



Series: HEALTH PSYCHOLOGY AND PSYCHOSOMATIC MEDICINE

Series Editor: ALEXANDER-STAMATIOS ANTONIOU

# Current Perspectives in Occupational Health Psychology

Edited by: Alexander-Stamatios Antoniou

VOLUME B



Science is ever-changing

---

New research accomplishments and clinical experience has expanded the field of medical knowledge and represent an ongoing process. With this in mind, it is imperative that we make the appropriate changes as far as it concerns the course of action, in the treatment of our patients.

The content of this textbook reflects all the most recent knowledge and internationally accepted techniques as they are analyzed by experienced authors in the field, in each chapter.

Nevertheless, the authors and the editor acknowledge that every medical opinion is under the limitations of the time frame that this book was created, as well as possible mistakes that might have escaped their attention.

Readers of this textbook are encouraged to keep that in mind, while at the same time we hope that the information included will become a starting point for young colleagues or the more experienced ones, for new research projects, clinical trials or maybe an updated version of the book in the near future.

**BROKEN HILL PUBLISHERS LTD**

16 PRINCESS DE TYRA STR., KARANTOKIS BUILDING

1642 NICOSIA, CYPRUS

e-mail: [info@brokenhill.com.cy](mailto:info@brokenhill.com.cy)

<http://www.brokenhill.com.cy>

**ISBN: 978-9963-716-73-9**



**Current Perspectives in Occupational Health Psychology**

Copyright © 2015 by Broken Hill Publishers LTD. All rights reserved. Printed in Greece. Except as permitted under the Greek Laws, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

# *Hardiness and Resilience at Work*

*Chapter*

*1*

*Maria Armaou & Alexander-Stamatios Antoniou*

## **Hardiness – work-stress**

Stress and health researchers have examined for a long time personal resources that appear as a protective factor in the stress-illness relationship. The concept of individual hardiness and more recently that of resilience are examples of such factors. However, hardiness reflects a more stable personality attribute whereas resilience, due to its cognitive nature, is more open to development.

Hardiness has been originally described as consisting of three interrelated self-perceptions: challenge, commitment, and control (Kobasa, 1979; Maddi, 2002; 2005). "Hardy" individuals find it interesting to stay involved with the people and events they encounter when under stress (commitment), believe that they influence the course of events in their lives (control), and see change as natural and an opportunity to grow (challenge) (Maddi & Kobasa, 1984). Overall, research findings show that hardy individuals are more able to remain healthy during stressful events (e.g., Florian, Mikulincer, & Taubman, 1995; Maddi, 1999; Zakin, Solomon, & Neria, 2003), and this effect may be more pronounced under highly stressful or traumatic circumstances (e.g., Bartone, 1999; Klag & Bradley, 2004; Pengilly & Dowd, 2000; Waysman, Schwarzwald, & Solomon, 2001).

## **The Hardiness-stress relationship**

Hardiness is composed of three interrelated characteristics or components: (a) commitment, (b) control, and (c) challenge. These three components have been

combined by Kobasa and colleagues into a "hardiness" scale. There are strong theoretical bases and empirical evidence supporting the negative relationship between hardiness and ill-health (Kobasa, 1979; Kobasa et al., 1982). According to Maddi and Kobasa (1984) hardy people experience less stress-related sequale as hardiness modifies the strain-illness process because it a) alters perceptions of events to make them less stressful, b) leads to active or "transformational" coping, c) influences coping indirectly through its influence on social support, d) leads to changes in health practices that in turn reduce illness (Funk, 1992).

With regards to hardiness effect on perceptual processes, Maddi (1999) notes that hardiness 'sensitizes people to the possible changeability of events' (p. 89). Due to these control perceptions people's beliefs on their capability to cope with stressful situations will increase (Bandura, 1997; Lazarus & Folkman, 1984). Also, people with high sense of commitment are expected to be more actively engaged and scanning the environment for interesting and stimulating tasks. In addition to impacting one's perception of stressors, hardiness may also impact the objective presence of stressors. Hardy individuals may actually be exposed to fewer stressors as the belief that one has control over the environment may cause one to proactively address potentially negative conditions before they become serious stressors. Finally, perceptions of stressors are also associated with the challenge component of hardiness as hardy individuals can more effectively appraise the demanding environment in relation to their goals (Kobasa, 1979).

With regards to the effect of hardiness on coping, according to Maddi and Kobasa (1984), hardiness affects coping (a) directly and (b) indirectly through social support. Its direct effect lays on the assumption that hardy people are more effective in stressful situations because they use coping strategies aimed at turning the stressful situation into a more benign situation (e.g. task-focused coping) and tend to have relationships that support transformational coping in times of stress. Maddi (1999) examined the interactions between stressors and hardiness and their effects on transformational and regressive coping. Their findings showed that hardiness accelerated the tendency for transformational coping. Similar were Maddi and Hightower's (1999) findings in three studies that compared the influence of hardiness and optimism on transformational and regressive coping. Their main finding was that hardiness influenced coping much more than optimism and especially transformational coping.

Overall, there is a breadth of empirical findings supporting the protective value of hardiness for people's well-being in a breadth of settings. For example, in Bernas and Major (2000) study among women hardiness was shown to be an important re-

source for the reduction of stress and subsequent work-family conflict. (contributors to stress). Bartone's (1999) studies in military personnel in various stressful circumstances, showed that the lower hardy attitudes are, the greater is the likelihood that for depression and posttraumatic stress disorder.

Moreover, Britt et al. (2001) explored the relationship between the meaningfulness of work, personality hardiness and deriving long-term benefits from a stressful event in U.S. soldiers. Their analysis showed that personality hardiness was associated with being engaged in meaningful work during deployment, which was strongly associated with deriving benefits from it months after it was over. However, Michielsen et al. (2003) examining personality and temperament as predictors of chronic fatigue they found that when fatigue measured earlier is controlled for, the direct role of temperament and personality decreases enormously. Similarly, Harrison et al. (2002) examined relationships among hardiness, psychological distress and work support in registered nurses in Quebec. They found that hardier nurses report lower psychological distress and more work support and that hardiness acts as a significant mediator between nurses' perceptions of work support and psychological distress.

Eschleman et al. (2010) carried out a meta-analytic review of 180 samples in the literature examining the relationships between hardiness facets and the relationship between hardiness and several criteria (e.g. stressors, strains, social support, and coping). With regards to the interrelationships among hardiness components they were all significant and positive, while the commitment -challenge and control- challenge relationships were significantly weaker than the commitment-control relationship. Overall, their findings are in line with previous research indicating that hardiness should be better assessed at the facet level with challenge as the most unique of the three hardiness components demonstrating the least adequate psychometric properties and systematically related to health criteria (Florian et al., 1995; Funk & Houston, 1987; Hull et al., 1987).

With regards to the relationships among hardiness, personality, stressors and strains their analyses showed that hardiness and its components were positively associated with dispositions that buffer against the effects of stressors, and negatively associated with those that exacerbate the effects of stressors. Moreover, hardiness and its components was negatively related with life stressors, work stressors, co-worker conflict, supervisor conflict, task uncertainty, role overload, role ambiguity, role conflict, work-family conflict, and interpersonal stressors. Of these relationships, hardiness was most strongly related with supervisor conflict, role conflict, and role ambiguity.

Furthermore, negative relationships were found between hardiness and psychological distress, depression, burnout, state anxiety, negative state affect, posttraumatic stress disorder, distress for parental drinking, poor mental health, psychological maladjustment, dissociative symptoms, and frustration. Hardiness was also positively associated with psychological well-being variables such as job satisfaction, life satisfaction, positive state affect, personal growth, engagement, happiness, and quality of life. The strongest relationships included life satisfaction total burnout and posttraumatic stress disorder. In regards to physical strain, hardiness was associated with physical symptoms, fatigue, and absences because of illness, but not related to physical fitness.

Moreover, with regards to coping Eschleman's et al. meta-analysis showed that hardiness was positively related to problem focused, approach, and positive intrusive thoughts and negatively related to emotion focused and negative intrusive thoughts. Of these relationships, hardiness had the strongest associations with positive intrusive thoughts and negative intrusive thoughts. Contrary to expectation, hardiness was not associated with avoidance and support seeking.

Finally, while controlling for either Five Factor Model traits, core-self evaluation traits, negative affectivity, or optimism, hardiness explained unique variance in role ambiguity, role conflict, role overload, job stressors, emotional exhaustion, personal accomplishment, depersonalization, depression, poor mental health, job satisfaction, life satisfaction, physical symptoms, supervisor support, co-worker support, social support, problem focused coping, emotion focused coping, job performance, academic performance, turnover intention, and job involvement. In only one case did hardiness fail to explain unique variance: hardiness-work-family conflict relationship while controlling for locus of control.

Delahaij et al. (2010) examined meditational processes between individual hardiness and stress responses during a stressful situation in two samples of officer cadets of the Netherlands Defence Academy and infantry recruits in basic military training. In line with hardiness theory they found that hardy people had a more effective coping style (i.e., more task-focused and less emotion-focused), and therefore more effective coping behavior (Kobasa, 1979; Maddi, 2002). Furthermore, they showed that hardiness affects coping behavior, because coping style mediates between hardiness and coping behavior, that coping self-efficacy mediates between hardiness and appraisal; while hardiness doesn't predict appraisal over and above the effect of coping self-efficacy.

Finally, Vogt et al. (2008) examined the relationships between hardiness and stress reaction and the moderating role of social support in a longitudinal study of

men and women Marine recruits. For men in line with the broader hardiness literature (e.g., Bartone, 1999; Klag & Bradley, 2004; Pengilly & Dowd, 2000; Waysman et al., 2001), they found that higher levels of initial hardiness predicted lower subsequent stress reactions, and higher initial stress reactions predicted a reduction in hardiness over the course of Marine training.

## Hardiness development

A significant element of hardiness literature is the argument that it may be open to development and therefore an important asset for HR development. Based on the conceptual model of hardiness, Maddi (1987, 2002) developed and tested a hardiness training program a waiting-list control study in order to facilitate the practical application of hardiness. Maddi's hardiness training program engages cognition, emotion, and action in coping effectively with stressful circumstances and uses the feedback to deepen commitment and control and challenge beliefs about oneself in the world (Maddi, 1987). It involved 15 small group sessions in Illinois Bell Telephone (IBT) on a weekly basis in which managers were taught and encouraged to cope with their major stressors by the use of hardy coping techniques and to use the feedback from their efforts to deepen their hardy attitudes (Maddi, 1987; Maddi, Kahn, & Maddi, 1998). It was found that hardiness training simultaneously increased personality hardiness and decreased subjective (e.g., anxiety and depression) and objective (blood pressure) signs of strain. This pattern of results persisted over the 6-month follow-up period used (Maddi, 1987).

Similarly, Maddi et al. (1998) compared hardiness training with relaxation/meditation and passive listening in 9 randomly assigned groups of managers in a utilities company. Three groups were then assigned at random to each treatment condition. The hardy training group involved an introductory session, where participants described their current stressful circumstances and learnt about the three coping techniques (situational reconstruction, focusing and compensatory self-improvement), 4 sessions practicing those techniques by carrying out action plans to change those stressful circumstances, one session where participants were encouraged to use this approach in the future and homework assignments. Feedback from these sessions was used to deepen self-perceptions of commitment, control and challenge. The appropriate training conditions were also set for the other two treatment groups of relaxation/meditation and passive listening.

Finally, participants completed a composite questionnaire at pretest and post test that measured their hardiness, job satisfaction, subjectively experienced strain, per-

ceived social support and an ill-health survey. Hardiness training appeared to have had a more beneficial effect than either relaxation/meditation or passive listening conditions. Participants experiencing hardiness training showed greater increases in personality hardiness, job satisfaction, and perceived social support levels, coupled with greater decreases in subjective strain and illness severity, than did those experiencing relaxation/meditation or passive listening. Judkins et al. (2005) measured hardiness attributes in a cohort of students before and after undertaking a nursing administration programme. Positive changes in hardiness mean scores were verified by qualitative findings, which revealed important changes in skills related to all three elements of hardiness.

## Resilience in the workplace

Resilience has attracted the attention of scholars for years; yet, a common definition has proved elusive. Despite the consensus that it refers to the ability to grow and move forward in the face of adversity, much ambiguity continues to exist surrounding the underlying processes that comprise resilience. Indeed, personal resilience has been conceptualised in a diverse ways. In particular, Rutter (1985) proposed a continuum from vulnerability to resilience as a means to conceptualize the individual's response to adversity and proposed a number of protective factors by which "catalytic modification of a person's response to risk" (Rutter, 1987; p.329) that mediate one's response to stress. Fine (1991), in her work with physically disabled individuals, found that "personal perceptions and responses to stressful life events are crucial elements of survival, recovery, and rehabilitation, often transcending the reality of the situation of others" (p.493). She identified a two-stage process of resilience. In the acute phase of the process, energy is directed at minimizing the impact of the stress and stressor.

In the reorganization phase, a new reality is faced and accepted in part or in a whole (p.499). Flach (1980, 1988) described the dynamic process of resilience as a system which can be learned at any point in life. Using a developmental perspective, Flach presented the idea of "bifurcation points...the points in life when major shifts occur" (p.14). Similar to Rutter's (1987) key turning points, bifurcation points represent moments of extreme change in the life cycle. Finally, Coleman and Ganong (2002, p. 1) define resilience as 'a dynamic process encompassing positive adaptation within the context of significant adversity'.

Resilience as a trait was defined by Wagnild and Young (1993): "...a personality characteristic that moderates the negative effects of stress and promotes adapta-



tion..." (p.165). Wagnild and Young (1993) investigated resilience as a trait and tested an instrument developed to measure resilience in people. Based on their 1990 research presented above, and a review of the literature, Wagnild and Young operationalized measurement of the five identified components in the 25-item Resilience Scale. Principal component analysis revealed two factors: personal competence and acceptance of self and life. The former included self-reliance, independence, determination, invincibility, mastery, resourcefulness and perseverance. The latter included adaptability, balance, flexibility, and a balanced perspective of life.

Psychological resilience has also been defined as the capacity to move on in a positive way from negative, traumatic or stressful experiences (Tugade & Fredrickson, 2004). Indeed, Bonanno (2004) notes that resilience can be differentiated from recovery as recovery refers to a period in which normal functioning is suspended, whereas resilience involves maintenance of equilibrium, with no loss of normal functioning. Resilience is sometimes defined according to qualities, traits or characteristics rather than in a neat and contained definition. For example, Giordano (1997) lists qualities associated with resilience such as resourcefulness, self-confidence, curiousness, self-discipline, level-headedness and flexibility.

Similarly, Jacelon (1997) suggests that resilient individuals are generally intelligent, with a strong sense of self. In an attempt to identify the inconsistencies in the understandings of resilience, Polk (1997) examined 26 published papers to identify characteristics or themes that distinguish and define resilience. From this, she was able to identify four patterns of resilience: dispositional pattern, which encompasses psychosocial attributes; relational pattern, which refers to intrinsic and extrinsic roles and relationships influencing resilience; situational pattern, which captures the ability people have to assess and react to stressors or situations of adversity; and the philosophical pattern, which includes personal beliefs and principles (Polk, 1997).

Indeed, achieving workplace resilience has become a common goal in organisational settings (Coutou, 2002). Recent research shows that resilience may be influenced by various factors and be open to development. Specifically, Gillespie et al. (2009) examined personal characteristics (age, years of operating room experience, education) as a predictor of operating room nurses' levels of resilience. The average resilience levels reported in the current study were reasonably high. Also, they found significant bivariate relationships between resilience and demographic variables, age and experience; however, years of OR experience was the only personal characteristic predictor of resilience for this group of nurses.

Moreover, Jackson et al. (2007) reviewed 50 papers exploring the concept of resilience in nurses. They concluded that self-development strategies can be used to

develop resilience to workplace adversity in nurses: building positive and nurturing professional relationships; maintaining positivity; developing emotional insight; achieving life balance and spirituality; and, becoming more reflective. Furthermore, they concluded that nurses can actively participate in the development and strengthening of their own personal resilience to reduce their vulnerability to workplace adversity and thus improve the overall healthcare setting.

Finally, Ablett and Jones (2007) used interpretive phenomenological analysis to describe hospice nurses' experiences of work in order to understand the factors that help to promote resilience and mitigate the effects of workplace stress. For this reason, a purposive sample of 10 palliative nurses was recruited from a hospice in the north west of England. Themes that emerged from the analysis of semi-structured interviews related to interpersonal aspects and to each individual's perspective of their 'job-person fit'. Overall 10 themes emerged. Central to these themes was the extent to which the nurses chose to work in this area, and were committed to it, believing they could "make a difference" to the people for whom they were providing palliative care. Awareness of both their mortality and their spirituality were additional prominent themes that emerged from the data analysis. The authors comparing those themes to the personality constructs of hardiness and sense of coherence they found considerable similarities. Specifically, they found that hardiness might explain some nurses' resilience at work, whereas sense of coherence explains other depending on an individual's attitude towards change.

## **Resilience as part of Positive Psychocological Capital (PsyCap)**

Masten and Reed (2002, p.75) define resilience as "a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk." Based on this definition, Luthans et al. (2007) conceptualised resilience as a personal resource as part of the construct of Psychological Capital. Psychological capital is an outgrowth of positive organizational behaviour or POB (Luthans, 2002a, 2002b, 2003). POB is defined as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today's workplace" (Luthans, 2002b, p.59). Therefore, Luthans support that for a construct to be included in POB must meet certain criteria as being: (a) positive, strength-based, and relatively unique to the organizational behaviour field; (b) theory and research-based with valid measures; and, most important HRD, (3) state-like and thus open to deve-

lopment and performance management. Along with other constructs, resiliency can meet those criteria (Luthans, 2002a; Masten & Reed, 2002; Youssef & Luthans, 2005;).

Luthans' conceptualization of resilience as part of the Psychological Capital differs from previous conceptualizations of resilience as it is relevant to HRD due to its state-like nature, which means that it can be targeted and opened to development. PsyCap is a core construct of positive organizational behaviour and is defined as "an individual's positive psychological state of development that is characterized by the following: (a) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (b) making a positive attribution (optimism) about succeeding now and in the future; (c) persevering toward goals and, when necessary, redirecting path to goals (hope) in order to succeed; and (d) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success" (Luthans et al., 2007).

Although resiliency has traditionally been portrayed as trait-like there is evidence that is in fact developable (Bonano, 2004; Masten, 1994; 2001; Masten and Reed, 2002; Tugade & Fredrickson, 2004; Youssef & Luthans, 2005). Masten & Reed (2002, p. 75) define resiliency as "a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk." Largely drawing from that definition PsyCap resilience focused on the proactive assessment of risks and personal assets that affect employee outcomes. Risks are defined as any predictor that leads to undesirable outcomes while having no effect of there is no occurrence.

On the other hand personal assets are defined as any predictor that leads to positive outcomes while having no influence if they are absent (e.g. promotions, bonuses, recognition, or mentoring programs). Furthermore, a key issue in PsyCap resiliency is the argument that resilience may lead to an increase in the performance domain (e.g. Luthan, 1991). This is in line with arguments that there may be an increase in performance after an adverse event, although others support that resilience leads to a return to previous normal functioning (Gest, Masten et al., 1999, Reed & Masten, 1999).

Luthans' conceptualization of resilience involves its convergence and differentiation in relation to the other PsyCap factors of hope, optimism, and confidence. Specifically, Luthans' approach to PsyCap factors is that they may either act as pathways to resilience or moderate the relationship between resilience and outcomes such as performance. However, resilience is more reactive and it requires an intense stressor as an antecedent that would activate the resiliency process. This suggests that resilience can be an antecedent to other positive outcomes of psychological capital restoring confidence, hope, and optimism after a challenging experience.

Luthans (2006) describe how the construct of resilience differs from the other PsyCap constructs. Hope is defined as the willpower (having positive expectancies and specific goals) and the waypower (having in place alternative pathways to cope with those expectancies not proceeding on the way they were supposed to proceed) people have toward a goal (Snyder, 2000). Flexibility is an important component of both waypower (pathways) and resilience, but neither component of hope encompasses the reaction to a disruptive event that triggers the resilience process (Bonnano, 2004).

Optimism, on the other hand, is less closely related to resilience is defined as generalized expectancy that one will experience good outcomes in life, which will lead to persistence in goal-striving (Scheier & Carver, 1985). However, similarly to hope, optimism does not take into account the necessity of a trigger event (adversity). Finally, efficacy is defined as the belief that an individual has to successfully perform a specific task (Bandura, 1997). The proactive process-focused development of resilience relies heavily upon Bandura's conception of efficacy that influences one's "resilience to adversity". Again, though, it doesn't incorporate the reactive use of resilience, which allows people to restore their self-efficacy even after it has been challenged and predicted to decrease due to a setback (Youssef & Luthans, 2005).

Research findings shows that the construct of PsyCap and its components are positively related to desirable employee outcomes such as performance, organisational commitment and job satisfaction but PsyCap seems to be a better predictor than its individual components (Luthans et al., 2007). Focusing on PsyCap resilience, Luthans et al. (2005), in a sample of chinese workers found that resilience, just like all PsyCap components, was positively related to supervisory rated performance, although that relationship was higher for PsyCap as a whole. Similarly, Larson and Luthans (2006) found that resiliency was significantly positively related to job satisfaction and organization commitment the effect was stronger for the PsyCap construct.

More recently, Avey et al. (2010) found that employees' PsyCap is significantly correlated with psychological well-being over time. Similarly, Avey et al. (2009) found a negative relationship between the levels of employees' PsyCap and their perceived symptoms of job stress. Specifically, psychological capital was found to have a negative relationship with respondents' symptoms of stress, their intentions to quit and job search behaviors. Finally, Avey et al. (2006) found that PsyCap and its components were negatively related to employee absenteeism in a sample of engineering managers. However, PsyCap was significantly correlated only with voluntary absenteeism and not involuntary one.

## PsyCap Resilience development

Luthans et al. (2006) approach on resilience development drawn mainly from the work of Masten (2002), but also that of Fredrickson's (2003) work on the role of positive emotions in crises and Bonano's (2004) in clinical settings. Specifically, Fredrickson et al. (2003) suggest that repeated exposure to positive emotions pre- and post trauma may help strengthen an individual's resilience capacity. Based on Fredrickson's (1998) broaden-and-build model people have the capacity for broadening their momentary thought-action repertoires and building out their personal resources. Research findings show that such positive emotions add to one's storage of personal resources that are called upon when resilience is needed (Aspinwall & Taylor, 1997; Fredrickson, 2001). Bonnano's (2004) work, on the other hand, suggests individual resilience is built through four personality dimensions that include positive emotion, self-enhancement, attribution or locus of control, and hardiness-may ultimately result in building pathways for individual resiliency.

Also, Richardson's (2002) meta-theory of resiliency identified three ways of inquiry and analysis that support the developmental nature of resilience. The first wave includes the identification of resilient qualities of individuals and support systems that predict social and personal success. The second one involves the understanding of coping with stressors, adversity, change, or opportunity resulting in the identification, fortification, and enrichment of protective factors. The third wave refers to the identification of the motivational forces within individuals and groups and the creation of experiences that foster the activation and use of these forces.

## The proactive-reactive approach in developing PsyCap resilience

Luthans et al. (2006) present their conceptualization of resilience explaining its relevant to HRD due to its state-like nature and, therefore, openness to development. They, also, describe two approaches for developing the Psychological Capital of Resiliency: the reactive and proactive approach.

### *The proactive approach*

Luthans et al. (2006) propose three areas of focus for a proactive HRD approach to resiliency development: risk, asset and process strategies.

### *Risk-focused HRD strategy*

This development strategy aims to proactively and aggressively avoid strategies and reduce the risks that may cause adverse event. Based on Masten's (2001) work on resilience in developmental psychology research, they suggest that the appropriate organisational culture that is proactively resistant to the need for resiliency is partially created by developing trust and reciprocity between the organization and its leadership and the individual employee's. To develop such a culture, HRD needs to foster a positive employee-employer psychological contract. Their specific HRD guideline for a proactive development of resiliency is to *manage risks by creating an ethical and trustworthy culture*.

### *Asset-focused HRD strategy*

The proposed asset-focused HRD strategy for resiliency is expected to be able to enhance the "employability" of people through paying for continued educational expenses, promoting developmental workshops and cross-training, and rewarding those seeking to better themselves. Indeed, their specific HRD guideline is to *invest in the human and social capital of employees*.

### *Process-focused HRD strategy*

A process-focused strategy would be employed in an attempt to influence the manner in which one interprets events and experiences. For this reason, self-efficacy may have a mediating effect on resilience (Masten & Reed, 2002). Self-efficacy development methods include mastery and success experiences, vicarious learning and/or modelling, persuasion and/or positive feedback, and psychological and/or physiological arousal and well-being (Bandura, 1997; 2000). Luthans et al. (2006) suggest that these proven tactics of HRD processes can be used to increase self-efficacy, which in turn would result in enhanced, proactive resiliency.

### *The reactive approach*

Luthans et al. (2006) describe three categories of strategies as a reactive approach to resilience development: strategies using positive emotions, strategies using self-enhancement, strategies using attribution and strategies using hardiness.

### *Strategies using positive emotions*

The proposed positive emotional strategy for HRD proposed in building resiliency is based on Fredrickson's (2001) broader-and-build model. Such a strategy is reactive

in nature because the development of coping tactics, such as thought-action repertoires, is developed along with the experience of stress or trauma (Fredrickson, 2001). These broad-minded thought-action repertoires, seem to lead to anatomical changes in the brain which may then include modifications to existing synapses that manage new activity (Fredrickson, 2001; Nelson, 1999). Also, proactive HRD strategies could be used to build positive emotional experiences for organizational members. This can lead to increasing thought-action repertoires and the probability that members will enhance their resilience. Overall, an effective reactive HRD strategy for resilience development would involve getting employees to exhibit positive emotions around ordinary events and their ability to trigger an "upward-spiral".

### *Strategies using self-enhancement*

Another proposed reactive HRD strategy for building PsyCap resilience might utilize self-enhancement. This is an individual trait-like tendency toward overly positive or unrealistic self-serving biases but, according to Taylor and Brown (1988), self-enhancers are also adaptive and generally better able to cope with stressful events. Although it has been argued that it promotes narcissism and masks, it has been shown that if harnessed it may be a useful HRD strategy.

### *Strategies using attribution*

Another HRD strategy would be to use optimistic attributions to allow individuals to move past a negative event. A main component of attribution theory related to building resilience is the internal locus of control. As internal attributions heighten the disappointment felt in failure, it may follow that an external locus of control may be a pathway toward building resilience (Bonano, 2004, 2005). In this process of attribution, optimists' abilities to emotionally dissociate from stressful situations may allow them to adapt (Bonano, 2004). As Seligman (1998) has demonstrated that attributional styles can be learned, this could allow a further adaptation of an HRD strategy.

### *Strategies using hardiness*

Luthans et al. (2006) note that as an HRD strategy, hardiness can be developed through a meaning-making process. For, example, recent work of Luthans and his colleagues on authentic leadership development suggests that leaders can tap a follower's self-concept and more specifically, help the follower become more self-aware and introspective (Avolio et al., 2004; Avolio & Luthans, 2006; Luthans & Avolio, 2003). Such self-awareness and self-reflection may help followers to find meaning in

their work and therefore become more hardy in their work environment. Similarly, via interacting with and modelling the authentic leader can become more hardy themselves.

## References

- Ablett, J. R., & Jones, R. S. P. (2007). Resilience and well-being in palliative care staff: A qualitative study of hospice nurses' experience of work. *Psycho-oncology*, *16*, 733-740.
- Aspinwall, L. C., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive. *Psychological Review*, *121*, 417-436.
- Avey, J. B., Luthans, F., & Jenses, M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management*, *48*(5), 677-693.
- Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology*, *15*(1), 17-28.
- Avey, B. J., Patera, J., & West, B. J. (2006). The implications of positive psychological capital on employee absenteeism. *Journal of Leadership and Organizational Studies*, *13*(2), 42-60.
- Avolio, B. J., & Luthans, F. (2006). *The high impact leader: Moments matter for accelerating authentic leadership development*. New York: McGraw-Hill.
- Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly*, *15*, 801-823.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bartone, P. T. (1999). Hardiness protects against war-related stress in Army reserve forces. *Consulting Psychology Journal: Practice and Research*, *51*(2), 72-82.
- Bartone, P. T., Ursano, R. J., Wright, K., & Ingraham, L. H. (1989). The impact of a military air disaster on the health of assistance worker: A prospective study. *Journal of Nervous and Mental Disease*, *177*, 317-328.
- Bernas, K. H., & Major, D. A. (2000). Contributors to stress resistance. Testing a model of women's work-family conflict. *Psychology of Women Quarterly*, *24*, 170-178.
- Britt, T. W., Adler, A. B., & Bartone, P. T. (2001). Deriving benefits from stressful events: The role of engagement in meaningful work and hardiness. *Journal of Occupational Health Psychology*, *6*(1), 53-63.
- Bonanno, G. (2004). Loss, trauma and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, *59*, 20-28.
- Bonanno, G. (2005). Clarifying and extending the construct of adult resilience. *American Psychologist*, *60*, 265-267.
- Coleman, M., & Ganong, L. (2002). Resilience and families. *Family Relations*, *51*, 101.
- Coutu, D. L. (2002). How resilience works. *Harvard Business Review*, *80*(5), 46-55.
- Delahail, R., Gailard, A. W. K., & Van Dam, K. (2010). Hardiness and the response to stressful situations: Investigating mediating processes. *Personality and Individual Differences*, *49*, 386-390.
- Eschleman, K. J., Bowling, N. A., & Alarcon, G. M. (2010). A Meta-analytic examination of hardiness. *International Journal of Stress Management*, *17*(4), 277-307.



- Fine, S. B. (1991). Resilience and human adaptability: Who rises above adversity? *The American Journal of Occupational Therapy, 45*(6), 493-503.
- Flach, F. F. (1980). Psychobiologic resilience, psychotherapy, and the creative process. *Comprehensive Psychiatry, 21*(6), 510-519.
- Flach, F. F. (1988). *Resilience: Discovering a new strengths at times of stress*. New York: Fawcett Columbine.
- Florian, V., Mikulincer, M., & Taubman, O. (1995). Does hardiness contribute to mental health during a stressful real-life situation? The roles of appraisal and coping. *Journal of Personality and Social Psychology, 68*(4), 687-695.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*(3), 300-310.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218-226.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. (2003). What good are positive emotions in crises? *Journal of Personality and Social Psychology, 84*, 365-376.
- Funk, S. C., & Houston, B. K. (1987). A critical analysis of the Hardiness Scale's validity and utility. *Journal of Personality and Social Psychology, 53*, 572-578.
- Gest, S. D., Reed, G. M., & Masten, A. S. (1999). Measuring developmental changes in exposure to adversity: A life chart and rating scale approach. *Development and Psychopathology, 11*, 171-192.
- Giordano, B. (1997). Resilience: A survival tool for the nineties. *Association of Perioperative Registered Nurses Journal, 65*, 1032-1036.
- Gillespie, B. M., Chaboyer, W., & Wallis, M. (2009). The influence of personal characteristics on the resilience of operating room nurses: A predictor study. *International Journal of Nursing Studies, 46*, 968-976.
- Jackson, D., Firtko, A., & Edenborough, M. (2007). Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: A literature review. *Journal of Advanced Nursing, 60*(1), 1-9.
- Harrison, M., Loiseau, G. G., Duquette, A., & Semenic, S. E. (2002). Hardiness, work support and psychological distress among nursing assistants and registered nurses in Quebec. *Journal of Advanced Nursing, 38*(6), 584-591.
- Hull, J. G., Van Treuren, R. R., & Virnelli, S. (1987). Hardiness and health: A critique and alternative approach. *Journal of Personality and Social Psychology, 37*, 1-11.
- Jacelon C. (1997). The trait and process of resilience. *Journal of Advanced Nursing, 25*, 123-129.
- Judkins, S., Arris, L., & Keener, E. (2005). Program evaluation in graduate nursing education: Hardiness as a predictor of success among nursing administration students. *Journal of Professional Nursing, 21*, 314-321.
- Klag, S., & Bradley, G. (2004). The role of hardiness in stress and illness: An exploration of the effect of negative affectivity and gender. *British Journal of Health Psychology, 9*, 137-161.
- Kobasa, S. C. (1979). Stressful life events, personality and health: An inquiry into hardiness. *Journal of Personality and Social Psychology, 37*, 1-11.
- Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A prospective study. *Journal of Personality and Social Psychology, 42*, 168-177.
- Luthans, F., Avolio, B., Walumbwa, F., & Li, W. (2005). The psychological capital of Chinese workers: Exploring the relationship with performance. *Management and Organization Review, 1*, 247-269.

- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Luthans, F. (2002a). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23(6), 695-706.
- Luthans, F. (2002b). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive*, 16(1), 57-72.
- Luthans, F. (2003). Positive Organizational behavior (POB): Implications for leadership and HR development and motivation. In R. M. Steers, L. W. Porter, & G. A. Begley (Eds.), *Motivation and leadership at work*. New York: McGraw-Hill/Irwin.
- Luthans, F., & Avolio, B. J. (2003). Authentic leadership: A positive developmental approach. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 241-261). San Francisco: Barrett-Koehler.
- Luthans, F., Gretchen, R. V., & Lester, P. B. (2006). Developing the psychological capital of resiliency. *Human Resource Development Review*, 5(1), 25-44.
- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital*. Oxford, United Kingdom: Oxford University Press.
- Luthar, S. S. (1991). Vulnerability and resilience: A study of high-risk adolescents. *Child Development*, 62, 600-616.
- Luthans, F., Avolio, B. J., Avey, J. B., & Normanm, S. M. (2007). Positive psychological capital: Measurement and relationship with satisfaction. *Personnel Psychology*, 60(3), 541-572.
- Luthans, F., Avolio, B., Walumbwa, F., & Li, W. (2005). The psychological capital of Chinese workers: Exploring the relationship with performance. *Management and Organization Review*, 1, 247-269.
- Maddi, S. R. (1987). Hardiness training at Illinois Bell Telephone. In J. P. Opatz (Ed.), *Health promotion evaluation* (pp. 101-115). Stevens Point, WI: National Wellness Institute.
- Maddi, S. R. (1999). The personality construct of hardiness: I. effects on experiencing, coping, and strain. *Consulting Psychology Journal: Practice and Research*, 51, 83-94.
- Maddi, S. R., Kahn, S., & Maddi, K. L. (1998). The effectiveness of hardiness training. *Consulting Psychology Journal*, 50, 78-86.
- Maddi, S. R., & Kobasa, S. C. (1984). *The hardy executive: Health under stress*. Homewood, IL: Dow Jones-Irwin.
- Maddi, S. R. (2002). The story of hardiness: Twenty years of theorizing, research, and practice. *Consulting Psychology Journal: Research and Practice*, 54, 175-185.
- Maddi, S. R., & Kobasa, S. C. (1984). *The hardy executive: Health under stress*. Homewood, IL: Dow Jones-Irwin.
- Maddi, S. R. (1999). The personality construct of hardiness: I. effects on experiencing, coping, and strain. *Consulting Psychology Journal: Practice and Research*, 51, 83-94.
- Maddi, S. R. (2005). On hardiness and other pathways to resilience. *American Psychologist*, 60(3), 261-262.
- Maddi, S. R., & Hightower, M. (1999). Hardiness and optimism as expressed in coping patterns. *Consulting Psychology Journal: Research and Practice*, 51, 95-105.
- Masten, A. S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang & E. W. Gordon (Eds.), *Education resilience in inner city-America: Challenges and prospects* (pp. 3-25). Hillsdale, NJ: Lawrence Erlbaum.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56, 227-239.

- Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Adaptations in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology, 11*, 143-169.
- Masten, A. S., & Reed, M. G. J. (2002). Resilience in development. In C. R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 74-88). Oxford: Oxford University Press.
- Michielson, H. J., De Vries, J., & Van Heck, G. L. (2003). In search of personality and temperament predictors of chronic fatigue: A prospective study. *Personality and Individual Differences, 35*, 1073-1087.
- Nelson, C. A. (1999). Neural plasticity and human development. *Current Directions in Psychological Science, 8*(2), 42-45.
- Polk, L. (1997). Toward a middle-range theory of resilience. *Advanced Nursing Science, 19*, 1-13.
- Pengilly, J. W., & Dowd, E. T. (2000). Hardiness and social support as moderators of stress. *Journal of Clinical Psychology, 56*(6), 813-820.
- Richardson, G. E. (2002). The meta-theory of resilience and resiliency. *Journal of Clinical Psychology, 58*, 307-321.
- Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry, 47*, 598-611.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57*(3), 316-331.
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*, 219-247.
- Seligman, M. E. P. (1998). *Learned optimism*. New York: Pocket Books.
- Snyder, C. R. (2000). *Handbook of hope*. San Diego: Academic Press.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Tugade, M., & Fredrickson, B. (2004). Resilient individuals use emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*, 320-333.
- Youssef, C. M., & Luthans, F. (2005). Resiliency development of organizations, leaders & employees: Multi-level theory for sustained performance. In W. Gardner, B. Avolio, & F. O. Walumbwa (Eds.), *Authentic leadership theory and practice. Origins, effects, and development*. Oxford, UK: Elsevier.
- Wagnild, G., & Young, H. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement, 1*(2), 165-178.
- Waysman, M., Schwarzwald, J., & Solomon, Z. (2001). Hardiness: An examination of its relationship with positive and negative long term changes following trauma. *Journal of Traumatic Stress, 14*(3), 531-548.
- Zakin, G., Solomon, Z., & Neria, Y. (2003). Hardiness, attachment style, and long term distress among Israeli POWs and combat veterans. *Personality and Individual Differences, 34*, 819-829.