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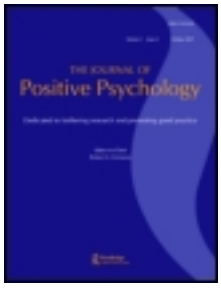

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Hardiness: The courage to grow from stresses

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Hardiness: The courage to grow from stresses

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Abstract

The recent emphasis on positive psychology is welcome, and has spurred much relevant research. But, there are still many unresolved conceptual and research issues, as more variables are being proposed as relevant. As part of this process, the present paper proposes hardiness as an addition to positive psychology. Hardiness is a combination of attitudes that provides the courage and motivation to do the hard, strategic work of turning stressful circumstances from potential disasters into growth opportunities. In this regard, the inherently stressful nature of living is discussed. Also clarified are the particular aspects of excellence in performance and health to which hardiness is relevant. The paper concludes with a call for issue-resolving research through which orientations and actions proposed as part of positive psychology can be compared in their contributions to performance and health. Two studies along these lines have found hardiness more powerful than optimism and religiousness in coping with stresses.

Keywords: *Positive psychology; courage; hardiness; hardy attitudes; hardy coping; hardy social support; hardy self-care*

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Introduction

The recent emphasis on positive psychology (Seligman & Csikszentmihalyi, 2000) is welcome, and has spurred relevant theorizing and researching. Thus far, a range of positive topics have surfaced, including optimism, subjective well-being, happiness, wisdom, creativity, authenticity, humility, altruism, gratitude, humor, compassion, and spirituality (Snyder & Lopez, 2001). In principle, what these topics have in common is an emphasis on the positive features of performance and health (rather than limitations and failures), and how to explain this. Although progress has been made, the field of positive psychology is still in process of formation. Hence, the main purpose of this paper is to add hardiness (Maddi, 2002; Maddi & Kobasa, 1984), which reflects existential courage, to the mix. This purpose is timely, as though hardiness entered the psychological literature some 25 years ago (Kobasa, 1979) it has not yet become included in discussions of positive psychology (e.g., Seligman & Csikszentmihalyi, 2002; Synder & Lopez, 2001).

Overall conceptualization of hardiness

Hardiness has been conceptualized as a combination of the three attitudes (3Cs) of commitment, control, and challenge (Kobasa, 1979; Maddi & Kobasa, 1984). If you are strong in commitment, you believe it is important to remain involved with the events and people around you, no matter how stressful things become. It seems like a waste of time to withdraw into alienation and isolation. If you are strong in control, you want to continue to have an influence on the outcomes going on around you, no matter how difficult this becomes. It seems like a mistake to let yourself slip into powerlessness and passivity. If you are strong in challenge, you see stresses as a normal part of living, and an opportunity to learn, develop, and grow in wisdom. You do not believe that easy comfort and security is a birthright.

These 3Cs of hardy attitudes provide the courage and motivation to do the hard work of turning stressful circumstances from potential disasters into growth opportunities instead (Maddi, 2002). As such, hardiness is a pathway to resilience under stress (Bonanno, 2004). Conceptually, it is insufficient to have only one, or even two of the hardy attitudes. All three are needed in order to be courageous.

As conceptualized, the attitudes of hardiness are a cognitive/emotional amalgam constituting a learned, growth-oriented, personality buffer (Seligman & Csikszentmihalyi, 2000). That this fits into positive psychology is clear in that hardiness is believed to facilitate turning stresses to advantage,

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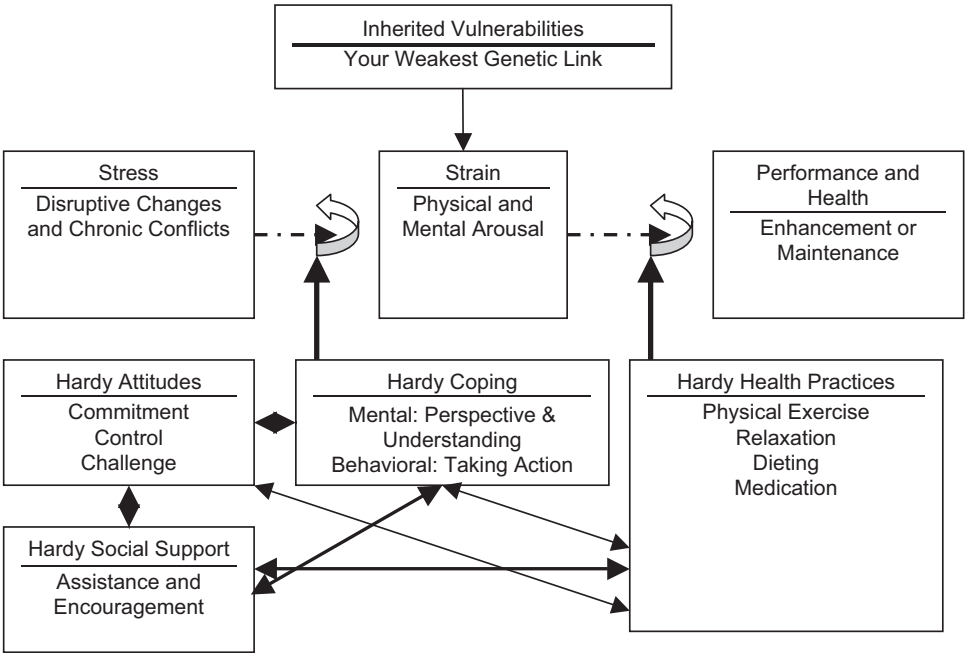

Figure 1. The hardiness model for performance and health enhancement. cc. 1986–2006, Hardiness Institute, Inc.

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growing in such enhanced performance considerations as creativity, wisdom, and fulfillment, and maintaining or enhancing physical and mental health in the process.

The conceptualized process whereby hardiness attitudes lead to enhanced performance and health is depicted in Figure 1 (Maddi & Kobasa, 1984). This model shows that as acute stresses (disruptive changes) and chronic stresses (ongoing conflicts) mount, so too does organismic arousal. And, if organismic arousal (or strain) is too intense and too prolonged, performance and health may be undermined (Selye, 1976), with breakdowns occurring along the lines of one's genetic vulnerabilities.

But, if hardy attitudes are strong, the resulting courage and motivation facilitates functioning with hardy action patterns that have the moderating effect of building social support, carrying out problem-solving (or transformational) coping, and engaging in effective self-care. In this resilient process, stress and strain are diminished, and performance and health is enhanced, rather than undermined. The reason that the courage and motivation of hardy attitudes is needed for this process is that the hardy action patterns, though the most effective in turning stresses to advantage, are also more difficult than coping by denial and avoidance or exaggerating and striking out, interacting socially by destructive competition or overprotection, and indulging or depriving oneself regarding self-care considerations.

The aspects of performance that are expected to be enhanced by the hardiness process include effectiveness in carrying out difficult tasks, taking a leadership role, being creative, increasing awareness and wisdom, and avoiding rule-breaking and other conduct problems. As to health, the hardiness process is considered to lead to vitality and enthusiasm, and to decrease the likelihood of physical "wear and tear" disorders (e.g., cardiovascular diseases, obesity, cancer, and Alzheimer's disease) and mental problems (e.g., depression, anxiety, and anger disorders).

The environment as stressful

An integral part of the conceptualization of the importance of hardiness is that the environmental circumstances we all encounter are inherently stressful. After all, what it means to interact with the events, people, norms, and requirements we encounter every day, and to develop in the process, involves continually experiencing changes and disruptions. Children go from lying in their cribs trying to discern what is going on, to crawling and stumbling into things. As they grow older, they leave the safe house of their birth, go to school, begin to learn on a more abstract level, and start interacting with peers and adults outside of their families. Before they know it, they are struggling to find their special talents, figure out whom to relate to intimately, deepen their interests into a career, and somehow become independent, responsible adults. As the years go by, they find themselves trying to deepen and value, or change and reconsider their choices of career, loved-ones, and community commitments.

And, when they are old, they increasingly have to deal with the health problems of themselves and those around them, retirement from work, and their children's difficulties as they grow up. What is important in all this, as was emphasized by Otto Rank (1929, 1945), is the recognition that the normal developmental process that takes people from birth to death is full of stressful circumstances.

Added on to the normal stressful circumstances outlined above are stresses that are not developmentally inevitable. Some particular environmental contexts subject the persons in them to "high risk" of failure. If a person's family has recently immigrated, is below the poverty level, or is dysfunctional through lack of emotional control or substance abuse, that will be a serious, additional source of ongoing stresses. Even in the family one forms through marriage, abuse and other forms of dysfunctionality will make living even more stressful. If a person has a disability, such as ADHD, being crippled, or having diabetes, that too will provoke unusually stressful circumstances. Further, societal conflicts, such as wars and terrorism, impose major stresses on people. Even without wars, there are also some occupations, such as policing, firefighting, and stock and commodities brokering that are inherently stressful, due to the ongoing changes, threats to life and limb, competition, and high stakes that are involved.

Indeed, stressful circumstances that are not developmentally inevitable are increasing dramatically as the twenty-first century unfolds (Maddi, 2002). Responsible for these stresses are such megatrends as breathtakingly rapid technological advance, globalization, worldwide increases in competition, and needed emphasis on minority rights. Despite the major positive effects of these megatrends, their downside is the ongoing disruption of people's everyday routines (Maddi & Khoshaba, 2005). At work, in order to address evolving market possibilities, job descriptions and ensuing work environments are continually changing to adjust products and services. To address increased competition, companies are reorganizing so regularly that job security is a thing of the past. Adding relatively unexpected stresses to those that are developmentally predictable leads toward a conceptualization of life as quite a stressful phenomenon.

The underpinnings of hardiness in existential psychology

The emphasis on life as inherently stressful underlies the importance of existential courage in finding fulfillment (e.g., Binswanger, 1963; Frankl, 1960; Maddi, 1988; May, 1958; Tillich, 1952). In this, existential psychology intends to include not only the stressful circumstances that are imposed on people (such as accidents or work conditions), but also those that are the natural result of the moment-to-moment decisions inherent (and therefore unavoidable) in interacting with the environment. According to existentialists, the person is continuously making decisions (whether or not they are recognized as such) as to dealing with stresses by moving toward the future (facing the circumstance and learning from the experience) or shrinking toward the past (denying and avoiding so as to preserve the status quo). In order to grow and develop, one must choose the future, even though this is anxiety provoking, as the outcome is uncertain. Facing this anxiety, and growing in that process, requires courage. This emphasis on the importance of courage in making the most out of life was instrumental in building the conceptualization of hardiness (Maddi & Kobasa, 1981). Indeed, hardiness was offered as an operationalization of existential courage (Maddi, 1986).

Hardiness research

By now, there are close to 600 studies on hardiness done around the world. The measure of hardy attitudes, the Personal Views Survey (PVS), has been translated into 17 Asian, European, and Middle-Eastern languages. It appears that studying the hardy attitudes and actions as a way of dealing effectively with life's stresses is becoming a cogent topic among psychologists and related professionals.

The initial research project

Hardiness was studied as a basis for resilience in a 12 year natural experiment at Illinois Bell Telephone (IBT), conducted from 1975 through 1987 (Maddi & Kobasa, 1984). The emphasis was on following workers experiencing major stresses, in order to determine whether there were individual differences in their reactions that could be understood by hardiness theory. When the study began, the US telephone industry was still a federally regulated monopoly, composed of AT&T and its subsidiary companies (such as IBT), because it was believed that an inexpensive and reliable telephone service was in the national interest. But, the pressure was building to deregulate in order to stimulate the competition that would eventually lead to the present, burgeoning telecommunications industry.

Every year in the IBT study, a wide variety of data was collected on 450 male and female supervisors, managers, and decision-makers. The deregulation hit in 1981 (6 years into the longitudinal design), and is still regarded as one of the largest upheavals in corporate history. The company went from roughly

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26,000 employees in 1981 to roughly 14,000 in 1982. One manager in the sample reported that he had 10 different supervisors in 12 months, and that neither they nor he had any idea of what they were doing. Every time the company came up with a plan, it had to be evaluated by a federal judge, to insure that it did not constitute a combination in restraint of trade. Clearly, the company and its employees were severely disrupted.

The data collected in the 6 years following the upheaval showed that roughly two-thirds of the sample suffered and collapsed. There were problems in performance, such as violence and absenteeism in the workplace, and divorces. Health also suffered, through heart attacks, cancer, and mental disorders. In contrast, the other third of the sample not only survived but actually thrived. Those who stayed at IBT rose up in management, and those who left used their experience to make significant contributions to competitor companies, or started their own firms. Their health was fine, indeed, they felt more full of energy and vitality than they had before the deregulation upheaval.

In the comparison of the debilitated two-thirds with the resilient one-third on the voluminous data collected before the upheaval, the orientation of hardiness was determined to be the differentiator. Specifically, the resilient employees were characterized by the cognitive/emotional amalgam of hardy attitudes of commitment, control, and challenge (Kobasa, 1979; Maddi & Kobasa, 1984). Although hardly the same thing, these 3Cs were positively intercorrelated.

The IBT study also showed that, by comparison with the others, employees high in the hardy attitudes showed the action pattern of coping with stressful circumstances by facing them (rather than being in denial), and struggling to turn them from potential disasters into opportunities for self and company (rather than avoiding them or blaming others). Further as to actions, the hardy employees were also more involved in building patterns of interaction with their significant others that emphasized mutual assistance and encouragement, rather than undermining competition or stultifying overprotection. Still further, the hardy employees also took pains to care for their bodies through eating well, engaging in relaxation procedures, and exercising (rather than sinking into obesity and alcoholism). The conclusion reached was that, consistently with the model shown in Figure 1, the courage contained in the hardy attitudes provided the strength and motivation to do the hard work of transformation coping, supportive social interactions, and facilitative self-care under stresses (Maddi & Kobasa, 1984).

Additional hardiness research

It is impossible here to review all the research that has been done since the IBT study. Instead, a few, representative topics will be highlighted. In the 1980s, there were two criticisms of hardiness based on its first measurement device. One criticism was that the 3Cs did not appear to be consistently intercorrelated in undergraduate samples (Funk & Houston, 1987; Hull, Van Treuren, & Virnelli, 1987), even though they were intercorrelated in the adult IBT sample (Maddi & Kobasa, 1984). These results suggested that the original PVS was not universal enough, especially with regard to the challenge subscale. Considerable item revision and subsequent data collection and analysis have been done over the years (cf., Maddi, 1997, 2002). The hardiness measure has now evolved through four editions to the 18 items of the PVS III-R (Maddi & Khoshaba, 2001). Current item examples are, for commitment, ''I often wake up eager to take up life wherever it left off,'' for control, ''Trying your best at what you do usually pays off in the end,'' and for challenge, ''Changes in routine provoke me to learn.'' The PVS III-R consistently shows the 3Cs as intercorrelated in adult, undergraduate, and even high school samples (Maddi & Khoshaba, 2001). Further, the 3Cs seem best understood as nested under a higher order factor (Maddi, Harvey, Khoshaba, Lu, Persico, & Brow, 2005; Sinclair & Tetrick, 2000), as is expected in the conceptualization of hardiness as existential courage.

The other criticism contended that the hardy attitudes are no more than a negative expression of neuroticism or negative affectivity (Funk & Houston, 1987; Hull, Van Treuren, & Virnelli, 1987). By now, there are several findings suggesting that the hardy attitudes measure is considerably different from, and broader than, neuroticism or negative affectivity. One study (Maddi & Khoshaba, 1994) showed that the pervasive negative relationship between hardiness and the clinical scales on the MMPI persists when the effect of negative affectivity is removed from these relationships. Compelling evidence from another study (Maddi, Khoshaba, Harvey, Lu, & Persico, 2002) is that the hardiness measure is not only correlated negatively to the neuroticism factor on the NEO-FFI measure of the five-factor model, but also correlated positively to each of the other four factors. Along with the results of these two studies, another important finding is that the hardiness measure is not related to socially desirable responding (Maddi et al., 2005). With these findings, it would be difficult to argue that hardy attitudes are no more than negative expressions of neuroticism or negative affectivity. Further, the five factors of the NEO-FFI together account for only about one-third of the

variance of the 3Cs, suggesting that hardiness is not simply explained by the five-factor model (Maddi, Khoshaba, Jensen, Carter, Lu, & Harvey, 2002). At least, it appears that the methodological critiques of hardy attitudes have been answered.

It is relevant now to summarize some of the major findings concerning the relationship of hardiness to performance, conduct, and health. Similar results to those in the IBT study have been reported concerning the positive influence of hardiness on performance and mood in such diverse samples as bus drivers (Bartone, 1989), lawyers (Kobasa, 1982), nurses (Keane, Ducette, & Adler, 1985), firefighters (Giatras, 2000), and undergraduates (Lifton, Seay, & Bushke, 2004; Maddi, 2002). Furthermore, Bartone (1999) has been studying military personnel in such stressful circumstances as combat and peace keeping missions. There is clear evidence that the higher hardiness attitudes are before the personnel leave on the missions, the less likelihood there is that life-threatening experiences abroad will lead to posttraumatic stress, or depression disorders. Similar results have been found regarding the stress of culture shock (rather than threats to life) in American employees on work missions abroad (Atella, 1989), and immigrants to the USA (Kuo & Tsai, 1986).

There are also studies notable for concerning more common sorts of stresses, and objective indices of performance and conduct. For example, Maddi and Hess (1992) showed that hardiness, measured before the basketball season began, predicted six out of seven indices of performance excellence throughout the ensuing season among male, varsity, high school players. Similarly, Lancer (2000) found that female synchronized swimmers who made the US Olympics team in 2000 and then performed well in the competition was predicted by hardiness levels measured before the competition began. Also relevant to performance is a study by Bartone and Snook (1999) in which hardy attitudes emerged as the best predictor of leadership behavior over the 4 years of training spent by cadets at West Point Military Academy. Similarly, Westman (1990) found that Israeli military recruits in office training school who were high in hardy attitudes (measured before they entered) were more likely to describe the training as stressful, but graduate successfully. In contrast, those recruits low in hardy attitudes tended to describe the training as easy and pleasant, but had a higher failure rate. Also, among undergraduates, hardiness was positively related to the creativity level expressed on a laboratory task (Maddi et al., 2005). Further, among human resource consultants, the higher the hardiness level, the greater the number of billable hours they accumulated in the ensuing year (Maddi et al., 2006).

As to conduct, Maddi, Wadhwa, and Haier (1996) studied alcohol and drug use among high school graduates about to enter college. Whereas a family risk factor index was positively correlated with self-report of trying alcohol and drugs, it was hardiness that was negatively correlated to self-report of the frequency with which these addictive substances had been used. Objective measurement through urine screens also showed this negative relationship between hardiness and substance use.

There are also construct validity studies that support the conceptualized mechanisms whereby hardy attitudes lead to hardy actions, thereby positively effecting performance, conduct, and health. Specifically, there is evidence of a positive relationship between hardy attitudes and the hardy actions of (a) coping with stresses by problem solving, rather than denying and avoiding, (b) interacting with others by giving and getting assistance and encouragement, rather than competition or overprotection, and (c) engaging in organismic self-care, rather than excessive or insufficient nutrition, exercise, and relaxation (Maddi, 2002; Weibe & McCallum, 1986). Further, hardy attitudes are positively related to feeling actively involved in the choice of activities and the ensuing interaction (Maddi, 1999). Also expected, there are results showing a negative relationship of hardy attitudes to repressive coping and right-wing authoritarianism (Maddi et al., 2005). These findings show a general tendency to approach experience openly, and cope with it in a manner than can enhance performance and health.

Hardiness is learned

Hardiness was conceptualized as something that develops, rather than is inborn (Maddi & Kobasa, 1984). The initial view, that youngsters whose parents expose them to a wide range of experiences, and encourage them to learn from these experiences by putting them together into patterns through exercising imagination and judgment, was then tested in the IBT study. That study included interviews on the early history of the participating employees, conducted before the deregulation upheaval. Comparison of the data given by those who thrived in the upheaval with those whose performance and health was undermined largely supported the hardiness conceptualization, but highlighted the importance of dealing with stressful circumstances (Khoshaba & Maddi, 1999). Specifically, those who thrived described their early life as stressful, and their parents as supportive and encouraging of their efforts to do well nonetheless. Convinced by their parents of the importance of, and their capability in, coping and thriving they worked hard in school and were also

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therefore supported and admired by their teachers (Khoshaba & Maddi, 1999).

These results suggesting that hardiness is learned prompted and guided the development of a hardiness-training program (Khoshaba & Maddi, 2001). Briefly, the training program is based on a workbook that includes hardy coping, social interacting, and self-care exercises, plus a procedure for using the feedback from these efforts to deepen hardy attitudes. Typically, there are several weekly sessions in the training, so that trainees can carry out planned exercises in their lives, and report back on the results of this. By now, there are several evaluation studies of this hardiness training showing that it not only increases hardy attitudes and actions, but also improves performance and health in working adults (Maddi, 1987; Maddi, Kahn, & Maddi, 1998) and college students (Maddi, Khoshaba, Jensen et al., 2002). In working adults, the training increased not only their hardiness levels, but also their job satisfaction, and constructive involvement with fellow employees. The training also decreased the number of employees in the sample whose blood pressure was too high. As to college students, the training not only increased their hardiness levels, but also their retention rates and grade point averages over the next 2 years.

Summary

The accumulating findings of these and other studies make clear that there is empirical support for the conceptualization of hardy attitudes as the courage and motivation to deal with natural and imposed stressful circumstances through hardy actions that turn them from potential disasters into opportunities and advantages, thereby enhancing performance and health.

Comparative analysis of cognitive/emotional amalgams

Hardiness has been offered here as an addition to positive psychology. Conceptually, the presentation has identified hardy attitudes as a cognitive/emotional amalgam emphasizing courage, and hardy actions as the attitude-motivated mechanisms for dealing effectively with stressful circumstances in a manner than enhances health and performance. That the research results support this conceptualization raises the further question of the relationship between hardy attitudes and the other cognitive/emotional amalgams already proposed as part of positive psychology.

One way of trying to answer this question involves a comparative analytic research approach (Maddi, 1969/1996) in which hardy attitudes and some other cognitive/emotional amalgams are compared as to their relative effectiveness in accounting for dependent variables to which they are all conceptually relevant. Such research findings will facilitate understanding of not only the relative importance of the cognitive/emotional amalgams, but also how they may interact together in facilitating relevant actions, and performance and health outcomes. The two comparative analytic studies currently available are summarized below.

Comparative analysis of hardiness and optimism

Thus far, one of the foundation stones of positive psychology has been the optimism construct, which is an important element of happiness. An argument has been made here that courage, expressed as hardy attitudes, needs to be included if positive psychology is to be complete. At the empirical level, there is need for research studies that clarify the relative magnitude and direction of the roles played by optimism and hardiness in health, performance, and conduct.

The only relevant article, thus far, reports on three studies (Maddi & Hightower, 1999) comparing hardy attitudes and optimism in their relationship to coping efforts. In all three studies, hardy attitudes were measured by the PVS III (Maddi, 1997), and optimism by the Learned Optimism Test (LOT; Scheier & Carver, 1987). The coping measures were Scheier, Weintraub, and Carver's (1986) COPE test in the first and third studies, and Moos' Coping Response Inventory (1993) in the second study. The first two studies involved undergraduate samples in completing the questionnaires. The sample in the third study was composed of women who had been referred to a specialty clinic for diagnosis of whether the breast abnormality they were experiencing was cancerous. Prior to diagnosis, these women completed the PVS, LOT, and COPE tests.

In all three studies, there were modest positive correlations between hardiness and optimism, and between each of these personality variables and various coping styles. The comparison of the relative roles of hardiness and optimism was done by entering both variables into multiple regression analyses as independent variables so as to determine the influence that each, purified of the other, had on the dependent variables of coping styles. In the first two studies, which emphasized the every day stresses of college life, hardiness was a more powerful and pervasive influence on problem-solving (or active) coping, and especially protected against denial and avoidance (or regressive) coping. The third study showed that, under a potentially life-threatening stressor, optimism finally emerged as associated

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with nearly as many problem-solving coping efforts as did hardiness, but it was still true that only hardiness negatively related to regressive (denial and avoidance) coping.

Taken together, these three sets of findings suggest that, with regard to everyday stresses, hardiness operates as the courage to face and cope effectively with them and that, by comparison, optimism may include some naïve complacency (Colvin & Block, 1994). Some of this difference persists even when the stressor is life threatening. These results are consistent with those showing that what makes the difference is what one does with problems, not merely one's optimism (Stewart & Vandewater, 1999; Torges, Stewart, & Miner-Rubino, 2005). Needless to say, much more comparative analytic research must be done before the relative roles of optimism and courage in positive psychology can be empirically clarified.

Comparative analysis of hardiness and spirituality

Spirituality, or religiousness, has also been proposed as part of positive psychology. The contention is that religiousness provides, as a cognitive/emotional amalgam, a sense of meaning and purpose that facilitates performance and health, despite whatever problematic circumstances may be encountered (e.g., Atchley, 1997; Bergin, 1983; Clark, Friedman, & Martin, 1999; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000). As such, religiousness is conceptualized somewhat similarly to hardiness. Both emphasize spirituality, though they differ as to how this is defined. In particular, it is generally true that religiousness is based in a God figure and a relatively unchanging credo, whereas hardy attitudes simply provide the courage to find one's own way by trying to transform stresses from potential disasters into growth opportunities.

At present, there is one relevant study (Maddi, Brow, Khoshaba, & Vaitkus, 2006), and it compares the relationship of hardiness and religiousness in their relationships to depression and anger. Conceptually, both hardiness and religiousness would be expected to help people deal with life stresses in a manner that minimizes such expressions of frustration and difficulty as depression and anger. This should be especially true for the sample in this study, which was comprised of senior US Army officers, whose lives are likely to be regularly stressful. In this study, the measures included the PVS III-R (Maddi & Khoshaba, 2001) for hardy attitudes, the DURAL (Sherman, Plante, Simonton, Adams, Harbison, & Burris, 2000) for religiousness, the Center for Epidemiological Studies Depression Scale (CES-D; Hann, Winter, & Jacobsen, 1999; Radloff, 1997) for depression, and the State-Trait Anger Expression Inventory (STAXI; Bishop & Quah, 1998; Spielberger, Sydeman, & Owen, 1999) for anger.

As expected, there was a pattern of modest correlations, positive between hardy attitudes and religiousness, and negative between each of them and indices of depression and anger. Several regression analyses were performed, each with hardy attitudes and religiousness as independent variables, and a depression or anger variable as the dependent variable.

Once hardy attitudes and religiousness were purified of each other through the regression analysis procedure, only the former showed main effects in protecting against depression and anger. In some of these analyses, the interaction effect between hardiness and religiousness was also significant. When these interactions were plotted, the emerging picture indicated that when hardy attitudes are low, religiousness protects against some expressions of anger and depression, but when hardy attitudes are high, they provide the protection and religiousness has no effect.

Hopefully, this study will open the way toward a greater understanding of the effects of cognitive/emotional variables on health and performance. Its results suggest that the day-to-day stressors encountered by these senior Army officers are less likely to have an emotionally debilitating effect when addressed through the hardy attitudes of commitment, control, and challenge than through the belief in a specific God figure and an unchanging credo of ethics. Of course, this study did not permit scrutiny of whether there were differences in the action variables (e.g., active or regressive coping, interacting with others in supportive or undermining ways) hypothetically prompted by both hardiness and religiousness. Needless to say, additional research is needed utilizing other measures of religiousness, and emphasizing additional action, health, and performance variables.

Concluding remarks

Hardiness has been proposed here as a needed component of positive psychology. Through conceptual and empirical efforts, hardiness is emerging as a combination of interrelated attitudes (cognitive/emotional amalgam) and interaction approaches (action patterns) that together provide the courage, motivation, and strategies for turning developmental and imposed stresses from potential disasters into growth opportunities. This process leads to excellence in performance, and enhanced physical and mental health. Building on this, research has begun which attempts to compare the relative power of

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hardiness and other proposed components of positive psychology on performance and health.

Exemplified here, this comparative analytic process needs to be incorporated further into positive psychology, so that it can continue and deepen its impact. This process will be facilitated by sufficient conceptualization of each proposed component of positive psychology such that it is clear whether the component is a cognitive/emotional amalgam, or an action pattern, or a combination of the two. Further, the particular aspects of enhanced performance or health that are influenced by the proposed component also need to be specified. These conceptual clarities will facilitate designing research that compares the effectiveness of proposed components in facilitating mutually relevant aspects of performance and health.

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