



EFFECT OF HARDINESS AND SOCIAL SUPPORT ON SATISFACTION WITH LIFE AND HAPPINESS IN RETIRED ENGINEERS

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Abstract: *The present study aims at investigating the role of hardiness and social support on satisfaction with life and happiness in retired engineers. Sample consisted of 120 retired engineers randomly selected from prestigious Malviya National Institute of Technology (MNIT) Jaipur who retired during 2000-2009. Categorization of high hardy and low hardy engineers as well as engineers with high social support and low social support were made on the basis of median values of measures of hardiness and social support. A 2x2 factorial design (hardiness and social support) was employed to measure life satisfaction and happiness. The standard psychological tests included Short Hardiness Measure for old Adults (McNeil et al., 1986), Social Supports Inventory for the Elderly (Ramamurti & Jamuna, 1991), Satisfaction with Life Scale (Diener et al., 1983) and Happiness Measure (Fordyce, 1988). Results disclosed significant influence on satisfaction with life and happiness. Furthermore interaction of hardiness and social support also significantly affected satisfaction with life scores.*

Keywords: *Hardiness, social support, retirement*

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Aging population is expected to increase more than 10% by the year 2021. As per the 2011 statistics presented in the situational analysis of elderly in India, elderly in the age of 60 and more who either retire or withdraw from work has climbed to 13.1 % in 2001 from a 10.9% in 1961.

The problems of the grey population are thus aggravated due to their disengagement from work. Post retirement, employees feel redundant and experience many psychological problems which further deteriorate their overall well-being. Compared with other careers, many assert that engineering is more hostile toward older workers. It has been claimed that cultural factors associated with a younger average age in IT occupations, on-the-job time pressures often associated with short project cycles, and rapid skill obsolescence associated with rapid changes in technology all adversely affect conditions for older technocrats.

There is extensive evidence suggesting that hardiness is positively related to physical and mental health and that it mitigates negative health outcomes of stress (Maddi & Kobasa, 1984). Thus hardiness may be described as an inner resource that may moderate the effects of stress on health. There have been research observations suggesting a negative relation between hardiness and negative health outcomes and measures of anxiety and depression. While recognizing the core importance of commitment, control and challenge attitudes, Bartone (2006) argues that hardiness is more global and encompassing than mere attitudes. Rather, it is a broad personal style or approach to life, a generalized mode of functioning that incorporates commitment (conviction that life is interesting and worth living), control (belief one can control or influence outcomes), and challenge (adventurous, exploring approach to living). In addition, the “hardy-resilient style” person has a strong future orientation, or tendency to look to the future while at the same time learning from the past. Hardiness is an important personality characteristic of an individual and was first described by Kobasa (1979). Research studies with a variety of occupational groups had found that hardiness operates as a significant moderator or buffer of stress (e.g. Bartone, 1989; Contrada, 1989; Kobasa, Maddi, & Kahn, 1982; Roth, Wiebe, Fillingim, & Shay, 1989; Wiebe, 1991). Thus individuals who perceive that their life circumstances are under control, with effort they can mould events for their development and view any situation as an avenue of positive change, demonstrate high level of hardiness.



Research into the field of social support has indicated that social exchange and social network are related constructs, which may be powerful and potentially modifiable determinants of cognitive health and mortality in the elderly population (Jordan-Marsh & Harden, 2005). Other studies reported that social support is inversely related to loneliness (Routasalo et al., 2006). As older persons lose their social networks through retirement, they also lose forums for developing new contacts. These events predispose them to loneliness which can lead to depression.

A research study from Himachal Pradesh University, Shimla, India entitled “Subjective Well-Being of Retired Teachers: The Role of Psycho-Social Factors” was reported by Anita Sharma (2010). The results showed the commonness of three variables viz., social support, purpose in life and religiosity in predicting the subjective well-being of both the genders. It further revealed the superiority of females in subjective well-being, religiosity and social support and male’s superiority on hardiness, and purpose in life.

The review of literature however reveals insufficient data regarding mental health of retired engineers. Furthermore Indian studies in this area are comparatively fewer. In this investigation an attempt has been made to understand the enigma of this professional group, facing equal amount of stress as they experience transition from a very significant phase of their lives which gives them power and authority to a phase where they have to adopt a more submissive role.

In the present study we investigated the effect of hardiness and social support on satisfaction with life and happiness. On the basis of median scores on hardiness and social support the participants were identified as high and low hardy and high and low social support. We hypothesized that participants with different levels of hardiness and social support would have different level of scores on satisfaction with life and happiness. Furthermore, interaction of hardiness and social support would jointly and significantly affect these measures.

METHOD

Design and Participants

We used a 2x2 (hardiness, social support) factorial design, with repeated measures for factors (Winer, 1974, p.549) and an equal number of participants in each cell.



The participants were male engineers retiring w.e.f. year 2000 to 2009. The details of this sample were obtained from the administration of Malviya National Institute of Technology, Jaipur. During this period total number of retired male engineers was 388 in the desired age range of 60-70 years, out of whom 150 were randomly selected. Each of the retired engineers of the sample was initially given tests of the two I.Vs i.e hardiness and social support for making four treatment groups of factorial design. Categories high and low hardy and high and low social support was based on median value on the score of hardiness and social support measures. In each cell 30 cases were retained to have an equal number. For the sample of engineers, based on the median values of hardiness (Mdn = 25) and social support (Mdn = 35.5), number of cases characterized in each of the four cells amounted to 36, 37, 39, 38. Of these 06, 07, 09 and 08 cases respectively were randomly dropped. Thereafter, the subjects were tested on the measures of satisfaction with life and happiness.

Materials

The following psychological tests were administered to measure hardiness, social support, satisfaction with life and happiness.

Short Hardiness Measure for old Adults (McNeil et al., 1986), consisted of 20 items. This test was standardized using predominantly subjects aged over 60 years. The test was standardized on the sample of 223 old persons. It is reported to be reliable and valid.

Social Supports Inventory for the Elderly (Ramamurti & Jamuna, 1991) had 20 items in the inventory and they were related to perception of social support. There are four areas with 5 statements each i.e emotional support, financial support, traditional, customs and legal support and social network or relationship. Each statement carries six points response scale varying from experience of good social support 'almost all the time' to 'no support'. Higher the score, better the perceived social support. Reliability of the inventory is 0.90. It has a satisfactory context validity and temporal reliability.

Satisfaction with Life Scale (Diener et al., 1983), consisted of 5 statements regarding nature of overall satisfaction with one's life. Statements were to be replied in seven point scale (viz., 1= strongly disagree; 2= disagree; 3=slightly disagree; 4= neither agree nor disagree; 5= slightly agree; 6= agree; 7 = strongly agree). Scoring was in terms of total of ratings on five statements. Scores ranges from 5 to 35. All items show high-factor loading on a single



common factor and the scale has a very high alpha and test-retest reliability (Larsen, Diener & Emmons, 1983).

Happiness Measure (Fordyce, 1988), had two parts. In the first part, it measures how happy or unhappy you usually feel. The number of statements that best describe one's average happiness were to be written. In the second part, the subject had to write the percentage of times he/she feels happy/unhappy/nothing.

Procedure

The tests were administered in two sessions on different days. The hardiness and social support scales were administered first. The tests were administered individually. The procedure for administering and scoring the scales were consistent with those that were used by the authors of the scales.

RESULTS

The mean satisfaction with life scores and F values for 4 groups are given in the Table 1.1 and 1.2. The mean difference (23.15 Vs 20.28) between high hardy and low hardy retired engineers is significant ($F=11.55$ $p<.01$). Thus it can be inferred that high hardy retired engineers have more satisfaction with life than low hardy retired engineers. Similarly mean scores of engineers with high social support is 23.50 and low social support is 19.93. This difference is also significant at .01 level ($F=17.87$). Interaction effect of hardiness and social support on satisfaction with life for retired engineers is significant at .05 level ($F= 5.25$) which indicates that engineers who are hardy and have higher social support, have greater satisfaction with their life.

Table 1.1

Mean scores and SDs of Main Effects for SWL of 4 groups of Retired Engineers

	High Hardy	Low Hardy	Total
High Social Support	25.9 (4.55)	21.1 (4.98)	23.50 (5.31)
Low Social Support	20.9 (4.67)	19.46 (4.24)	19.93 (4.44)
Total	23.15 (5.34)	20.28 (4.66)	21.71 (5.19)



Table 1.2

ANOVA for Satisfaction with Life (SWL)

Source of variance	Sum of Squares	d.f.	Mean Squares	F	p
Between Hardiness	246.53	1	246.533	11.550	.01
Between Social Support	381.633	1	381.633	17.879	.01
Interaction	112.133	1	112.133	5.253	.05
Error	2476.06	1	21.345		

Table 2.1

Mean scores and SDs of Main Effects for Happiness of 4 groups of Retired Engineers

	High Hardy	Low Hardy	Total
High Social Support	23.36 (3.16)	19.63 (5.30)	21.50 (4.72)
Low Social Support	19.43 (4.66)	15.73 (3.47)	17.58 (4.48)
Total	21.40 (4.42)	17.68 (4.85)	19.54 (4.98)

Table 2.2

ANOVA for Happiness

Source of variance	Sum of Squares	d.f.	Mean Squares	F	p
Between Hardiness	414.408	1	414.408	23.032	.01
Between Social Support	460.208	1	460.208	25.577	.01
Interaction	.008	1	.008	.000	ns
Error	2087.167	116	17.993		

Table 2.1 and 2.2 present the mean happiness and F scores of the 4 groups. Mean scores of engineers reveal that retired engineers with high hardiness have greater happiness score (21.40) in comparison to retired engineers with low hardiness (17.60) and this mean difference is significant at .01 level (F=23.03). Similarly engineers with high social support have greater mean score on happiness as compared to engineers with low social support ($\bar{x} = 21.50$ Vs 17.58). This mean difference is significant at .01 level (F=25.57). These values suggest that retired engineers who have high hardiness and higher social support are happier than retired engineers with low hardiness and low social support. The interactive effect of 2 IVs (hardiness and social support) on happiness was not significant.

DISCUSSION

One of the significant findings emerged from this study is that high hardy retired engineers evidenced significantly higher satisfaction with life and happiness than their low hardy professional counterparts.



This finding is in harmony with other studies where high hardy individuals were consistently found to be better and healthier-physically (e.g. Kobasa, et al, 1979, 1980, 1981, 1982a, 1982b, 1983, 1985; Weibe & Mc Callum, 1986) and psychologically (e.g. Ganellen & Blaney 1984; Gentry & Kobasa, 1984; Joshi 1989; Rhodewatt & Augustdottir 1984; Rhodewatt & Zone 1989). In recent past, Hull, Van Treuren and Virnelli (1987) and Orr and Wessman (1990) have concluded that hardiness is positively related to well-being and adjustment. All these studies indicate that hardiness moderates the effects of stressors and negative life events.

McNeil et al. (1986) strongly urge gerontologists to pay closer attention to hardiness as a correlate of coping. Their assertion is made with the understanding that current gerontological research has made discoveries that would parallel the idea of hardiness as a strong buffer for stress. McNeil et al. extend this to infer that psychological hardiness could very well have a significant impact on the psychological well-being of older adults.

Thus hardiness is found to be linked with the individual's use of active problem focused coping strategies for dealing with stressful events (Gentry & Kobasa, 1984; Kobasa, 1982). These two mechanisms are in turn hypothesized to reduce the amount of psychological distress one experiences and to contribute to the long-term psychological well-being of an individual.

Significantly inverse correlation have been reported between hardiness and measures of anxiety and depression (Allred & Smith, 1989; Drory & Florian, 1991; Funk & Houston, 1987; Rhodewatt & Zone, 1989). Ganellen and Blaney (1984) found that persons with depression were less hardy than persons without depression. Booth-Kewley and Friedman (1987) reported that hardy people show low anxiety and depression.

Another important variable under study concerned the influence of social support on the mental health of aged engineers. The findings of the present study suggest that retired engineers with high social support have better mental health than those with low social support by scoring higher values on the measures of satisfaction with life and happiness. Therefore, social support is important for the well-being of retirees, as it gives one a feeling of being loved, cared for, and esteemed, valued and belonging to a network of communication and mutual belongingness (Singh, 2005).



Ann Bowling, Professor of Health Care for Older Adults at Kingston University London, observed that key to happiness in old age is resourcefulness. What matters to people in old age, according to him was to build reserves of social support and self belief. These social and psychological resources enable people to make the most of their skills, opportunities and abilities so they can compensate when they can no longer do things.

One of the aims of the research was to examine the interactive effect of hardiness and social support on the quality of life of engineers after their retirement.

- Interaction of hardiness and social support influenced the scores of satisfaction with life and happiness. Engineers with high hardiness and high social support had better mental health and reported greater scores on the measures of satisfaction with life and happiness.
- The findings of the present study offer both theoretical as well as applied implication. Theoretically it has been shown that happiness is a process that includes a number of conditions. Although the overall life satisfaction constitute the crux of human happiness, the element of satisfaction with various life functioning domains is also important.
- Overall, the findings of the present study substantially support predictions. Psychological hardiness and high social support both directly impact on measures of psychological and somatic distress.

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