



Study Of Science Teachers as Dimension of Psychological Stress Among Science Students

KEYWORDS

Dr. Narendra Kumar

Assistant Professor Department of Education, S.G.P.G. College, Sarupurkhurd, Meerut

ABSTRACT This study attempts to assess the Science Teachers as dimension of psychological stress among senior secondary science students studying indifferent types of institutions. A sample of 631 students was randomly selected from the schools recognized by different boards in Meerut province. They were administered Psychological Stress Scale for Science Students (PSSSS) developed by the researcher himself. Mean, S.D., F-test and t-test were used to analyze the data. Results show that male and female science students differed significantly on psychological stress dimension Science Teachers. Male science students were found to be more stressed than female science students. While no significant difference was observed between rural and urban science students on science teachers as psychological stress dimension. Further, Significant difference was observed among the students of different types of institutions. Highest psychological stress due to Science Teachers was found in the students of GAS and lowest in the students of KV.

Introduction

The present scenario is coming up with technological revolution, web technology and web culture. Naturally it is the achievement of people especially in the field of science besides humanities. It is well considered opinion proven rationally that science is the great potential factor for the development of country. Hence science education in every country occupies a significant emphasis. The very structured knowledge in science education demands good intellect people with scientific attitude and rationale mind. Difficulty in understanding of science experienced by students in general, fear of science and underachievement in science subjects are the common problems due to which students used to suffer. Science also exerts a number of additional demands on students. The science curriculum requires enormous commitment and hard work by students. The intense curriculum may produce stress on science student's life. The school setup, teacher's expectations, infrastructure facilities, modalities of teaching etc. promote the feeling of pressure associated with being in the science stream. Most of the time, science students have complain of dwelling in between their efforts for better achievement and teacher's/ parent's expectations. Even investing time and efforts they find it difficult and get easily stressed. It is being experienced by parents and teachers in schools that science students suffer from psychological stress which influence the achievement.

In the hope of preparing students for their future roles in science, it is important to identify stressful factors that may affect their successful development. One study identified the major academic stressors among college students to be tests, grade competition, time demands, professors and classroom environment, and career and future success (Murphy & Archer, 1996). Misra, et al., (2000) found that academic stress among college students varies across year in school and gender. Most of the studies in different responses to stress have been carried out in dental, medical, nursing, university and college students (Sinha, et al 2000, Lee et al 2002, Kurupparachchi, et al 2002, Ellison, 2004, Polychronopoulou, Argy and Divaris, Kimon 2005, Hussain, et al 2008, Kumar and Singh 2004, Kaplan, et al 2005, Chapell, et al 2005, Vijayalakshmi and Lavanya 2006, Nicholson 2009, and Hasan 2009). Science Teacher is also

the major causal factor of stress among science students. This refers to the stress among science students due to methods of teaching, high expectations of science teachers, favoritism and poor perception of science teachers among students. The researcher found that there is no research conducted particularly in Western U.P pertaining to this issue. Therefore, it was decided to conduct a research to examine this particular issue. In the present study, the researcher attempted to study the Science Teachers as dimension of psychological stress among senior secondary science students.

Objectives

1. To study the nature of Science Teachers as dimension of psychological stress among science students.
2. To study the difference between male and female science students on Science Teachers as dimension of psychological stress.
3. To study the difference between rural and urban science students on Science Teachers as dimension of psychological stress.
4. To study the difference among science students of different types of institutions on Science Teachers as dimension of psychological stress.

Research Methodology

Method

Methods of research are generally determined by the theory of the topic under study, objectives of the study, resources of researchers etc. These considerations have led the investigator to use the descriptive survey method of research for the present study.

Participants

For the present study, science students officially enrolled in 12th standard were taken from the institutions recognized by different boards in Meerut province. Using simple random sampling, 100 senior secondary science students were selected from each type of institutions. Out of 700 science students only 631 students were finally taken because 69 students did not fill the scale properly.

Material and Procedure

To achieve objectives of this study Psychological Stress

Scale for Science Students (PSSSS) developed by the researcher was used to measure psychological stress of science students. Each item was followed by five options, namely, 'Always', 'Often', 'Sometimes', 'Rarely', and 'Never'. Reliability of the scale was determined by split half method and was found 0.96.

Data Analysis Techniques

To study the nature of Science Teachers as dimension of psychological stress, all the science students (N = 631), mean and standard deviation (S.D.) were calculated. To find out the differences among science students on Science Teachers as dimension of psychological stress, analysis of variance (ANOVA) was used. In case of significant F-value, t-test was used. Results are presented in the following tables.

Results

After analysing the data, it was observed that the mean, median and mode values of all the 631 science students on psychological stress dimension Science Teachers were found to be 24.071, 24 and 25, which indicate moderate level of stress due to Science Teachers.

Table-1

Summary of t-test for difference between male and female, rural and urban science students on Science Teachers as dimension of psychological stress

Groups	Mean	S. D.	t-value
Male (N = 419)	24.86	7.04	3.19**
Female (N = 212)	22.79	8.84	
Rural (N = 218)	24.81	7.13	1.52
Urban (N = 413)	23.83	8.04	

It is evident from Table - 1 that t-values between the means of male and female science students on psychological stress dimension science teachers was found to be 3.19 which was significant at 0.01 level of significance. This reveals the fact that male and female science students differed significantly on psychological stress dimension science teachers. Since mean difference was in favor of male students, it indicates that male science students were found to be more stressed than female science students. It is also evident from Table- 1 that t-values between the means of rural and urban science students on psychological stress dimension science teachers was found to be 1.52 which was not significant at 0.05 level of significance. This revealed the fact that rural and urban science students do not differ significantly on psychological stress dimension science teachers.

Table - 2

Summary of ANOVA for difference among science students of different types of institutions on psychological stress dimension Science Teachers

Source of Variation	Df	Sum of Squares	Mean Sum of Squares	F
Between	6	1638.38	273.06	4.709**
Within	624	36185.15	57.99	
Total	630	37823.53	** p < 0.01	

It is evident from Table - 2 that F-value was found to be 4.709, which was significant at 0.01 level. This means that students of different types of institutions differed significantly on psychological stress dimension science teachers. This analysis shows significant difference among groups. To know significance of difference between groups, t-values were calculated. Results of t-test are given in Table - 3.

Table - 3

t-matrix for difference between science students of different types of institutions on psychological stress dimension Science Teachers

Types of Schools	N	Mean	KV	JNV	GIC	GAS	PS	CMS	AS
KV	95	21.62	0	3.514**	4.020**	4.723**	1.399	1.721	0.192
JNV	82	25.93	0	0.334	0.961	2.390*	1.369	3.840**	
GIC	90	25.38		0	0.646	2.867**	1.727	4.375**	
GAS	79	26.29			0	3.629**	2.243*	5.172**	
PS	98	24.56				0	0.605	1.660	
CMS	96	23.23					0	1.919	
AS	91	22.76						0	

It is clear From Table - 4 that significant differences were obtained between the students of KV and JNV, KV and GIC, KV and GAS, KV and PS, JNV and CMS, JNV and AS, GIC and CMS, GIC and AS, GAS and CMS, GAS and AS on psychological stress dimension science teachers. No significant differences were observed between the students of KV and CMS, KV and AS, JNV and GIC, JNV and GAS, JNV and PS, GIC and GAS, GIC and PS, GAS and PS, PS and CMS, PS and AS, CMS and AS on psychological stress dimension science teachers. It is also clear from Table - 4 that highest mean on psychological stress dimension science teachers was found for the students of GAS and lowest for the students of KV.

Conclusions

Findings of this study show that male and female science students differed significantly on psychological stress dimension science teachers. Male science students were found to be more stressed than female science students. While, rural and urban science students do not differ significantly. Further, Significant difference was observed among the students of different types of institutions. Highest psychological stress due to infrastructure for science was found in the students of GAS and lowest in the students of AS.

REFERENCE

Ellison, K.W. (2004). Stress and the Police Officer, 2nd ed., Charles C. Thomas Publishers, Springfield, IL. | Huan, V.S., See, Y.L., Ang, R.P. and Har, C.W., (2008). The impact of adolescent concerns on their academic stress. *Educ. Rev.*, 60(2): 169-178. | Hussain A, Kumar A. (2008). Academic stress and adjustment among high school students. *J Indian Acad Appl Psychol*; 34 (Special Issue): 70-3. | Kadapatti, M. and Khadi, P.B. (2006). Factors influencing for academic stress among preuniversity students. *Indian Psychol. Rev.*, 66(2): 83-88. | Kaplan, D.S., Liu, R.X. and Kaplan, H.B. (2005). School related stress in early adolescence and academic performance three years later: The conditional influence of self expectations. *Soc. Psychol. Edu.*, 8(1): 3-17 | Khalid, R., & Hasan, S. S. (2009). Test anxiety in high and low achievers. *Pakistan Journal of Psychological Research*, 24 (3-4). | Kumar, S. and Singh, A.P., (2004). Stress state and its relationship with academic performance among students. *Recent Trends in Human Stress Management*, pp. 55-66. | Kuruppuarachchi, K. A. (2002). Psychological distress among students from five universities in Sri Lanka: Ceylon. *Med. J.*, March, 47 (1), 13-5. | Lee, R. M., Keough, K. A., & Sexton, J.D. (2002). Social connectedness, social appraisal, and perceived stress in college women and men: *Journal of Counseling and Development*, 80 (3), 355-361. | Misra, R., McKean, M., West, S., & Russo, T. (2000). Academic stress of college students: Comparison of student and faculty perceptions: *College Student Journal*, 34(2), 236-245. | Polychronopoulou, A. and Divaris, K. (2005). Perceived Sources of Stress Among Greek Dental Students. *J Dent Educ.* 69(6): 687-692. | Sinha, B. K., Willson, L.R. and Watson, D.C. (2000). Stress and coping among students in India and Canada. *Canadian Journal of Behavioural Science*, Oct. | Sulaiman, T., Hassan, A., Sopian V.M and Abdullah S. K. (2009). *European journal of social sciences*, 10(2), 179-184.