social context, including his or her work environment, is seen as either supportive or debilitating as regards the maintenance of hardiness. Maddi (1987, 1990) has provided the most thorough depiction and rationale for hardiness intervention strategies. He outlines a combination of focusing, situational reconstruction, and compensatory self-improvement strategies that he has used successfully in small group sessions to enhance hardiness and decrease the negative physical and mental effects of stress in the workplace.

Self-Esteem

John M. Schaubroeck

Low self-esteem (SE) has long been studied as a determinant of psychological and physiological disorders (Beck 1967; Rosenberg 1965; Scherwitz, Berton and Leventhal 1978). Beginning in the 1980s, organizational researchers have investigated self-esteem's moderating role in relationships between work stressors and individual outcomes. This reflects researchers' growing interest in dispositions that seem either to protect or make a person more vulnerable to stressors.

Self-esteem can be defined as "the favorability of individuals' characteristic self-evaluations" (Brockner 1988). Brockner (1983, 1988) has advanced the hypothesis that persons with low SE (low SEs) are generally more susceptible to environmental events than are high SEs. Brockner (1988) reviewed extensive evidence that this "plasticity hypothesis" explains a number of organizational processes. The most prominent research into this hypothesis has tested self-esteem's moderating role in the relationship between role stressors (role conflict and role ambiguity) and health and affect. Role conflict (disagreement among one's received roles) and role ambiguity (lack of clarity concerning the content of one's role) are generated largely by events that are external to the individual, and therefore, according to the plasticity hypothesis, high SEs would be less vulnerable to them.

In a study of 206 nurses in a large southwestern US hospital, Mossholder, Bedeian and Armenakis (1981) found that self-reports of role ambiguity were negatively related to job satisfaction for low SEs but not for high SEs. Pierce et al. (1993) used an organization-based measure of self-esteem to test the plasticity hypothesis on 186 workers in a US utility company. Role ambiguity and role conflict were negatively related to satisfaction only among low SEs. Similar interactions with organization-based self-esteem were found for role overload, environmental support and supervisory support.

In the studies reviewed above, self-esteem was viewed as a proxy (or alternative measure) for self-appraisals of competence on the job. Ganster and Schaubroeck (1991a) speculated that the moderating role of self-esteem on role stressors' effects was instead caused by low SEs' lack of confidence in influencing their social environment, the result being weaker attempts at coping with these stressors. In a study of 157 US fire-fighters, they found that role conflict was positively related to somatic health complaints only among low SEs. There was no such interaction with role ambiguity.

In a separate analysis of the data on nurses' reported in their earlier study (Mossholder, Bedeian and Armenakis 1981), these authors (1982) found that peer group interaction had a significantly more negative relationship to self-reported tension among low SEs than among high SEs. Likewise, low SEs reporting high peer-group interaction were less likely to wish to leave the organization than were high SEs reporting high peer-group interaction.

Several measures of self-esteem exist in the literature. Possibly the most often used of these is the ten-item instrument developed by Rosenberg (1965). This instrument was used in the Ganster and Schaubroeck (1991a) study. Mossholder and his colleagues (1981, 1982) used the self-confidence scale from Gough and Heilbrun's (1965) *Adjective Check List*. The organization-based measure of self-esteem used by Pierce et al. (1993) was a ten-item instrument developed by Pierce et al. (1989).

The research findings suggest that health reports and satisfaction among low SEs can be improved either by reducing their role stressors or increasing their self-esteem. The organization development intervention of role clarification (dyadic supervisor-subordinate exchanges directed at clarifying the subordinate's role and reconciling incompatible expectations), when combined with responsibility charting (clarifying and negotiating the roles of different departments), proved successful in a randomized field experiment at reducing role conflict and role ambiguity (Schaubroeck et al. 1993). It seems unlikely, however, that many organizations will be able and willing to undertake this rather extensive practice unless role stress is seen as particularly acute.

Brockner (1988) suggested a number of ways organizations can enhance employee self-esteem. Supervision practices are a major area in which organizations can improve. Performance appraisal feedback which focuses on behaviours rather than on traits, providing descriptive information with evaluative summations, and participatively developing plans for continuous improvement, is likely to have fewer adverse effects on employee self-esteem, and it may even enhance the self-esteem of some workers as they discover ways to improve their performance. Positive reinforcement of effective performance events is also critical. Training approaches such as mastery modelling (Wood and Bandura 1989) also ensure that positive efficacy perceptions are developed for each new task; these perceptions are the basis of organization-based self-esteem.

Locus of Control

Lawrence R. Murphy and Joseph J. Hurrell, Jr.

Locus of control (LOC) refers to a personality trait reflecting the generalized belief that either events in life are controlled by one's own actions (an internal LOC) or by outside influences (an external LOC). Those with an internal LOC believe that they can exert control over life events and circumstances, including the associated reinforcements, that is, those outcomes which are perceived to reward one's behaviours and attitudes. In contrast, those with an external LOC believe they have little control over life events and circumstances, and attribute reinforcements to powerful others or to luck.

The construct of locus of control emerged from Rotter's (1954) social learning theory. To measure LOC, Rotter (1966) developed the Internal-External (I-E) scale, which has been the instrument of choice in most research studies. However, research has questioned the unidimensionality of the I-E scale, with some authors suggesting that LOC has two dimensions (e.g., personal control and social system control), and others suggesting that LOC has three dimensions (personal efficacy, control ideology and political control). More recently developed scales to measure LOC are multidimensional, or assess LOC for specific domains, such as health or work (Hurrell and Murphy 1992).

One of the most consistent and widespread findings in the general research literature is the association between an external LOC and poor physical and mental health (Ganster and Fusilier

1989). A number of studies in occupational settings report similar findings: workers with an external LOC tended to report more burnout, job dissatisfaction, stress and lower self-esteem than those with an internal LOC (Kasl 1989). Recent evidence suggests that LOC moderates the relationship between role stressors (role ambiguity and role conflict) and symptoms of distress (Cvetanovski and Jex 1994; Spector and O'Connell 1994).

However, research linking LOC beliefs and ill health is difficult to interpret for several reasons (Kasl 1989). First, there may be conceptual overlap between the measures of health and locus of control scales. Secondly, a dispositional factor, like negative affectivity, may be present which is responsible for the relationship. For example, in the study by Spector and O'Connell (1994), LOC beliefs correlated more strongly with negative affectivity than with perceived autonomy at work, and did not correlate with physical health symptoms. Thirdly, the direction of causality is ambiguous; it is possible that the work experience may alter LOC beliefs. Finally, other studies have not found moderating effects of LOC on job stressors or health outcomes (Hurrell and Murphy 1992).

The question of how LOC moderates job stressor-health relationships has not been well researched. One proposed mechanism involves the use of more effective, problem-focused coping behaviour by those with an internal LOC. Those with an external LOC might use fewer problem-solving coping strategies because they believe that events in their lives are outside their control. There is evidence that people with an internal LOC utilize more task-centred coping behaviours and fewer emotion-centred coping behaviours than those with an external LOC (Hurrell and Murphy 1992). Other evidence indicates that in situations viewed as changeable, those with an internal LOC reported high levels of problem-solving coping and low levels of emotional suppression, whereas those with an external LOC showed the reverse pattern. It is important to bear in mind that many workplace stressors are not under the direct control of the worker, and that attempts to change uncontrollable stressors might actually increase stress symptoms (Hurrell and Murphy 1992).

A second mechanism whereby LOC could influence stressor-health relationships is via social support, another moderating factor of stress and health relationships. Fusilier, Ganster and Mays (1987) found that locus of control and social support jointly determined how workers responded to job stressors and Cummins (1989) found that social support buffered the effects of job stress, but only for those with an internal LOC and only when the support was work-related.

Although the topic of LOC is intriguing and has stimulated a great deal of research, there are serious methodological problems attaching to investigations in this area which need to be addressed. For example, the trait-like (unchanging) nature of LOC beliefs has been questioned by research which showed that people adopt a more external orientation with advancing age and after certain life experiences such as unemployment. Furthermore, LOC may be measuring worker perceptions of job control, instead of an enduring trait of the worker. Still other studies have suggested that LOC scales may not only measure beliefs about control, but also the tendency to use defensive manoeuvres, and to display anxiety or proneness to Type A behaviour (Hurrell and Murphy 1992).

Finally, there has been little research on the influence of LOC on vocational choice, and the reciprocal effects of LOC and job perceptions. Regarding the former, occupational differences in the proportion of "internals" and "externals" may be evidence that LOC influences vocational choice (Hurrell and Murphy 1992). On the other hand, such differences might reflect exposure to the job environment, just as the work environment is thought to be instrumental in the development of the Type A behaviour pattern. A final alternative is that occupational differences in LOC are be due to "drift", that is the movement of workers into or out of certain occupations as a result of job dissatisfaction, health concerns or desire for advancement.

In summary, the research literature does not present a clear picture of the influence of LOC beliefs on job stressor or health relationships. Even where research has produced more or less consistent findings, the meaning of the relationship is obscured by confounding influences (Kasl 1989). Additional research is needed to determine the stability of the LOC construct and to identify the mechanisms or pathways through which LOC influences worker perceptions and mental and physical health. Components of the path should reflect the interaction of LOC with other traits of the worker, and the interaction of LOC beliefs with work environment factors, including reciprocal effects of the work environment and LOC beliefs. Future research should produce less ambiguous results if it incorporates measures of related individual traits (e.g., Type A behaviour or anxiety) and utilizes domain-specific measures of locus of control (e.g., work).

COPING STYLES

Ronald J. Burke

Coping has been defined as "efforts to reduce the negative impacts of stress on individual well-being" (Edwards 1988). Coping, like the experience of work stress itself, is a complex, dynamic process. Coping efforts are triggered by the appraisal of situations as threatening, harmful or anxiety producing (i.e., by the experience of stress). Coping is an individual difference variable that moderates the stress-outcome relationship.

Coping styles encompass trait-like combinations of thoughts, beliefs and behaviours that result from the experience of stress and may be expressed independently of the type of stressor. A coping style is a dispositional variable. Coping styles are fairly stable over time and situations and are influenced by personality traits, but are different from them. The distinction between the two is one of generality or level of abstraction. Examples of such styles, expressed in broad terms, include: monitor-blunter (Miller 1979) and repressor-sensitizer (Houston and Hodges 1970). Individual differences in personality, age, experience, gender, intellectual ability and cognitive style affect the way an individual copes with stress. Coping styles are the result of both prior experience and previous learning.

Shanan (1967) offered an early perspective on what he termed an adaptive coping style. This "response set" was characterized by four ingredients: the availability of energy directly focused on potential sources of the difficulty; a clear distinction between events internal and external to the person; confronting rather than avoiding external difficulties; and balancing external demands with needs of the self. Antonovsky (1987) similarly suggests that, to be effective, the individual person must be motivated to cope, have clarified the nature and dimensions of the problem and the reality in which it exists, and then selected the most appropriate resources for the problem at hand.

The most common typology of coping style (Lazarus and Folkman 1984) includes problem-focused coping (which includes information seeking and problem solving) and emotion-focused coping (which involves expressing emotion and regulating emotions). These two factors are sometimes complemented by a third factor, appraisal-focused coping (whose components include denial, acceptance, social comparison, redefinition and logical analysis).

Moos and Billings (1982) distinguish among the following coping styles: