting psychologist. In contrast to assessing the now familiar hardy attributes of control, commitment, and challenge, the Courage Scale developed herein taps a distinctly different construct. The Courage Scale assesses a person's reported willingness to act in meaningful situations where he or she is experiencing the fear that results from a sense of vulnerability. In such situations, there may be the stark realization that control is lost, commitment is wavering, and the challenge presented will likely lead to failure. For the consulting psychologist, the range of application of such a measure is widespread. Responding to vulnerability and fear in a productive and courageous manner could mean the difference between success and failure from the lowest ranks of the military to the highest levels of executive management.

Although further research is needed to validate the Courage Scale, there is the potential to assess and explore a trait that is central to an array of institutions, organizations, and individuals. Perhaps the Courage Scale developed herein will differentiate between those newly recruited military personnel who will act and those who will be immobilized by fear. Perhaps it will distinguish among firefighters or police applicants. Who will be most likely to meet the overwhelming challenges of the job with courageous behavior? Perhaps the scale will illuminate the relationship between courage and leadership and the role courage plays in executive development. Perhaps it could be used to assess an organizational level of courage that is related to

the organization's performance and ability to cope with change. On an individual level, this scale may also provide insight into the courage level of the person faced with a variety of life challenges. Could this scale measure a person's likelihood of starting a new business, leaving an abusive relationship, or going back to school despite the financial and personal hardships? Future research needs to address these questions, but the Courage Scale that was developed though this research provides at least a starting point in the assessment of a person's ability to confront the familiar experience of fear.

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