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Mukta G Sthavarmath
M.H.Sc., Department of Human
Development and Family
Studies, College of Community
Science, University of
Agricultural Sciences, Dharwad,
Karnataka, India

Manjula Patil
Jr. Scientist, AICRP (CD),
Department of Human
Development and Family
Studies, College of Community
Science, University of
Agricultural Sciences, Dharwad,
Karnataka, India

Corresponding Author
Mukta G Sthavarmath
M.H.Sc., Department of Human
Development and Family
Studies, College of Community
Science, University of
Agricultural Sciences, Dharwad,
Karnataka, India

Influence of stress on scholastic performance of high school students

Mukta G Sthavarmath and Manjula Patil

Abstract
Stress is the most common psychological problems which were adversely affecting the high school students academic performance. A study was conducted to examine the influence of stress on scholastic performance of high school students studying in Kannada medium government and private aided schools. About 240 students each from urban and rural areas were drawn from Dharwad taluk of Karnataka. The prior permission was obtained from Block Education Officer and the Heads of the schools for gathering information of students. Twenty students were taken from 8th, 9th and 10th class randomly for the study. Structured questionnaires on stressors (Targar 2009 was used to know the stress of students. Scholastic performance of the children-Rutter's proforma-A (1967) was used to know the scholastic performance. On analysis, results revealed that, majority of students were in high level of stress. With regard to gender, boys had slightly higher stress level compared to girls. High level of stress found more among 10th class which results in lower scholastic performance of students. Study results indicates the immediate need for guidance and counseling programmes to high school students to reduce their stress and anxiety levels and to increase the scholastic performance.

Keywords: Stress, high school students, scholastic performance

Introduction
Adolescence is a transition stage between childhood and adulthood and characterized by rapid physical changes and mental development. According to Ablard and Parker (2010) [1] adolescence stage is defined as the time when individuals begin to function independently of their parents. It is the period of life when a child develops into an adult and generally seen from the age of 12 to 19 years.

Stress is the most common psychological turmoil facing school adolescent function in everyday life. In school life, every school adolescent in one way or another is a victim of stress disorders. The young people/students with stress disorder are so afraid, worried and cannot function normally. Stress has been defined as a future oriented mood or feelings characterized of negative affective state accompanied by self-focused, psychological and self-preoccupation within the controllability of future threat or potentially negative situation (Figueroa, 2013) [6]. It is estimated that 13 to 25 per cent of the world adolescents in schools face stress. In India, effect of stress among school children and adolescents results in decreased scholastic performance. Results of the secondary examination are vital for individuals since this is the main determining criteria for future admission to a high quality senior secondary school and a preferred academic stream which creates the lots of stress and stress among students. (National Crime Records Bureau, Ministry of Home Affairs, Government of India, 2000).

Additionally students have to face many academic demands, for example, school examination, answering questions in the class, showing progress in school subjects, understanding what the teacher is teaching, competing with other class mates, fulfilling teachers and parent's academic expectations. These demands may tax or exceed available resources of the students. As a consequence, they can be under stress, since the demand is related to achievement of an academic goal. So, stress is related to the achievement of an academic goal.

A low level of stress could be good. It can motivate and help a person to become more productive. It provides the means to express talents and energies and pursue happiness. However, too much stress or a strong response to stress can be harmful. A high level of stress may have negative effect on cognitive functioning and learning of students. Hence, the study was conducted to know the stress and stress level in students and to examine the influence of stress and stress on scholastic performance of students.

Materials and Methods
Research design: Correlation design was employed to test the relation between stress and locality, study stress and locality. It was also employed to examine influence of stress and stress on scholastic performance of high school students.

Population and sample
There were total 98 high schools in urban locality and 188 high schools in rural locality of Dharwad taluk. About 4 per cent of 98 urban schools (four schools: 2 govt, 2 private aided) and 2 per cent of 188 rural schools (four schools: 2 govt, 2 private aided) were randomly selected for the study who were willing to participate and extend co-operation for the study. For the present study, the sample comprised of 480 high school students (240 boys and 240 girls) studying in 8th, 9th and 10th classes of schools (government and private aided) situated in urban and rural localities of Dharwad taluk. The selected were explained about the questionnaire so as to seek their honest answers. Four visits were made to get necessary information for all questionnaires. The filled questionnaires were collected and the doubts were cleared on the spot by the interviewer.

Tools used for assessment
Structured questionnaire on stressors
Structured questionnaire on stressors developed by Targar (2009) [17], the questionnaire consisted of 59 items and 8 areas of stressors like school stressors (4 items), parental stressors (7 items), personal stressors (19 items), peer stressors (5 items), external stressors (5 items), physiological stressors (7 items), socio-economic stressors (2items) and teacher stressors (10 items). For each item, 4 alternative answers are given like 4- extreme stress, 3- a lot of stress, 2- slight stress and 1- no stress and scoring is done as follows

Level of stress	Range of score
Low stress	87 and below
Average stress	88-143
High stress	144 and above

Scholastic performance of the children- Rutter proforma-A (1967) [11]
The proforma consists of qualitative information about scholastic performance, consistency in academic work, school attendance, leadership qualities, sports and extracurricular activities, reading and writing difficulties, presence of any illness, physical handicapness and the teacher's opinion about the need for psychological help. All together the proforma has 9 items consisting of sub items, for each item a score of one was given. So child can score a minimum of '9' scores and maximum of '22'scores. Based on obtained scores, respondents will be classified under 3 categories as follows:

Level	Scores
Low	9-13
Average	14-18
High	19-22

Statistical analysis: The 'chi square' analysis was employed to know the stress and anxiety among high school students and to know the influence of stress and anxiety on scholastic performance of high school students.

Results and Discussion
Stress among high school students: Results related to stress and locality, stress and gender and stress and class were presented and discussed from table 1 to table 3.

Table 1: Association between stress among urban and rural high school students N=480

Locality	Levels of stress								χ^2 Value
	Low		Medium		High		Total		
	N	%	n	%	n	%	n	%	
Urban	50	20.83	75	31.25	115	47.91	240	100	23.52**
Rural	62	24.58	54	29.58	124	45.83	240	100	
Total	112	23.33	129	26.87	239	49.79	480	100	

** Significant at 0.0 1 level

Table 2: Association between stress and gender of urban and rural high school students N=480

Level of stress	Urban (240)				χ^2 Value	Rural (240)				χ^2 value
	Boys (108)		Girls (132)			Boys (128)		Girls (112)		
	N	%	n	%		n	%	n	%	
Low	18	16.66	32	24.24	19.31*	35	27.34	27	25.00	21.12**
Medium	38	35.18	37	28.03		32	25.00	22	19.64	
High	52	48.14	63	47.72		61	53.12	63	50	

*Significant at 0.05 level
** Significant at 0.01 level

Table 3: Association between stress and class of urban and rural high school students N=480

Level of stress	Urban (240)						χ^2 value	Rural (240)						χ^2 value
	8th class (80)		9th class (80)		10th class (80)			8th class (80)		9th class (80)		10th class (80)		
	n	%	n	%	N	%		n	%	n	%	n	%	
Low	28	35.00	12	15.00	10	12.50	12.97**	27	33.75	23	28.75	12	15.00	14.67**
Medium	23	28.75	38	47.50	14	17.50		25	31.25	14	17.50	15	18.75	
High	29	36.25	30	37.50	56	70		28	35.00	43	53.75	53	66.25	

** Significant at 0.01 level

Association between stress and locality
The result of table 1 shows that, association between stress and locality of high school students. It was found that, in urban locality, majority (47.91%) of students were in high level of stress and 20.83 per cent of students belonged to low level of stress. In rural locality, 45.83 per cent of students were in high level of stress and 24.58 per cent of students were in low level of stress. On statistical analysis the 'chi square' value was found to be significant at 0.01 level. Similar significant relationship is also reported by Ai-qiang *et al*. (2014) [3] and Kadapatti (2017) [8] who reported the rural students will be facing extra pressure to perform as a key

element of the family's drive to promote their social and economic status in comparison to their urban counterparts.

Association between stress and gender
The association between stress and gender of urban and rural high school students is presented in table 2. It was revealed that, in urban locality, majority of boys were under high level of stress (48.14%) and 16.66 per cent had low level of stress. In case of girls, majority were in high level of stress (47.72%) and 24.24 per cent were in low level of stress. The statistical analysis revealed that, there was a significant association found between gender and stress among urban high school students at 0.05 level. Similar trend was followed with rural locality, and analysis showed a significant association between gender and stress at 0.01 level. Similar result also reported by Rajkumar et al. (2012) [10], Ai-qiang et al. (2014) [3] and reported that significant association found between gender and stress among students.

Association between stress and class
The result of association between class and stress among urban and rural high school students is presented in table 3. In urban locality, among 8th class students, majority of them (36.25%) belonged to low level of stress and 28.75 per cent of students were under medium level of stress. Among 9th class students, majority of them were under medium level of stress (47.50%) and 15 per cent of students were under low level of stress. Among 10th class students highest percentage of them (70%) belonged to high level of stress and 11.25 per cent of students were under low level of stress. The 'chi square' analysis showed a significant association between class and stress at 0.01 level of significance. In rural locality, among 8th class students, most of them (47.50%) belonged to low level of stress and 25 per cent of students were under high level of stress. Among 9th class students, majority were under high level of stress (53.75%) and 21.25 per cent of students were under medium level of stress. Among 10th class students, highest percentage of them (76.25%) belonged to high level

of stress and only 5 per cent of them were under low level of stress. The 'chi square' analysis showed a significant association at 0.01 level of significance. These results are in line with results reported by Saini et al. (2010), Rajkumar et al. (2012) [10] and Saradar et al. (2017) they stated that, stress was significantly higher among the 10th class students compared to 8th and 9th class students. It was a stark reminder of the tremendous pressure faced by the 10th students with regards to their performance in the board examinations.

Influence of stress on scholastic performance
Table 4 visualized that, association between stress and scholastic performance of urban and rural high school students. In urban locality, with regard to high scholastic performance, majority (47.32%) of students were in low level of stress and 23.21 per cent of students were in high level of stress. With regard to average scholastic performance, the students were equally distributed in medium and low level of stress (36.08%) and 27.83 per cent students were in high level of stress. Majority (54.83%) of low scholastic performed students were under high level of stress followed by medium level of stress (25.80%) and 19.35 per cent of students were in low level of stress. In rural locality, with regard to high achieved students, majority (46.06%) of students were in low level of stress followed by medium level and high level of stress (32.58% and 21.34% respectively). With regard to average scholastic performed students, 44.44 per cent of students were in low level of stress and 26.85 per cent of students were in high level of stress. Among low performed students, majority (58.13%) of students were prone to high level of stress and 18.6 per cent of students were in low level of stress. On statistical analysis, results showed significant association between stress and scholastic performance at 0.01 level. Similar results were reported by Aghdasi and Hasani (2014) [2]. Stubbe (2017) [16] showed that, increased stress impaired the attention and concentration of the students which naturally had adverse effect on academic performance.

Table 4: Association between stress and scholastic performance of urban and rural high school students N=480

Levels of stress	Levels of scholastic performance										
	Urban (240)						Rural (240)				
	High (112)		Average (97)		Low (31)		χ^2 Value	High (89)		Average (108)		Low (43)		χ^2 value
	n	%	N	%	n	%		n	%	n	%	n	%	
High	26	23.21	27	27.83	17	54.83	6.93**	19	21.34	29	26.85	25	58.13	8.69**
Medium	33	29.46	35	36.08	8	25.80		29	32.58	31	28.70	10	23.25	
Low	53	47.32	35	36.08	6	19.35		41	46.06	48	44.44	8	18.60	

** Significant at 0.01 level

Conclusion
Majority of students were in high level of stress, study anxiety. With regard to gender, boys had slightly higher stress level compared to girls. Girls were more prone to study anxiety in urban locality. High level of stress and anxiety found more among 10th class which results in lower scholastic performance of students.

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