HARDINESS AS PREDICTOR OF MENTAL HEALTH IN WOMAN EXECUTIVES

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ABSTRACT

Hardiness may be described as an inner resource that may moderate the effects of stress on physical and mental health. There is vast panorama of research suggesting a negative relation between hardiness and negative health outcomes, and measures of anxiety and depression. Hardiness has also been shown to be associated with the choice of coping strategies for dealing with stressful events.

Since studies on hardiness and mental health are not too many in our culture, therefore, it occurred to us, to carry out, such a study in woman executives who are venerable to stress in job situation and may have difficulties in coping with job stress. It aimed at:

1. Finding out the differences, if any, in high hardy and low hardy woman executives on the measures of coping with stress, psychological well-being, emotional intelligence and interpersonal problems.

2. Investigating the correlation among these measures and hardiness. It was hypothesized that there will be significant differences in high hardy and low hardy woman executives on these measures. Furthermore, these measures will show significant correlations.

A sample of 100 middle level woman managers was selected from different public and private sector organizations (Banking and Insurance) in Kolkata and was subjected to the following standard psychological tests: Third Generation Hardiness Scale, Coping Response Inventory, Positive and Negative Affect Scale, Emotional Intelligence Scale and the Eight State Questionnaire. Appropriate statistics of significant difference between different means (t-test and ANOVA) and correlations were employed.
The data was subjected to quantitative analysis. The results showed a significant difference between High Hardy and Low Hardy women on most of the measures of mental health. Further, significant correlations were found between these measures. More specifically, hardy women executives exhibited significantly better mental health than their counterparts who were low hardy. In summary, hardiness has significant linear relationship with the positive measures of mental health and inverse relationship with the negative measures of mental health.
INTRODUCTION

Recently, considerable attention has been paid to the construct of hardiness as an inner resource that may moderate the effects of stress on physical and mental health. Basing their definition on existential personality theory, Cobasa, Maddi and Kahn (1982) defined the construct of hardiness as “a constellation of personality characteristics that function as a resistance resource in the encounter with stressful life events” (p.169). Hardiness is composed of 3 basic inter related hypothetical components, commitment, control and challenge. Hardy persons are easily committed to what they are doing in their lives, believe they have some control over the causes and solutions of life problems and view changes in life and adaptive demands as challenges and opportunities for growth rather than threats. According to Bartone (2006), hardiness is a personality dimension that develops early in life and is reasonably stable over time, though amenable to change and probably trainable under certain conditions (Kobasa, 1979; Maddi & Kobasa, 1984).

There is vast panorama of research suggesting that hardiness is positively related to physical and mental health and it mitigates negative health outcomes (Greene and Nowack, 1995; Benishek, 1996). Significant inverse correlations have also been found between hardiness and measures of anxiety and depression. If persons with high EQ entertain good quality of life, then hardiness and EQ are likely to be positively correlated.

Hardiness has also been shown to be associated with the choice of coping strategies for dealing with successful events. Kobasa (1982) and her associates have suggested that hardy persons may prefer to rely on active transformational coping, which transforms stress into a benign experience by means of problem focused strategies. In contrast, persons low in hardiness may prefer to use regressive coping strategies such as cognitive and behavioral withdrawal and
denial which neither transforms the situation nor solves the problem and may even enhance emotional problems and maladjustment.

Finally, coping with interpersonal problems may also be successfully possible if one has hardy personality. Undeniably, managers spend a major part of their time, dealing with other people and they often face difficulties that inevitably arise when people get together. Generally, interpersonal problems result in individual’s resisting each other. The resistance may take many forms such as - opposition, delay, failure to provide support or sabotage.

In order to deal with interpersonal problems effectively, it is essential to have general understanding of the general principles of human behavior rather than look at handling specific situations. Since studies on hardiness and mental health are not too many in our culture, therefore, it occurred to us, to carry out, such a study in woman executives who are venerable to stress in job situation and may have difficulties in coping with job stress. More specifically, present study aims at fulfilling the following objectives:

1. To study the significant the differences, if any, in high hardy and low hardy woman executives on the measures of coping with stress, psychological well-being, emotional intelligence and interpersonal problems.
2. To investigate the correlation among hardiness and measures of mental health.

It is hypothesized that there will be significant differences in high hardy and low hardy woman executives on these measures. Furthermore, these measures will show significant trends of correlations.
Formulation of hypotheses:

Hardiness has been defined by Kobasa (1979) as a cognitive appraisal processes composed of three characteristics: 1) Control was described as a belief that people could control or influence the events of their experience; 2) Commitment was described as an ability to feel deeply involved in the activities in their lives; and 3) Challenge was described as anticipating change as an exciting challenge to further development (Gebhardt, Doef and Paul, 2001). High hardy persons have a strong sense of life and work commitment, a greater belief of control and more openness to change and challenges in life (Bartone, 2006).

Stress is the nonspecific response of the body to any demand made upon it (Selye, 1979). Stress has long been identified by researchers to be moderated by physiological as well as psychological correlates, that is, environmental conditions moderate stress quite as much as one’s ability and willingness to cope with it, and even one’s tendency to perceive a given situation as stressful. Kobasa (1979) formulated the term hardiness to describe people who experience high degrees of stress without illness as opposed to those who become sick under stress. Subsequent researchers have found that hardiness plays an integral part in buffering stress which may ultimately result in better health (Collins, 1993; Florian, 1995). Hardiness demonstrated statistically significant negative correlations with stressful life events, aberrant behavior, strain, school absence and drug use (Collins, 1993). Bartone (2006), in his work on West Point Army officer cadets, have found that hardiness -- a characteristic sense of commitment, control, and challenge – facilitates adaptation and performance in the stressful job of army cadets. Although there have been investigations reporting the contrary (Hull, Van Treuren and Virnelli, 1987; Funk, 1992), other researchers too report hardiness to be a

In the light of the above observations, it is plausible that the trends seen in other populations would hold for women executives as well in India. Hence it is hypothesized that:

**HYPOTHESIS 1:** There is a significant negative correlation between hardiness and perceived stress

**HYPOTHESIS 2:** There is a significant difference between the levels of perceived stress of high hardy and low hardy women.

Coping can be defined as any conscious effort to deal with stressful demands (Stone and Neale, 1984). An approach coping style refers to the use of coping strategies that direct cognitive and behavioral efforts toward reducing the intensity of stress. Conversely, avoidance coping style refers to the typical use of coping strategies that direct the activity away from the threat-related stimulus (Anshel & Weinberg, 1999). Greene & Nowack (1988) studied coping styles in relation to hardiness and health and supported the notion that a positive association exists between stress, coping and health. Research shows that hardiness is significantly associated with the approach style coping, rather than the avoidant style, that has been found to predict psychological distress and physical illness outcomes in conditions of stress. Florian Mikulincer, and Taubman (1995) found that hardiness is positively contributing to health by means of coping and appraisal techniques. Hence it is hypothesized that:
HYPOTHESIS 3: There is a significant positive correlation between hardiness and approach style coping.

HYPOTHESIS 4: There is a significant difference between the coping styles of high hardy and low hardy women.

Hardiness has also been associated to one’s level of positive affect. Psychological well being is a function of two independent dimensions, positive affect and negative affect (Bradburn, 1969). Positive affect appears primarily to be related to a sense of well-being and happiness, involvement in the environment, social contact and active interest in the world (Bradburn, 1969). Several findings show the close relation between hardiness and positive affect. For instance, associates hardiness with an ability to have a positive outlook on life (Engel, Nadine, Sahyoun, Jackson and Siewerdt, 2009). In another investigation, hardiness was associated with positive attitudes toward school, instructors, and one's own capabilities and standards as well as expressed satisfaction with life (Maddi et al, 2009). In the light of the above findings, it is hypothesized that:

HYPOTHESIS 5: There is a significant positive correlation between hardiness and positive affect.

HYPOTHESIS 6: There is a significant difference between the levels of positive affect of high hardy and low hardy women executives.
Emotional intelligence describes the ability, capacity, skill or, in the case of the trait EI model, a self-perceived grand ability to identify, assess, manage and control the emotions of one's self, of others, and of groups (Bradberry, Travis and Greaves, 2009). Goleman's (1998) model outlines four main emotional intelligence constructs:

1. Self-awareness – the ability to read one's emotions and recognize their impact while using gut feelings to guide decisions.
2. Self-management – involves controlling one's emotions and impulses and adapting to changing circumstances.
3. Social awareness – the ability to sense, understand, and react to others' emotions while comprehending social networks.
4. Relationship management – the ability to inspire, influence, and develop others while managing conflict (Bradberry, Travis and Greaves, Jean. (2009).

Hardiness has been found to be significantly associated with emotional intelligence (Maddi, 1967; Keen, 1970). Bartone (2006) found that persons high on hardiness are also high on dimensions like authenticity, openness, self-awareness as well as awareness of the social world – dimensions closely linked to the concept of emotional intelligence (Goleman,1998; Salovey & Mayer, 1990).

Hence, while considering the status of working women on these two dimensions, it is hypothesized that:

**Hypothesis 7: There is a significant positive correlation between hardiness and level of emotional intelligence.**
Hypothesis 8: There is a significant difference between the levels of emotional intelligence of high hardy and low hardy women.

Anxiety is a psychological and physiological state characterized by cognitive, somatic, emotional, and behavioral components (Seligman, Walker and Roshenhan, 2001). Anxiety is the result of threats that are perceived to be uncontrollable or unavoidable (Ohman, 2000). Research shows that anxiety is negatively related to hardiness. Maddi and others (2009) found that hardiness was negatively related to depression, anxiety, and hostility, even though it was also negatively related to avoidance of intrusive, stressful thoughts. Hardiness has also been associated with lower competitive anxiety levels in athletes (Richard, Evans and Hanton, 2003). In the light of the above finding, it is hypothesized that:

Hypothesis 9: There is a significant negative correlation between hardiness and level of anxiety.

Hypothesis 10: There is a significant difference between the levels of anxiety of high hardy and low hardy women.

Working women the world over are grappling with the Herculean task of balancing their familial and organizational roles (Bhushan & Karpe, 1996). Though a lot of work has been done on equalitarian families and spousal responsibilities, and several attempts taken worldwide to redefine man-woman relationship in sharing family responsibilities, there has not been an
equitable change in societal attitudes and expectations about male and female roles (Kim & Ling, 2001). Work is still considered to the prime responsibility of the man, who has to provide for the family, while the woman is expected to take upon herself the vital responsibility of family and children (Sahoo & Rath, 2003). Indeed, women across the world have taken to attending to work and family demands quite naturally, even though they find this dual responsibility quite stressful, because in most cases they seldom enjoy the desired support from their spouses in sharing domestic obligations and responsibilities (Haas, 1982).

It is however expected that hardiness, as a trait, would help married women executives to cope with their domestic stress almost as much as hardy women executives who are single. Hardy persons have a high sense of life and work commitment, a greater feeling of control, and are more open to change and challenges in life. They tend to interpret stressful and painful experiences as a normal aspect of existence, part of life that is overall interesting and worthwhile (Bartone, 2006). Hence it is hypothesized that:

Hypothesis 11: Irrespective of their marital status (married/single), perceived stress of the women varies in terms of their level of hardiness (high/low)
METHODS

The present study is aimed at understanding the relation between hardiness and mental health variables such as perceived stress, coping style, level of positive affect, emotional intelligence and anxiety, for women executives in and around Kolkata, India.

Participants and Procedure

The present sample included 100 women executives – working as middle level managers in public-sector and private sector companies of Kolkata (Banking and Insurance sectors). The prospective participants were contacted via their supervisors, and informed consent was obtained.

Following this, the questionnaires were sent to 200 willing participants. 150 questionnaires were filled up and returned (response rate of 75%). After careful screening, and matching of the subjects on the parameters of age, marital status, and socio-economic standing, 100 sets of completed questionnaires were selected for the purpose of research and analysis.

Sample Demography

Table 1 summarizes the information regarding the sample characteristics. The average age for the samples was 30.7 years. The study was carried out between the months of October and February, 2009, in Kolkata, India.
MEASURES

For the purpose of the present research the following tests and tools were used:

**Third Generation Hardiness Scale** (Personal Views Scale, Maddi, 1987): this self report questionnaire is composed of 50 items, measuring the hardiness construct as a composite of three moderately interrelated components: commitment, control and challenge. Participants indicate how they felt about each item, using a 4 point Likert scale ranging from 0 (not at all true) to 3 (completely true). The tool is reported to have adequate reliability and validity.

**Coping Response Inventory**: the coping response inventory (CRI- Adult form) is developed by Rudolf H. Moos. It measures 8 different types of coping responses to stressful life circumstances. These include- logical analysis (LA), positive reappraisal (PR), seeking guidance & support (SG), problem solving (PS), cognitive avoidance (CA), acceptance or resignation (AR), seeking alternative rewards (SR) and emotional discharge (ED). Of these, first 4 are approach coping and last 4 are avoidance coping. They can also be cognitive and behavioral. 1 and 2 are cognitive and 3 and 4 are behavioral in approach coping. Similarly, 5 and 6 are cognitive and 7 and 8 are behavioral in avoidance coping. Each coping measure has 6 items total amounting to 48 items.
Test is widely used in stress research and is reported to be valid and reliable measures of coping responses.

Psychological well-being measures **positive and negative affect scale**: it is developed by Bradburn (1969). It has 9 items of positive affect and 9 items of negative affect. Test is reliable and valid measure of psychological well-being.

**Eight State Questionnaire (Cattell, 1976)**: it measures 8 emotional states including anxiety, stress, depression, regression, fatigue, guilt, extraversion, arousal. Each measure has 12 items amounting to a total of 96 statements.

**Emotional Intelligence Scale** by Dr. Dalip Singh (2003): it is a 22 item scale – each item describing a life situation and each having four options from which the subject selects the best possible way to react to that situation.

Appropriate statistics of significant difference between different means and correlations were employed.

RESULTS

The hypotheses stated were subjected to t-test, ANOVA and correlational analysis. The coefficients of correlations of the variables under study with the reported levels of hardness are presented in Table 2 below:
To test whether there is any significant difference between high hardy women executives and low hardy women executives with respect to the major variables under study, the data collected was analysed using t-test. The critical ratio obtained, to test the different hypotheses, have been presented in Table 3 below:

To find out whether there is any significant interaction effects between the marital status and perceived stress of high hardy and low hardy women, analysis of variance was employed. The findings are presented in table 4 below:

Comments:

From the data collected it may be seen that there is a significant positive correlation between level of hardiness and approach style coping, positive affect and emotional intelligence. Hence,
hypotheses 3, 5 and 7 stand accepted for the present sample. It may also be seen that there is a significant negative correlation between level of hardiness and level of stress and between level of hardiness and level of anxiety. Hence it may be said that hypotheses 1 and 9 also stand accepted for the present sample under the present testing conditions.

With reference to the critical ratio computed, it may be seen that there is a significant difference between high hardy and low hardy women with respect to their levels of stress, approach style coping, emotional intelligence and levels of anxiety. Hence it may be stated that Hypotheses 2, 4, 8 and 10 stand accepted for the present sample under the present testing conditions. However, no significant difference has been found between high hardy and low hardy women with respect to their levels of positive affect. Hence, it may be said that Hypothesis 6 stands rejected for the present sample under the present testing conditions.

With reference to Hypothesis 11, it is seen that the stress level reported with the women executives in the present research do not vary significantly with respect to their marital status – that is, the stress perceived by married working women does not differ significantly from that perceived by single working women. As expected from previous trends of data, stress levels vary with levels of hardiness – that is, high hardy women perceive significantly lower stress than low hardy women. However there is a significant interaction effect between marital status and level of hardiness on the levels of stress – married high hardy women executives perceive higher levels of stress than single high hardy women executives, thus suggesting a significant impact of the strain of balancing dual careers - at home and outside - on the psychological health and stress levels of the urban Indian working women.
The present research thus illuminates the significant relationship between hardiness in women executives and the variables under study in the urban Indian context. Further research can be undertaken to reveal the interaction among the variables, and the variations with respect to the nature of job, educational level and relationship with spouses.


• Engel, Sahyoun, Jackson and Siewerdt (2009). Depression and Hardiness and their Association with Appetite in Older Adults. *The FASEB Journal*. Available at www.fasebj.org/cgi/content/meeting_abstract/23/1.../108.5 (accessed on March 28, 2010).


APPENDICES

Table 1: Sample Characteristics

<table>
<thead>
<tr>
<th>Sample Nature of work</th>
<th>Age</th>
<th>Education</th>
<th>Marital status</th>
<th>Social class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women Executives working in and around Kolkata</td>
<td>25-45</td>
<td>Graduates and above</td>
<td>Equal number of married and unmarried subjects were included in the study</td>
<td>Middle and Upper middle class</td>
</tr>
</tbody>
</table>
Table 2: Coefficients of Correlation of the Variables under Study with Hardiness

<table>
<thead>
<tr>
<th>Variable 1</th>
<th>Variable 2</th>
<th>Coefficient of Correlation</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardiness (as measured by the Third Generation Hardiness Scale)</td>
<td>Stress (as measured by the stress subscale in the Eight States Questionnaire)</td>
<td>- 0.76</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Hardiness (as measured by the Third Generation Hardiness Scale)</td>
<td>Coping Style (as measured by the Coping Response Inventory)</td>
<td>+0.59</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Hardiness (as measured by the Third Generation Hardiness Scale)</td>
<td>Level of Positive Affect (as measured by the Positive and Negative Affect Scale)</td>
<td>+0.64</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Hardiness (as measured by the Third Generation Hardiness Scale)</td>
<td>Emotional Intelligence Scale (as measured by the Emotional Intelligence Scale)</td>
<td>+0.61</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Hardiness (as measured by the Third Generation Hardiness Scale)</td>
<td>Level of anxiety (as measured by the Anxiety subscale on the Eight States Questionnaire)</td>
<td>- 0.61</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Dependent variable</td>
<td>Independent Variable</td>
<td>Critical Ratio</td>
<td>Level of Significance</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>----------------------------------------------------------------</td>
<td>---------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Stress (as measured by the stress subscale in the Eight States Questionnaire)</td>
<td>Level of Hardiness – high/low (as measured by the Third Generation Hardiness Scale)</td>
<td>4.08</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Coping Style (as measured by the Coping Response Inventory)</td>
<td>Level of Hardiness – high/low (as measured by the Third Generation Hardiness Scale)</td>
<td>5.23</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Level of Positive Affect (as measured by the Positive and Negative Affect Scale)</td>
<td>Level of Hardiness – high/low (as measured by the Third Generation Hardiness Scale)</td>
<td>1.51</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Emotional Intelligence Scale (as measured by the Emotional Intelligence Scale)</td>
<td>Level of Hardiness – high/low (as measured by the Third Generation Hardiness Scale)</td>
<td>4.35</td>
<td>0.01 level of significance</td>
</tr>
<tr>
<td>Level of anxiety (as measured by the Anxiety subscale on the Eight States Questionnaire)</td>
<td>Level of Hardiness – high/low (as measured by the Third Generation Hardiness Scale)</td>
<td>6.98</td>
<td>0.01 level of significance</td>
</tr>
</tbody>
</table>
Table 4: The F - ratios for the levels of perceived stress for the married and single women executives high on hardiness and the married and single women executives low on hardiness

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>F-ratio for variation due to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>marital status:</td>
</tr>
<tr>
<td>Stress</td>
<td>0.18</td>
</tr>
</tbody>
</table>

*indicating significance at the 0.01 level.