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Relationship between stress and psychological hardiness among secondary school students in Chandigarh

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Abstract

This study investigates the relationship between stress and psychological hardiness among school students. For this study a sample of 100 students from 9th grade was selected. The data was collected by using Standard Stress Scale by Gross and Seebab (2014) and Psychological Hardiness Scale by Novack (1990). Pearson product moment correlation was employed for analysis and the stress and psychological hardiness were found to be statistically significantly correlated at 0.05 level of significance.

Keywords: Stress, psychological hardiness, secondary school students

Introduction

Stress is evident in every field. The cases of various mental health problems are rising at an alarming rate. Looking at the severity of rising mental health cases World Health Organization (WHO) had put mental health as one of the sustainable development goals. SDG Target 3.4 requests that countries for the promotion of mental health and well-being.

Depression and suicide take a major toll on the health of the population. Nearly one in 10 people in the world suffer from a mental disorder. An estimated 804,000 deaths due to suicide occurred worldwide in 2012. WHO Mental Health Action Plan 2013–2020 calls for a 20% increase in service coverage for severe mental disorders (WHO report, 2016) ^[19] as stress has been identified as a determinant of health (Backé, Seidler, Latza, Rosnagel, & Schumann, 2012; Steptoe, 1991).

According to Lazarus and Folkman (1984) ^[10] stress occurs whenever the perceived demands of a situation tax or exceed the perceived resources of the system (individual, family, group, or community) to meet those demands, especially when the system's wellbeing is judged or perceived as being at stake.

Pestonjee (1999) ^[17] noted that it is natural and healthy to maintain optimal levels of stress. When stress is left unchecked and unmanaged, it creates problems in performance and affects the health, well-being and emotional intelligence of an organism. Thus, Maddi (2006) ^[11] has characterized hardiness as a combination of three attitudes that together provide the courage and motivation needed to turn stressful circumstances from potential calamities into opportunities for personal growth. Enhancing psychological hardiness may facilitate an individual's ability to deal with stress (Lambert, Lambert & Yamase, 2003) ^[9].

The hardy personality style as proposed by Kobasa *et al.* (1981) ^[8] encourages transformational coping, which involves, 'an amalgam of cognition, emotion, and action aimed at not only survival, but also the enrichment of life through development.'

Commitment is a sense of purpose and meaning that is expressed by way of becoming involved in life's events rather than being passively involved.

Control is the tendency to believe and act in a way that influences life's events rather than feeling helpless when confronted with adversity.

Challenge is the belief that change, instead of stability, is normal and that change is a stimulus to enhance maturity rather than a threat to security.

Psychological hardiness is trait of an individual which enables one to see stressful situations as opportunities to be challenged and rise above the given circumstances and belief in oneself

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that one has control of his own life and capable of overcoming challenges through one's own ability. Hardiness is directly relevant to health care as it may assist in the determination of who is more likely to face adverse effects of stress and to determine the need of intervention not to develop stress related illness. These three traits result in empowerment, positive thinking and the confidence needed to succeed.

Hardiness is characterized by a sense of challenge, control, and commitment. Challenge refers to perceiving stressful situations and problems as opportunities for problem solving, rather than as threats or unwanted demands. The natural response with this perspective is to generate solutions to difficult situations, rather than avoid them. Challenge also involves openness to new experiences. Control involves the belief that an individual can, in some ways, influence future outcomes. Consequently, instead of avoiding stressful situations, individuals with psychological hardiness strive to confront them. A sense of control does not deny the reality that some outcomes cannot be controlled, but asserts that a positive outlook can still be maintained. It's possible, even in unavoidable circumstances, to control one's reaction. The connection between this concept and cognitive therapy is obvious, since developing a sense of control involves learning to view stressors and difficult situations more positively. The goal becomes to think about situations optimistically and act decisively. Commitment is the ability to persevere through difficult situations and retain a sense of purpose in regard to work and relationships. (Maddi, 1999; Maddi & Kobasa, 1991) [12, 8].

Review of literature

Gerson (1998) [4] in a study conducted on psychology graduate students found that high hardy subjects perceived stressors as a less stressful as their low hardy to more effective methods of coping. Hardiness along with cognitive avoidance and logical analysis of different instructional strategies emerged as significant predictor of stress among students.

Damodaran and Paul (2014) [2] conducted a study to determine the stress among adolescents and to identify their stressors was conducted among 46 adolescents who were selected through non-probability convenience sampling in a selected school of Udipi District, Karnataka. Data were obtained using demographic proforma, stress rating scale and stressor table. Data analysis showed that majority of them experience moderate stress (63.04%) whereas severe stress was reported by 23.9%. These results suggest that adolescents experience considerable stress. Early recognition of stress will play an important role to plan appropriate intervention and prevent mental and physical health problems among adolescents.

Kaur (2014) [7] studied the relationship of work place stress, coping styles and hardiness on a sample of 500 college teachers from colleges under Punjab University by applying multistage stratified sampling. Findings suggest that significant relationship exists between work place stress and hardiness of college teachers. Significant relationship also exist between work place stress and control, commitment, challenge i.e. dimensions of hardiness of college teachers.

Sachdeva (2016) [18] examined organizational role stress in relation to perceived school problems, burnout and personality hardiness. In this study multistage random

sampling was used and population for this study was Punjab State. Findings of study revealed that significant and negative correlation exist between organizational role stress and personality hardiness of secondary school teachers. Thus, the review suggested that persons with high psychological hardiness are likely to face less somatic problems, have high stress resistance, enjoy better health, high selfesteem, better adjusted and highly motivated, and can increase understanding of learning experience and academic achievement.

Objectives of the study

- To study the relationship between stress and psychological hardiness among secondary school students.
- To study the stress among male and female students of secondary school
- To study the Psychological Hardiness among male and female students of secondary school

Hypotheses

H₀₁) There exists no significant relationship between stress and psychological hardiness

H₀₂) There exists no significant difference between stress of male and female students of secondary school

H₀₃) There exists no significant difference between psychological hardiness of male and female students of secondary school

Method

For the present study descriptive survey method was used to collect the data from the secondary schools in Chandigarh. A sample of 100 students was selected from the 9th class from randomly selected two schools of Chandigarh.

Sample

The population for the present study included all the government schools of Chandigarh. Researcher followed probability sampling technique for collecting the data. Two schools were selected from the population randomly through lottery method by the researcher. From each school one intact section of 9th class was taken as sample for the study. The sample of 100 adolescent students was selected from 9th grade.

Tools used

Data was collected by administering the following scale on the selected sample:

1. Standard Stress Scale (Gross & Seebab, 2014) [5]
2. Psychological Hardiness Scale (Novack, 1990) [15]

The Standard Stress Scale by Gross and Seebab (2014) [15] was used to collect the data about stress level of adolescents. The scale consisted of 11 items measuring stress levels of adolescents. The sub dimensions of the test were over commitment, self-realization, empowerment, social distress, social support, recreational capacities, exhaustion, anxiety about the future and uncertainty. Each item was answered on a 5-point Likert scale.

To view the role of psychological hardiness on mental health data was collected using the Psychological Hardiness scale by Novack (1990) [15]. The Psychological Hardiness scale was developed by Nowack in 1990 [15]. The scale was developed by Nowack in order to evaluate and measure

psychological hardiness of an individual. The scale has 3 dimensions (i.e.) commitment, control and challenge. It helps in knowing the level of hardiness which insulates individual from the effect of stress and in predicting future well-being. It was developed for the secondary school children to know their personality dimension more comprehensively. Students who report having hardy attitude have great motivation to learn class material and more strongly committed to their classes than those reporting not having hardy attitude (Nowack, 1992) [15].

The scale of psychological hardiness has 30 items to be responded on five point rating i.e. Always (A), Often (O), Sometimes (ST), Rarely (R), and Never (N). The scale has 10 items each pertaining to challenge, control and commitment dimensions; and hence provides three dimensional scores and a composite score known as global hardiness score. The range of score in each dimension is 10-50 whereas range of the global hardiness score lies between 30-150. High end score is indicative of strong presence of challenge, control and commitment and being a hardy individual. The composite score of the psychological hardiness scale has been found to have positive and significant relationship with the original Kobasa Hardiness Scale.

Results and Discussion

In this section, the researcher presented the distribution of scores of the sample on the variables under study in terms of mean, standard error of mean, median, mode, standard deviation, skewness and kurtosis.

Table 1: Mean and Standard Deviation of Stress and Psychological Hardiness of Students

	Stress	Psychological Hardiness
Mean	29.54	74.54
Std. Error of Mean	.706	2.061
Median	30.00	80
Mode	32	78
Std. Deviation	7.065	20.606
Skewness	-.408	-.510
Std. Error of Skewness	.241	.241
Kurtosis	-.585	-.597
Std. Error of Kurtosis	.478	.478

The mean score of stress of the students was 29.54 and standard deviation was 7.065, the value of median and mode is 30.00 and 32 respectively. The value of mean, median and mode is similar, suggesting normality of the data. The value of skewness is -.408 and kurtosis is -.585. The negative value of the skewness implies that the data values were skewed towards the left. Negative values of kurtosis of scores of stress indicated that the distribution of scores were leptokurtic. The mean score of Psychological Hardiness of the students was 74.54 and standard deviation was 2.061, the value of median and mode is 80 and 78 respectively. The value of mean, median and mode is similar, suggesting normality of the data. The value of skewness is -.510 and kurtosis is -.597. The negative value of the skewness implies that the data values were skewed towards the left. Negative values of kurtosis of scores of stress indicated that the distribution of scores were leptokurtic. The value for standard error of skewness was 0.241 and for standard error of kurtosis was 0.478. The values of kurtosis and skewness were within the range -2 to +2 (Bachman, 2004) and the values of standard error of skewness and standard error of

kurtosis were in the range of +/- 1.96 (Peat and Barton, 2008). The descriptive statistics for the total sample shows that the sample is normally distributed.

Further to establish the condition for normality for using parametric test, the researcher employed Shapiro-wilk test of normality.

Table 2: Tests of Normality

Shapiro-Wilk of Normality			
Variables	Statistic	df	Sig.
Stress	.952	100	.001
Psychological Hardiness	.928	100	.000

From table 2, it was concluded that for both the variables, stress and psychological hardiness, the data is normally distributed as the value of significance is <0.05 level. Thus the data is normally distributed. Thus the data is suitable for employing parametric test.

Testing of hypotheses

After establishing the normal distribution of sample, the researcher employed the Pearson product moment correlation to find out the relationship between the stress and psychological hardiness. The results were interpreted at 0.05 level of significance.

H₀₁) There exists no significant relationship between stress and psychological hardiness

Table 3: Relationship between Stress and Psychological Hardiness of the Students

Variable	Pearson Correlation	Sig. (2-tailed)	N
Stress Psychologic Hardiness	-.204	.042	100

*. Correlation is significant at the 0.05 level (2-tailed).

The value of Pearson product moment correlation between the stress and psychological hardiness was calculated as -.204. The value was found to be statistically significant at 0.05 level of significance as the p value <0.05. Thus, the null hypothesis i.e. "There exists no significant relationship between stress and psychological hardiness" is rejected. The negative sign in value of Pearson product moment correlation between the stress and psychological hardiness signifies that stress and psychological hardiness are negatively correlated which implies with increase in level of stress the psychological hardiness decreases. The results of the study are in consonance with the studies conducted by Gerson (1998), Kaur (2014) and Sachdeva (2016) [4, 7, 18].

Table 4: Descriptive statistics for male and female students of secondary school

	gender	N	Mean	Std. Deviation	Std. Error Mean
Stress	Male	59	25.95	6.276	.817
	Female	41	34.71	4.473	.699
Ph	Male	59	78.71	19.081	2.484
	female	41	68.54	21.457	3.351

The mean scores of stress of the male students was 25.95 and standard deviation was 6.276 and the mean scores of stress of the female students was 34.71 and standard deviation was 4.473. This employs that the female students are more stressed in comparison to male students. The mean scores of psychological hardiness of the male students was 78.71 and standard deviation was 19.081 and the mean

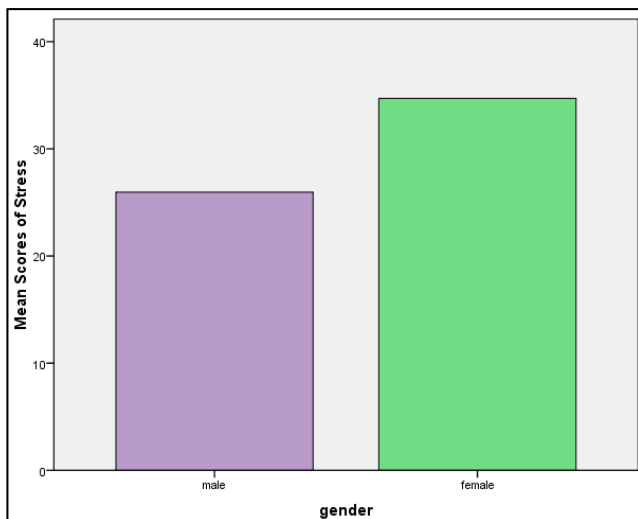
scores of psychological hardiness of the female students was 68.54 and standard deviation was 21.457. This implies that the psychological hardiness of male students is more than the female students. To check whether the difference between the male and female students is significant, t-test was employed by the researcher.

H₀₂) There exists no significant difference between stress of male and female students of secondary school

Table 5: t-test table for Stress scores of males and females

Variable	T	df	Sig. (2-tailed)
Stress	-7.677	98	.000

The independent sample t test was calculated, the t-value was found to be -7.677. The value was found to be statistically significant at 0.05 level of significance as the p value <0.05. Hence it is concluded that there is significant difference between the stress scores of male and female secondary school students. Thus the null hypothesis “There exists no significant difference between stress of male and female students of secondary school” is not accepted. From the graph below it is concluded that the mean stress scores of male students is lower than the mean scores of stress of female students. Thus the female students are found to be more stressed than the male students. The results are in consonance with the study conducted by Bartone & Priest, (2001) and Kaur 2011 [1, 6].



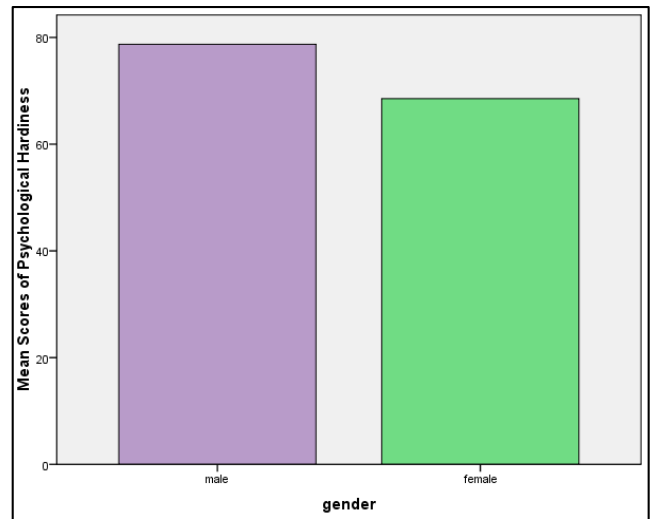
Graph 1: mean scores of stress of male and female students H₀₃) There exists no significant difference between psychological hardiness of male and female students of secondary school

Table 6: T-test table for Psychological Hardiness scores of males and females

Variable	t	Df	Sig. (2-tailed)
Psychological Hardiness	2.492	98	.014

The independent sample t test was calculated, the t-value for psychological hardiness was found to be 2.492. The value was found to be statistically significant at 0.05 level of significance as the p value <0.05. Hence it is concluded that there is significant difference between the psychological hardiness scores of male and female secondary school students. Thus the null hypothesis “There exists no significant difference between psychological hardiness of male and female students of secondary school” is not accepted. From the graph below it is concluded that the

mean psychological hardiness scores of male students is higher than the mean scores of psychological hardiness of female students. The results are in consonance with the study conducted by Bartone & Priest, (2001) and Kaur 2011 [1, 6].



Graph 2: mean scores of Psychological Hardiness of male and female students

Conclusion and discussion of the results

From the results of the study it was revealed that the stress and psychological hardiness are negatively correlated to each other. Thus, higher stress adversely affected the psychological hardiness of the students. There are various researches regarding higher stress among female students than male students. Mazumdar, *et al.* (2012) [14], reported various symptoms that lead to more stress in females than males. The reported factors which contributed to the stress are the management of time, intercommunication with teachers, high standards of parents, student-teacher ratio, distraction in unfavourable environment such as class, and expectations of teachers and etc.(Mazumdar, *et al.*, 2012) [14]. Garrett (2001) [3] demonstrated five major provenances among the female that respectively are failing in their exams, the pressure of exams, to be rejected by someone, the break up in their relations and finally financial problems. So, there is need to provide interventions for stress management at the school level.

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