Relationships among Psychological Hardiness, Coping Strategies and Perceived Stress of Mid-Level Managers

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Abstract

The purpose of this study was to explore the relationships among psychological hardiness, coping strategies, and perceived stress of mid-level managers. Further, this study attempted to develop Myanmar version of the Dispositional Resilience Scale, the Ways of Coping Questionnaire and the Perceived Stress Scale. Participants were 200 mid-level managers of 30 private sectors from Mandalay, Naypyidaw and Lashio. Pearson correlation coefficient, independent sample "t" test, and multiple regression analyses were used for data analyses. Results of the correlation and "t" test analyses showed that high hardiness (total), commitment, control, and challenge demonstrated significantly associations with lower perceived stress among mid-level managers. Planful problem-solving was significantly influenced by high levels of hardiness and escape-avoidance and distancing were significantly associated with low levels of hardiness. Seeking social support, planful problem-solving and positive reappraisal had a significant negative correlation with perceived stress. Escape-avoidance was significantly positively correlated with perceived stress. As expected, the stepwise method of multiple regression analyses revealed that hardiness (total), escape-avoidance, and positive reappraisal were a significant predictor of perceived stress. However, one of the results differed from our expectations; hardiness (challenge) was significantly positively associated with perceived stress.

Key words: Hardiness, Coping, stress, mid-level managers

Introduction

The ability of individuals to function effectively in dealing with life challenges has been a topic of interest to psychologists (Phinney & Haas, 2003). The rapid changing of our environment has put enormous strain on mid-level managers. Mid-level managers are forced to be intensive, competitive, and stressful, which frequently results in mid-level managers "burnout". Intense job-related demands are a major source of stress among managers and often have significant negative effects on job performance and personal well-being. With taxing job requirement, and little time for controlling (or) monitoring their job, many mid-level managers suffer stress and have difficulty in coping.

Occupational stress among managers has been studied by many researchers in the field of business (Mathis & Lecci, 1999; Quick, et al., 1997). Interest in the cons-

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-equences of job stress for both employees and organizations is increasing as stress is linked to poor work performance, acute and chronic health problems, and employee burnout (Williams & Cooper, 1998). Occupational stress adversely affects performance, productivity, job satisfaction, and health of professionals. The total costs of stress to American organizations assessed by absenteeism, reduced productivity, compensation claims, health insurance, and direct medical expenses add up to more than $ 150 billion a year (Karasek & Theorell, 1990). Stress can have a dysfunctional impact on both organizations and individuals (Cooper & Cartwright, 1994).

When determining levels of stress and coping, individual characteristics such as personality style, support systems, coping mechanisms and exercise habits influence the individual's reaction to occupational stressors (Cooper & Marshall, 1978).Additionally, personality variables are important factors in mediating the effects of stress and coping in the role of mid-level managers.

Over the past 20 years, the personality construct of hardiness has emerged as an important factor in buffering and offering resistance towards the effects of stress and coping (Maddi, 1987). Hardiness, as conceptualized by Kobasa (1979) is a set of beliefs about oneself and the world manifested as commitment, control, and challenge. The exhibit a belief that stressors are changeable and that they can influence what is going on around them with a willingness to act on the belief (control). Hardy individuals possess a deep involvement in life's activities and the knack of finding something interesting or important about whatever it is they are doing (commitment). They have a tendency to view changes, pressures and disruptions, however painful, as something to be learned from and growth with (challenge) (Khoshaba & Maddi, 1999).

According to Funk (1992), by possessing these characteristics the hardy individual is able to remain healthy under stress. Hardy individuals are active, goal-oriented people who are committed to themselves, not as victims of threatening changes, but as persons who are active determinants of the consequences brought about by change (Kobasa, 1979 b).

Another approach to understanding the relation of hardy and stress is coping. Folkman and Lazarus (1998) define "coping as the cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person". Coping has been classified as either problem-focused or emotion-focused. Problem –focused coping is directed at controlling the

stressor to reduce or eliminate its stressfulness. Emotion-focused coping is aimed at reducing or managing the environmental distress that is associated with (or cued by) the situation.

There is a great variability in individual coping patterns. The situation and how it is appraised have the greatest influence on coping strategies. If people think the stressor can be managed, they are more likely to choose problem-focused coping: otherwise, they tend to rely on emotion-focused coping.

Mid-level managers such as coordinator or supervisor work under highly stressful situations. They must meet demands from two directions: their bosses and their workers. Job related stress of mid-level managers were found to involve role conflict, role ambiguity, and lack of authority over those affecting their roles, interdepartmental conflicts, and interpersonal relationships (Alderman, 1985). These negative emotions are also likely sources of stress in the managerial role.

The purpose of this study is to explore how mid-level managers' perceived stress is affected by their psychological hardiness and their coping strategies.

Aims/ Objectives

General objective

The objective of this study is to investigate the relationships among psychological hardiness, coping strategies and perceived stress of mid-level managers.

Specific objectives

1- To assess psychological hardiness of mid-level managers.

2- To assess perceived stress of mid-level managers.

3- To find out what coping strategies mid-level managers use when they encounter with stress.

4- To find out the relations among psychological hardiness, choice of coping strategies and perceived stress.

Hypotheses

The following hypotheses are formulated:

(1) Low hardy mid-level managers are more likely to use higher levels of perceived stress than high hardy mid-level managers.

(2 a) High hardy mid-level managers are more likely to use problem-focused coping strategies than low hardy mid-level managers.

(2 b) Low hardy mid-level managers are more likely to use emotion-focused coping strategies than high hardy mid-level managers.

(3 a) There is a positive relationship between perceived stress and emotion-focused coping among mid-level managers.

(3 b) There is a negative relationship between perceived stress and problem-focused coping among mid-level managers.

(4) Both hardiness and coping strategies predict perceived stress.

Method

Participants

Survey booklets were handed out to a sample of 230 mid-level managers in Mandalay, Naypyidaw and Lashio. Participants responded and returned booklets anonymously. The final usable sample for the present study was 200 mid-level managers (87% response rate) of whom 8 were from Lashio, 61 were from Naypyidaw, and 131 were from Mandalay.

Procedure

Permission to approach participants to voluntary take part in the study during work time was obtained from head of the 30 private organizations. Two hundred and thirty full time workers of those organizations were pooled and survey booklets were administered to all full time workers present in the organization on the schedule day. Participants were told simply that the purpose of the study was to know the relationship among psychological hardiness, coping strategies, and perceive stress and were asked to complete a survey booklet and assuming them of confidentially, and requesting their cooperation on a voluntary basis. The survey booklet consisted of an

informed consent, demographic information, the Hardiness Scale, the Coping Strategies Scale, and the Perceived Stress Scale.

Measures

Hardiness Scale: The Hardiness Scale was adapted from the original of Dispositional Resilience Scale (DRS) constructed by Bartone et al., (1987), is composed of 45 items that were answered on a 4-point scale ranging from not true at all (0) to completely true (3). It consists of three sub-scales: Commitment, Control, and Challenge. The descriptions were translated into Myanmar version by the author and checked by supervisor against the original version to ensure the conceptual equivalence o the Myanmar version to the original version.

Coping Strategies: The Coping Strategies scale was adapted from the Ways of Coping scale (Revised) developed by Folkman and Lazarus (1983). It is a self-report measure of a broad range of different coping strategies. It consists of 8 sub-scales: Confrontive coping (6-item), Planful Problem Solving (6-item), Distancing (6-item), Escape-Avoidance (8-item), Accepting Responsibility (4-item), Seeking Social Support (6-item), Positive Reappraisal (7-item) and Self-Controlling (7-item) respectively. Fifty coping items were scaled so that (0) indicated that the subject had not used the strategy and (3) indicated that it had been used a great deal.

Perceived Stress Scale: The Perceived Stress Scale (PSS) was developed by Cohen et al., (1983). It is a 14-item measure of the degree to which situations in one's life are appraised as stressful. Response is to a five-point Likert scale ranging from 0-4 with 0 = never, 1= almost, 2 = sometimes, 3 = fairly often, and 4 = very often.

Results and Discussion

Item Analyses

In general, it is expected that each item will be answered more correctly by high-scoring individuals than by low-scoring individuals. When this does not occur it

alerts us to the possibility that something may be wrong with the item. To check the relation of item response to total scores the performance of a group of high-scoring on the basic of total test score. In a normal distribution sample, it has been shown that optimum groups for the purpose consist of the upper 27 percent and the lower 27 percent of the case (Anastasi, 1982). The present study followed the above method to carry out an item analysis. In this study, item analysis available in the Statistical Package for the Social Science (SPSS, 11.5 version) was used to produce the scale.

After computation of the item analysis, the retained items which had (p<.05) above level were chosen, and 32 items out of 45 items were remained for Myanmar version of the Hardiness scale. In Coping Strategies scale, all of the items were significant at either .01 or .001 level. In Perceived Stress Scale, all of the items were significant at either .05 or .001 level except one item.

Reliability Analyses

To determine the internal consistency reliability of Hardiness Scale (total) and sub-scales, Cronbach Alpha Coefficient available in SPSS was computed. Two hundred mid-level managers used for item analysis were also used for reliability estimates of Hardiness Scale (Myanmar Version).

The reliability coefficients were found to be .59 for Commitment, .58 for Control, .54 for Challenge, and .79 for the Hardiness (total). The internal reliability coefficient of Hardiness (total) was high and its sub-scales were acceptable.

In order to examine the internal consistency reliability of Coping Strategies Scale, Cronbach Alpha coefficient was also computed. The reliability coefficient were found to be .56 for Confrontation, .69 for Distancing, .57 for Self-Controlling, .70 for Seeking Social Support, .63 for Accepting Responsibility, .69 for Escape-Avoidance, .67 for Planful Problem Solving, and .72 for Positive Reappraisal.

To determine the internal consistency reliability of the Perceived Stress Scale (PSS), Cronbach Alpha coefficient was also computed. The reliability coefficient

obtained for PSS was .67. So, it is obvious that the value of reliability coefficient for the scale is high enough to warrant a safe application.

Characteristics of the respondents

Demographic data for gender, age, marital status, education level, monthly salary, and type of organization are shown in Table 4. One hundred and thirteen were female (56.5%) and 82 (41%) were males. Age ranged from (29 and less) to (50 and over) years with a mean of 1.68 (SD=.80). One hundred and thirteen were single (66.5%), 57 were married (28.5%), 2 were widowed (1%) and 5 were separated (25%). One hundred and sixty two respondents were employed on a full time basis with 81%, having a graduated degree. As shown in the table, 22 of the mid-level managers held post graduated degree (11%) and 11 were diploma (5.5%). Salaries ranged from less than 100,000 to more than 250,001 with most receiving 100000 and less monthly. Information about respondents' type of organization was presented in the table. The majority of respondents (42.5%, N=85) worked in distribution section.

Independent Sample 't' test for Stress and Hardiness

To determine the association between levels of hardiness and perceived stress, an independent samples "t" test was used to compare levels of stress among high and low levels of hardiness. Results are shown in Table 1. When total hardiness mean scores were used, low and high hardy individuals differed significantly in perceived stress: low hardy participants perceived greater stress than did high hardy participants. Using the three concomitant hardiness subscales, commitment, control and challenge were found to be significantly different between low and high hardy participants and perceived stress.

Independent 't' test for Hardiness and Coping Strategies

An independent sample 't' test was used to examine participants different in use of hardiness and coping strategies. Levels of coping strategies were assessed using the Myanmar version of the Ways of Coping Questionnaire (Revised) originally developed by Folkman and Lazarus (1983). In the Ways of Coping Questionnaire scale, high numerical values were associated with high levels of coping. The degree of personality hardiness was assessed using the Myanmar version of the Dispositional

Resilience Scale (DRS). Using this scale, high numerical values were associated with higher levels of hardiness and low numerical values were associated with lower levels of hardiness.

A significant overall effect was found between hardiness and coping strategies. Table 2 contains a summary of the results for hardiness. Follow- up 't' test indicated that use of coping strategies, planful problem solving was significantly influenced by high levels of hardiness. Further, use of escape-avoidance and distancing were significantly associated with low levels of hardiness.

Table 1

Independent Sample 't' test for Stress and Hardiness

			Hardiness	
			Mean (SD)	*t*
Perceived stress		Total		
	High		19.32 (7.4)	3.10**
	Low		22.35 (6.3)	
Perceived stress		Commitment		
	High		19.33 (7.4)	3.35***
	Low		22.62 (6.1)	
Perceived stress		Control		
	High		19.06 (7.4)	3.63***
	Low		22.58 (6.2)	
Perceived stress		Challenge		
	High		19.71 (7.5)	2.20*
	Low		21.88 (6.3)	

Dependent variable: Perceived Stress

P* < .05 (one–tailed)   P** < .01 (one-tailed)   P*** < .001 (one-tailed)

Table 2

Independent 't' test for Hardiness and Coping Strategies

		Hardiness	
		Mean (SD)	*t*
Confrontation			
	High	9.31 (3.2)	1.10
	Low	8.82 (3.1)	
Distancing			
	High	9.14 (3.9)	2.97**
	Low	10.70 (3.4)	
Self-Controlling			
	High	12.02 (12.0)	.08
	Low	12.90 (12.9)	
Seeking Social support			
	High	11.79 (3.5)	.47
	Low	11.56 (3.5)	
Accepting Responsibility			
	High	7.47 (2.7)	1.07
	Low	7.08 (2.5)	
Escape- Avoidance			
	High	5.71 (3.7)	4.42***
	Low	8.08 (3.9)	
Planful Problem solving			
	High	11.32 (3.4)	2.134*
	Low	10.29 (3.3)	
Positive Reappraisal			
	High	15.33 (3.7)	1.66
	Low	14.46 (3.9)	

P* < .05 (one–tailed) P** < .01 (one-tailed)   P*** < .001 (one-tailed)

Correlational analyses

A Pearson correlation was calculated for the relationship between subject's perceived stress and coping strategies using the eight subscales of the Ways of Coping (Revised): confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal. Table 3 indicated that seeking social support had a significant negative correlation with perceived stress ($r = -.122$, $P < .05$). Avoidance was significantly positively correlated with perceived stress ($r = .227$, $P < .001$). Planful problem solving was significantly negatively correlated with perceived stress ($r = -.112$, $P < .01$). Positive reappraisal had a significant negative correlation with perceived stress ($r = -.143$, $P < .05$). Confrontation, distancing, control, and accepting responsibility were not significantly correlated with perceived stress.

Table 3

Correlations for Coping Strategies and perceived stress

Coping Strategies	Perceived stress	
	r	p
Confrontation	- .053	ns
Distancing	-.071	ns
Self-Controlling	.011	ns
Seeking Social Support	- .122	.05
Accepting Responsibility	- .079	ns
Escape-Avoidance	.227	.001
Planful Problem Solving	- .199	.01
Positive Reappraisal	- .143	.05

Table 4

Multiple Regression Analysis of Perceived Stress, Hardiness and Coping strategies

Variable:	R^2	F	B	beta	P
Hardiness					
Hardiness total	.15	35.31	-.38	-.56	.001
Challenge	.18	6.50	.37	.24	.01
Coping strategies					
Escape-Avoidance	.051	10.71	.46	.26	.001
Positive Reappraisal	.09	7.40	-.36	-.19	.01

Dependent variable: Perceived Stress

Multiple Regression Analyses

The stepwise method of multiple regression was employed for predictor variable hardiness and related subscales as shown in table 4. The R^2 indicates that 15% of the variance in stress can be accounted for by hardiness. Both beta weight and standard beta are indicating an inverse relationship between hardiness and perceived stress. Hardiness was a significant predictor for low level of stress. However, challenge had significantly positive relation to perceived stress (β = .239).

The stepwise method of multiple regression was employed for predictor variable coping strategies. The R^2 indicates that 5% of the variance in stress can be accounted for by escape-avoidance. Use of escape-avoidance was a significant predictor for higher levels of stress. Positive reappraisal had significantly negative relation to stress (β = -.188).

Discussion

The primary purpose of the present study was to examine the relationship among psychological hardiness, coping strategies and perceived stress among mid-level managers. As hypothesized, low hardy mid-level managers have higher levels of perceived stress than high hardy mid-level managers. The findings were consistent with previous studies that examined relationships between hardiness and stress in

management-like positions (Berwick, 1992; Kobasa, 1979; Maddi & Kobasa 1984; Nowack, 1989, 1991) and concluded an inverse relationship exists between hardiness and stress. Kobasa (1982) reported that hardy individuals view their bosses and their work in a more positive light than do the less hardy. In support of this hypothesis Kobasa found that hardy executives were more likely to remain healthy under conditions of high stress than were non-hardy executives (Kobasa, et al., 1982).

In the present study, high hardiness total, commitment, control, and challenge demonstrated significant associations with lower stress among mid-level managers. Individuals who are high in commitment do not easily give up under pressure, those high in control feel and act influential, and those who were challenged view stressful events as stimulating rather than threatening (Kobasa, et al., 1989). Consequently workplace stressors may be seen as non-threatening, natural, and meaningful. Hardy mid-level managers may have expected, or even desired, a constantly changing work environment having viewed workplace stressors such as workload, role ambiguity, and home/ work interface (Bunsey, et al., 1991) as opportunities for growth. Thus, hypothesis 1 was supported.

In the present study high hardiness had the positive association with planful problem solving and negative association with distancing and escape-avoidance. The relationship between hardiness and problem-focused coping is one of the most consistently found and clearly supported relationships (Carver, 1989; Maddi, & Hightower, 1999; Rush, et al., 1995). Hardy people are more likely than their low hardy counterparts to engage with the stressful situation, working out what needs to be done (planning) and then getting on and doing it (active coping). Previous research findings have provided support for this hypothesis that individuals who score high on hardiness measure are more likely to engage in problem-focused coping than those

who score low on hardiness (Pollock, 1989; Williams et al., 1992). Finding is also congruent with the previous study that the hardiness measure was significantly positively correlated with the problem-focused coping (Nowack, 1989).

Problem solving had the association with high levels of hardiness suggesting mid-level managers who were committed to their organization, giving a sense of autonomy and effect on one's future, and believed that change rather than stability is normal in life and the anticipation of change is an incentive for growth rather than a threat to security, used problem-solving more often when coping with stress. Acting as a buffer of stress appraisal, hardiness transforms events to be less stressful by interactions with the events, by thinking about them in a less stressful direction. Consequently, findings that an association existed between high hardiness and use of problem solving was not surprising given that problem solving entails directing attention toward the problem in an effort to prevent or control it. Therefore, hypothesis 2a was supported.

People high in hardiness believe that they can influence the outcomes of a situation through expending effort; conversely people who low in hardiness are more likely to feel powerless in stressful situations (Maddi & Hightower, 1999). Unable to see ways of improving the situation and likely to be experiencing negative emotion, low hardy people are likely to disengage and give up efforts to cope. Hardy people are also said to be focused on the future, looking for new challenges and opportunities for growth. This is in contrast to those low in hardiness who are more focused on the past and trying to preserve what was, rather than what could be. Unable to keep things from changing, these people are more likely to engage in negative behaviors such as self-blame or unproductive ones such as wishful thinking (escape-avoidance). The

finding support for this comes from two unpublished studies discussed in Blaney and Ganellen (1990) which found hardiness to be negatively related to self-blame coping.

Previous research investigating the relationship between hardiness and coping showed high hardiness was negatively related to emotion-focused coping and unrelated or positively related to problem-focused coping (Boyle, et al., 1991; Willilams, et al., 1992). These authors concluded that individuals high in hardiness are more likely to engage in what are traditionally interpreted as adaptive coping strategies and less likely to engage in maladaptive coping practices. Previous findings have provided support for the hypothesis 2b and indicate that, in comparison to less hardy individuals who are more likely to engage in distancing, and avoidance than individuals who score high on hardiness (Pollock, 1989; Williams, et al., 1992). Similarly, in a study of undergraduate students who are low on hardiness are more likely to use self-blame, wishful thinking, and avoidance than those students who are high on hardiness (Toth, 1986).Our finding is consistent with previous study that use of escape-avoidance was significantly associated with low levels of hardiness (Judkins, 2001). Therefore, hypothesis 2b was partially supported.

According to the correlational analysis, results supported that mid-level managers experienced stress at work and coped by using strategies that either reduced (social support, positive reappraisal, and avoidance) or resolved (planful problem solving) stress. Problem solving is a cognitive-behavioral process through which individuals actively seek to explain and develop approaches and solutions to effectively and productively address problems that may occur in day- to-day living. Our finding is in line with previous study that project managers use relatively more problem-focused strategies when dealing with stressful situations (Aitken, 2011). Folkman, et al's (1986) longitudinal study into the coping strategies of 75 white

couples over 6 months found a tendency for problem focused coping strategies to be used when coping with work-based stressors. People who have the tendency to employ problem-focused coping tend to have better mental and physical health (Semmer, 1996). Thus, hypothesis 3b was supported.

Positive reappraisal is described by Folkman and Lazarus (1988a) as an emotion-focused strategy that can diminish the negative emotion response and generate positive emotional responses. It can transform a threat appraisal into a challenge through focusing on the possibilities for mastering or growth. Positive reappraisal can generate beneficial emotion such as pride and satisfaction and perhaps reduce emotions such as anger and sadness.

Skinner, et al., (2003) argued that the categories of problem and emotion focused coping suffer from problem with conceptual clarity, mutual exclusivity, and exhaustiveness. Strategies of social support seeking seem to fall outside both categories according to Cartwright and Copper (1990), because they focus on other people rather than the problem itself or the emotions associated with problem.

When people know that they have a large network of friends, they may gain confidence in their ability to handle stressful situations, so when they experience stress, they may appraise the stressors as less threatening than people who have fewer coping resources (Wills, 1998). Indeed, knowledge of the availability of support (even if that support is not used) can reduce the magnitude of the stress response (Uchino & Garvey, 1997). Social support may also provide more knowledge about coping strategies, thus giving people with more sources of support useful information on solving problems and implementing solutions.

The social support modality provides an empathic, safe environment where individuals are encouraged to share their experiences, thoughts and feelings, social

support is often referred to as a buffer against the negative effects of stress (Steinherdt, 2008).

The maladaptive nature of avoidance coping strategies has been noted in the wider coping literature and with reference to adaptation to illness and disability. For example, associations between greater reliance on avoidance and higher rates of depression (Spangenberg & Theron, 1999; Welch & Austin, 2001), anxiety (Nigro, 1996), and symptoms of post-traumatic stress (e.g. Solomon, et al., 1988) have been documented. Finding is consistent with previous study that escape-avoidance had a significant positive correlation with perceived stress among mid-level nurse managers (Judkins, 2001). Further, Nowack's studies (1988, 1991) of 400 professional men and women discovered a positive association between high stress and use of escape-avoidance leading to both mental and physical ill health. Therefore, hypothesis 3a was partially supported.

Finally, the present study tended to predict both hardiness and coping strategies are predictors of perceived stress. Results of the study, low levels of stress appeared to be significantly predicted among mid-level managers who are highly hardy to their work situation. These findings are consistent with Collins (1996) and Topf (1988) who reported a negative correlation between stress and hardiness among hospital nurses. Less stress was found when levels of hardiness became high. In a study among male and female undergraduates, Banks and Gannon (1988) discovered individuals high in hardiness reported fewer life events and hassles than did those lower in hardiness. Further, hardy individuals tended to rate hassles, but not life events, as less severe than did low hardy individuals, suggesting that hardy individuals may be less inclined to notice troublesome situation or difficulties of work. Similarly, in a study comparing hardiness and stress among highway patrol

officers, Hills and Norvel (1991) reported that the presence of high hardiness exerted clear main effects in the prediction of reduced stress, burnout, and illness. Maddi and Kobasa (1984) found hardy individuals have the ability to transform distress into eustress. And individuals who score high on hardiness report lower stress levels, therefore, hardiness acts as a buffer protecting individuals from stressful job and life events.

Interestingly, hardiness subscale, challenge was positively correlated with perceived stress. Many studies have had similar problems with the hardiness factor of challenge and other variables (Florian, et al., 1995; Hull, et al., 1987; Klag & Bradley, 2004; Williams, et al., 1992). Whereas challenge was unrelated to the experience of somatic problems among females, for low stress males high challenge ironically was associated with an increase in the experience of somatic problems (Shapperd & Kashani, 1991). Hull, et al., (1987) examined the validity of the hardiness components and concluded that control and commitment are related to health status, but that challenge is not. Challenge was found to be virtually unrelated to any measure, including the other hardiness components, leading the researchers to conclude that this component offers little benefit to health (Wiebe, 1989). Hull, et al., (1987) proposed that the challenge subscale should be eliminated and that only the commitment and control sub-scales should be utilized in future hardiness research.

One of the problems in the hardiness challenge was that the negative keyed items did not relate well to the positively keyed items. This could explain some of the divergence (Cash, 2009). He also supports the calls for Florian, et al., (1995) to re-conceptualize the challenge factor as more of a search for meaning. Perhaps increasing the number of positive items or re-focusing the concept of challenge may provide more reliable results.

Further, use of escape-avoidance tended to predict high level of stress among mid-level managers. However, positive reappraisal tended to predict low levels of stress among them. High stress and use of escape-avoidance by mid-level managers is consistent with findings by Nowack (1988) who studied 194 professional employees (male and female) attending management training workshops. Nowack found significant association between stress and use of avoidance coping by both men and women. Also consistent with the present study are results by Dewe (1989), who found higher use of emotional relief and distraction (comparable to escape avoidance) among male supervisors and administrators when work related stress was high. In a study by Aldwin and Revenson (1987) among community adults, high use of emotion-focused strategies, escapism actually caused emotional distress rather than resolve or relive stress.

According to regression analysis, problem focused coping did not predict stress, positive reappraisal tended to predict low level of stress. Positive reappraisal as an emotion-focused strategy has been explained by Folkman and Lazarus (1982) as the individual attempts to create positive meaning by focusing on personal growth. This category is characterized by items on the Ways of Coping Questionnaire such as "Changed or grew as a person in a good way," and "I was inspired to do something creative". As previously described, emotion-focused strategies are those used when situations are appraised as holding few possibilities for beneficial change and have to be accepted by individuals (Judkins, 2001). Our finding is also congruent with the previous study that positive-reappraisal was significantly associated with satisfactory outcomes (Lazarus R.S, 1993). Therefore, findings from the present study are consistent that escape-avoidance and positive reappraisal were both found to be significant predictors for perceived stress. Thus, hypothesis 4 was partially supported.

Summary and Conclusion

The purpose of present study was to examine the relationship among psychological hardiness, coping strategies and perceived stress of mid-level managers. The results of the study tend to support the hypotheses that hardiness is negatively associated with perceived stress. Planful problem solving is negatively correlated with perceived stress. Distancing and avoidance are positively associated with perceived stress.

In order to test hypotheses, an independent sample "*t*" test was used comparing levels of stress among high and low levels of hardiness. And also an independent sample "*t*" test was also used to examine participants different in use of hardiness and coping strategies. Moreover, a Person correlation was calculated for the relationship between subject's perceived stress and coping strategies using the eight subscales of the Myanmar version of the Ways of Coping (Revised): confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal. Then, the stepwise method of multiple regression was employed for criterion variable hardiness and related subscales and coping strategies.

According to the results of an independent samples "*t*" test showed that low hardy participants perceived greater stress than did high hardy participants. The three concomitant hardiness subscales: commitment, control, and challenge were also found to be significantly different between low and high hardy participants and perceived stress. And follow up *"t"* test indicated that use of coping strategies planful problem solving was significantly influenced by high levels of hardiness. Further, use of escape-avoidance and distancing were significantly associated with low levels of hardiness. As a results of correlation analyses, seeking social support, planful problem solving and positive reappraisal were significantly negatively and associated with perceived stress. Avoidance was significantly and positively correlated with perceived stress.

According to the results of stepwise method of multiple regressions, hardiness (total) and positive reappraisal were significant predictors for low levels of stress and escape-avoidance was a significant predictor for high levels of stress.

In conclusion, findings from this study indicated that, by assessing of stress, hardiness, and coping strategies of mid-level managers could be expected to identify stress at their work situations early enough to intervene and prevent or at least

minimized, debilitating psychological and, subsequently physical effects of stress. Findings also suggest concerns about issues (i.e. hardiness, coping strategies and perceived stress) to which mid-level managers could become more aware in order to create a smoother and less adverse in their work situations.

Limitations

Limitation of this study includes we did not randomly select participants from the population, a process that is often not feasible in social science research. Thus, the sample may not be representative of the population from which it was drawn, which has implications from the generalizability of the results. When possible, future interventions researchers should randomly select from the target population to increase the external validity of study results.

And the use of self-report survey data has inherent limitations. It is possible that responses from the questionnaire were untruthful due to suspicion or biased due to historical effects related to the past experiences with work surveys or changes in the work setting.

Moreover, this study as a cross-sectional design is also relevant. Subsequent studies of a longitudinal nature, in which individuals' responses to the perceived stress are tracked over longer periods of time in order to explore how hardiness and coping strategies affect long-term adjustments, could be expected to produce even more significant and useful information.

Future research

Results of the present study argue for future research with representative, random samples, in which the interrelationship and role of the hardiness and coping strategies in buffering effects of stress is more closely examined.

Both the concept of hardiness and model of perceived stress could be utilized more fully in mid-level managers. However, because hardiness does not appear to be a unitary concept and the challenge component behaves differently from the other two components of hardiness, it is important the researchers use the hardiness concept (as measured by the DRS) with caution. Measurements should include values for each of component parts, as well as hardiness as a whole, to avoid errors in conclusions. Other tools for measuring hardiness have recently been developed (Horen, 1991;

Nowack, 1989; O Connor, 1984). Perhaps these tools should be considered who wish to measure hardiness.

Moreover, future research might also adopt a longitudinal design which enables an important contribution to theory of the role played by hardiness and coping as a moderator of stress.

Implications

This research provides support for a transactional perspective of stress which has a great deal of potential for application in organizational settings.

At the individual level, this research highlights that individual differences play an important role in the way demanding situations are experienced and managed. Hardier people view change as normal and as an opportunity for growth, they believe they can influence their outcomes, and they are committed to the people and events around them. Thus, these attitudes have an impact on whether a demanding situation is seen as challenging or threatening. Helping individuals to become aware (through training, coaching) that these beliefs and attitudes affect the way they approach situations is the first step in affecting change. It must be noted, however, that becoming aware is not enough, as real lasting change requires intention, effort and support from others.

Scientists have made significant contributions to the body of knowledge on work stress and health outcomes in the second half of 20th century, and a shift is now called for from managing health risks to developing sources of strength and resilience among individuals. Organizations may benefit by including hardiness concepts in training and assimilation programs for mid-level managers and managers. In addition, mid-level managers and managers' development programs should emphasize the value of coworkers and organizational support, providing training to develop the skills necessary to create more support work environments. Health promotion professionals can have more input into managers and executive training classes within the company to address how they can promote a more supportive environment for their mid-level managers. Both strategies have the potential to build organizational strength while also providing the opportunity for mid-level managers to build relationship skills and improve their health.

An organization has recently flourished, offering stress management and hardiness training programs. There has been some initial empirical support for these

types of programs (Jukins, et al., 2006; Maddi, et al., 1998) and this author cautiously recommends that programs such as these could be beneficial. However, it would be important to include aspects from the full range of the process, including development of the hardy components of commitment, and control, recognition of appraisal as a balance between resources and demands, as well as gaining practice with a range of beneficial coping strategies. This would also need to be done in addition to ongoing reviews of organizations support processes. If these things are achieved, a hardiness and stress management training program could have positive effects for both individuals and organizations as a whole.

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