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A study of academic stress and its predictors among senior secondary school students of Haryana

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Abstract

Present study was designed to identify the predictors of academic stress among senior secondary school students. For this, Busari's Students' Academic Stress Scale (SASS) was adapted by the investigators and Academic Stress Determinants Scale (ASDS) developed by the investigators was used. Data was collected from various senior secondary school students of Haryana. A sample of 444 senior secondary school students was drawn randomly from the population. To identify the predictors of academic stress among senior secondary school students, Stepwise Multiple Regression Analysis was applied by taking academic stress as dependent variable. SPSS version 16.0 was used for the analysis. The findings of the study reveal that three stressors i.e. peer-related stressors, self-related stressors and teacher-related stressors jointly contribute substantially to the prediction of sample subjects' academic stress. All three predictors i.e. peer-related stressors, self-related stressors and teacher-related stressors account for 37% (0.367) of the total variance in the academic stress.

Keywords: academic stress, stress, determinants, predictors

Introduction

Stress is the emotional and physical strain caused as a result of our response to what happens around. At one point or the other, everybody goes through stress – be it relationship demands, work, household chores, children's school, education, financial situations etc. It is an inborn instinct which helps everybody to deal with everyday difficulties. But if it goes on for too long, it can harm one's physical as well as psychological health making it difficult for a person to handle day-to-day living. Stress is a necessary and unavoidable concomitant of daily living – necessary because without some stress we would be listless and apathetic creatures, and unavoidable because it relates to any external event, be it pleasurable or anxiety producing. A person's response towards stress depends on whether an event is appraised as a challenge or a threat (Lazarus and Folkman, 1984) [15]. Challenging stimulus lead to positive motivation and improved task performance while threatening ones and distress that can result in anxiety, depression, social dysfunction and even suicidal intention.

Stress Defined

The concept of stress was first introduced by Selye (1956) [25]. It was derived from Latin word "Stringere". Stress was popularly used in 17th century to mean hardship, strain, adversity or affliction. It was used in 18th and 19th centuries to denote force, pressure, strain or strong effort with reference to an object or person. Stress is either an external event or an internal drive which threatens the normal functioning of an individual resulting in impaired health or altered behaviour. The word 'stress' is defined by Oxford Dictionary as "a state of affair involving demand on physical or mental energy." A condition or circumstances (not always adverse), which can disturb the normal physical and mental health of an individual. In medical parlance 'stress' is defined as a perturbation of the body's homeostasis. This demand on mind-body occurs when it tries to cope with incessant changes in life. Stress is defined as the way our bodies and mind react to life changes. Stress is caused by multitude of demands (stressors), such as inadequate fit between what we need and what we are capable of, and what our environment offers and what it demands (Levi, 1996) [17]. Stress is the combination of psychological, physiological and behavioural reactions the people have in response to events that threaten challenge them. According to Selye (1956) [25], "Any external event or any internal drive which threatens to upset the organism equilibrium is stress." The most commonly accepted definition of stress is that stress is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize.

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Stressors

The causes of stress are known as stressors and there are literally hundreds of different types of stressors. Any event in life that a person finds threatening, difficult to cope with or causes excess pressure can be a potential cause of stress. It is important to bear in mind that stress is an individualistic, subjective experience and therefore, what one person finds stressful another may not. Various types of events can be stressful for one person or another. For the better understanding of stress, theorists have tried to analyse the nature of stressful events and divide them into subtypes. Stressor can be broken down roughly into either external or internal (or a mixture of both).

Types of Stress

Stress is natural—it is person's perception of the event that determines their response. Stress can be both positive as well as negative. Stress is positive when the person feels stimulated and able to manage the situation. This positive response prepares the body for action and activates the higher thinking centres of the brain. A positive response to stress can provide the energy to handle emergencies, meet challenges, and excel. Stress is negative when a person feels threatened and not in control of the situation. These feelings instigate a powerful reaction – affecting both the brain and body in ways that can be destructive to physical and mental health.

Academic Stress

All children will experience stress, sometimes significant amount of it, in their lives. Adults ordinarily fail to recognize the incidence and magnitude of stress in the lives of children. For example, studies have shown that parents perceive children as having lower levels of stress than children perceive themselves as having (Humphery, 1998)^[8]. Complex modern society has greatly increased the amount of stress adults and children are exposed to. Children are experiencing more stress at younger and younger ages.

Academic stress is the product of a combination of academic-related demands that exceed the adaptive resource available to an individual (Wilks, 2008)^[31]. Academic stress is a concern that must not be taken for granted because it adversely affects the overall adjustment of students (Hussain, Kumar and Hussain, 2008)^[9] and several studies have already documented the effect of stress on students (e.g. Agolla and Ongori, 2009; Hussain *et al.*, 2008; Masih and Gulrez, 2004; Shaikh *et al.*, 2004; Sulaiman *et al.*, 2009)^[2, 9, 18 26, 27]. In 2005, Kumar and Jejurkar found that academic factors were responsible for higher level of stress among undergraduate students. Out of number of stress faced by adolescents and young adults, academic stress emerges as significant mental health problem in recent years (Rangaswamy, 1982)^[24]. It has been estimated that 10% to 30% students experience academic related stress that affects their academic performance (Johnson, 1979; Hoghughi, 1980)^[10, 7], Psychological adjustment (Phillips, 1978)^[22] along with their overall emotional and physical well-being. Academic institution have different work settings compared to non-academic and therefore, one would expect the difference in symptoms, causes, and consequences of stress in two set up (Elfering *et al.*, 2005; Chang and Lu, 2007)^[6, 3].

Types of Academic Stress

Stress is normal part of a student's life because everyone experiences it at least once. A small amount of stress helps the students to concentrate more on one task. However, if the tasks keep adding up, the stress also adds up. There are two types of stress that a student experiences, these are – adaptive and negative stress. Adaptive stress helps us rise to life's challenges. Negative stress is the kind of stress that prevents someone from relaxing. This in turn leads to worry, irritability, or even panic. This stress that each student builds up is negative, because negative stress is the result of too much work and if this happens, the students' ability to complete the work fails, leaving them with no way to complete the work the teachers assigned to them.

Causes of Academic Stress

The senior secondary level students belong to adolescence stage. Adolescence/teen age is a transitional period and it is the bridge between childhood and adulthood. It is the time of rapid development of growing to sexual maturity, discovering one's real self, defining personal value and finding one's vocational and social direction.

At senior secondary school level, students spend most part of their day attending school, coaching classes/academics, engaging in extracurricular activities and doing homework. School environment influences the overall development through the academic demands of formal curricula and through teachers who emphasize academic achievement, motivation to learn and self-improvement. The high or senior secondary school introduces new view for the future to the adolescents. It plays a vital role in the development of teenagers.

Academic stress is a very serious issue in India. It is imperative to mention here that in India, more than six students per day committed suicide because of examination failure (National Crime Reports, Bureau, Ministry of Home Affairs, Government of India, 2000). India has one of the highest youth suicide rates in the world and it was found that one of the contributing factors for this is the academic failure and academic stress (Aaron *et al.*, 2004)^[11]. Because of such serious consequences, this is an issue that needs to be systematically explored, so that effective interventions and educational reforms can be implemented. Some of the potent causes of academic stress are as below:-

Academic Performance: Examinations and papers are the part of academic performance and can contribute significantly to academic stress of senior secondary school students.

Self-Imposed Expectations: Self-imposed expectations for success can also significantly contribute to academic stress. The students constantly compare themselves to others and are often stressed. Pupils with perfectionist tendencies expect everything to be 100% otherwise they become frustrated, irritated, unhappy and stressed.

Parents: Students at either level experience stress because of parental pressures. Parents want their children to succeed in school. In their attempt to guide their children, parents can become one of the major causes of stress for students.

Peers and Siblings: Peers' and siblings' pressure also affects most of the teenagers. Peer pressure can motivate teenagers in a positive sense to be more productive but it becomes negative when it results in pressure to do something an adolescent would not do simply. No doubt that competition and comparison between siblings can add an enormous amount of stress in the life of the students' but it also depends on the home environment and relationship with siblings.

Tuitions and Coaching Classes: The other significant source of academic stress in students is tuitions and coaching classes. Depending upon their future targets, most of the students take one or the other, although some attend both. Coaching classes are more commercialized than tuition. Students devote a lot of time to attend tutorial classes and preparing for tutorial tests and examinations, further increasing their exposure to academic stress.

Workload: Another major factor in student stress is the workload that they receive. While homework and school work helps students learn the material, the teachers sometimes give the students too much work and the student then feels overwhelmed with material.

School: School related stress is the most prevalent, untreated cause of academic failure in Indian schools. Dobson (1980) ^[5] explained that stress has a relationship with a specific situation like a learning environment in school and the inability to do work perfectly and the failure to achieve anything that is desired.

Teacher: An additional source of academic stress among secondary school students is their teacher. Just as students can be too hard on themselves in terms of unrealistic expectations, teachers can also cause heightened academic stress among students.

Internal and External Factors

The internal factors are also known as personal factors and these factors are within the individual. The events or factors such as examination pressure, worry about marks, language problem, lack of concentration when studying, difficulties in completing the homework, difficulty in preparing the notes from books, not regular in studies, habit of postponing the studies, lack of interest in some subjects are the example of internal sources of academic stress. The external factors which are not within the individual but present in the individual's surrounding are known as external stressors of academic stress, e.g. school, mass media, peers, facilities available, watching TV, limited time for games or recreational activities, too much homework on each day and monotony in daily routine.

Academic stress among students has long been researched and it has been found that various factors are responsible for students' stress. If it is not managed well, stress can ignite psychological disturbances among them when they are grown up. Stress is an entirely natural process. A critical premise in stress reduction is that fact that 'taking out one or two things' reduce stress. There is no need to remove all stress. Even just a few minutes each day can make things better. Various interventions like eating properly, taking adequate sleep, reading, recreational activities, listening music, exercise, meditation, relaxation, yoga exercises and

some of the time management techniques are helpful for students in coping with stress.

Review of Literature

Various studies have been conducted till date to examine academic stressors/determinants among the senior secondary school students. Morris (1990) ^[19] stated that teenagers always face stress in school and they compete each other to get better grades. Verma and Gupta (1990) ^[30] found that stress of examination, homework and expectations of teachers and parents resulted in variety of behavior problems such as – tension, anxiety, withdrawal, sleeplessness and irritability. It was also found that younger students suffered more than the older one. Pukar *et al.* (1993) ^[22] surveyed 122 rural high school students and found that most of the rural students reported stress due to family, school, friendship, health and transportation. Vamadappa (1999) ^[29] found that parental involvement in studies lead to higher academic stress. Kouzma and Kennedy (2004) indicated that the major sources of stress were related to school and the highest sources of stress were due to examinations and outcomes, in addition to things like worrying about the future, making choices and the need to do well (self-imposed and by others). Another study reported that 57 percent students were found depressed and 9 percent had thinking for committing suicide because of academic stress (Pasmanlier, 2005) ^[20]. Kaplan *et al.* (2005) ^[12] conducted a study and the findings suggest that for students in highly stressed school environment, an increase in academic expectation may serve to increase the school related stress and impede their academic performance. Agolla and Ongori (2009) ^[2] revealed that academic work load, low motivation, inadequate resources, poor performance in study, over-crowded lecture hall and uncertainty of getting job after graduation were the major causes of stress among students. Needlman (2009) ^[16] affirmed that most of the academically capable students feel very high pressure as they find themselves competing for success. Kadapatti and Vijayalaxmi (2012) ^[11] indicated that high aspiration level, poor study habits, change in medium of instructions and low socio-economic status were the major stressors of academic stress among pre-university students. Dickson *et al.*, (2020) ^[4] conducted a study and found that stress comes from academic tests, interpersonal relations, relationship problems, life changes, and career exploration.

In Indian society senior secondary education occupies a significant position. It plays an important role in social construction, specialized human resource development and economic development of the country too. The review of the literature reveals that various factors such as parents'/teachers' high expectations, competitiveness, career choice among various professional courses, peers' pressure, work overload, school environment, parent-child relationship are some of the potent causal factors responsible for stress among senior secondary students. Studies conducted in Korea and Japan have also found that students who experience academic stress, express their distress in different ways, including in terms of depression, anxiety and somatic symptoms. The present study is design to seek relevant information about various stressors. The investigators also try to explore the predictors of academic stress of senior-secondary students. So, in view of the above

and as very few systematic studies have been conducted in India, suggested that it requires urgent investigation.

Objective of the Study

To find the predictors of academic stress among senior secondary school students.

Method

The study was carried out through Descriptive Survey Method on a sample of 444 senior secondary school students. All the senior secondary school students of Kurukshetra, Sirsa and Rohtak districts of Haryana State, of the age group of 14-18 years constituted the population of the present study. In the present study, 444 senior-secondary school students were selected randomly from the population. All the selected students were administered with Students Academic Stress Scale (SASS), and Academic Stress Determinants Scale (ASDS). The scores of all three dimensions i.e. cognitive reaction, affective reaction, and behavioral reaction of SASS were combined and obtained the total score of academic stress.

Measures

Students Academic Stress Scale (SASS)

For the measurement of academic stress the investigators adapted A.O. Busari's Students Academic Stress Scale (SASS). SASS is a valid measure and it consists of 37 items. The scale measures three aspects/reactions i.e. cognitive reaction, affective reaction and behavioral reaction towards different types of academic stressors. Cognitive reaction to stressors sub-scale of the instrument consists of 9 items, and total score can range from 9 to 45. The second sub-scale of the instrument is affective reaction. This sub-scale consists of 11 items and total scores can range from 11 to 55. The behavioral reaction scale is the third sub-scale of the SASS. Since there are 17 items in this sub-scale, total scores can range from 17 to 85. Student Academic Stress Scale is a reliable measure of academic stress. Cronbach's alpha coefficient for each scale was found 0.92 for cognitive reaction, 0.84 for affective reaction and 0.84 for behavioral reaction.

Academic Stress Determinants Scale (ASDS)

Academic Stress Determinants Scale (ASDS) has been developed by the investigators. Academic Stress Determinants Scale consists of 50 items and five sub-scales. Each sub-scale consists of 10 items. This scale is used to assess five types of academic stressors/determinants i.e. self-related stressors, parent-related stressors, peer-related stressors, teacher-related stressors and school-related stressors of academic stress. The possible range of score on each dimension is 10 to 50. The internal consistency of the test determined by computing split-half reliability for self-related stressors, parent-related stressors, peer-related stressors, teacher-related stressors and school-related stressors sub-scales are 0.90, 0.79, 0.71, 0.73 and 0.86 respectively. The scale was validated against the criterion of content validity.

Results and Discussion

The regression analysis provides an opportunity with little ambiguity to assess the importance of each of the predictors to the overall relationship with dependent measures. In the

present study, stepwise multiple regression analysis is applied while taking academic stress as dependent variable.

Table 1: Stepwise Multiple Regression Analysis for Academic Stress (N=444)

Variables	R	R ²	F	P
Peer-related stressor	0.542	0.294	183.816	0.01
Self-related stressor	0.590	0.348	117.717	0.01
Teacher-related stressor	0.606	0.367	84.916	0.01

Table-1 reveals the findings of stepwise multiple regression analysis for the dependent variable academic stress. A closer inspection of the table-1 clearly shows the three major predictors of academic stress of sample subjects and these predictors are peer-related stressors, self-related stressors and teacher-related stressors.

Peer-related stressor being the most potent predictor of academic stress entered the equation at step 1. The Multiple R for peer-related stressor equals to 0.542 and R² is 0.294. The obtained F-ratio for this variable equals to 183.816 which is significant at 0.01 level of significance. The obtained findings reveal that peer-related stressor (feel nervousness at the time of presentation, not found suitable place in the group when group task assigned, desire to out-perform peers, face problems in adjustment with classmates, competitiveness, comparison with peers with regard to examination result and comparison of study hours with peers etc.) is a strong predictor of senior-secondary school students' academic stress.

The self-related stressor appeared to be the major predictor of academic stress at the step 2. With the addition of this predictor the Multiple R increased to 0.590 and R² becomes 0.348 and the obtained F-ratio equals to 117.717 which is significant at 0.01 level of significance. The obtained findings clearly indicates that self-related stressor (Poor learning level, parents' high expectations, no interest in some of the subjects, disturbance in studies due to T.V., tough competition with classmates, language problem, pressure of extra coaching classes etc.) is the another potent predictor of students' academic stress.

At the step 3 teacher-related stressor was entered into the regression equation. With the entry of this predictor at step 3 Multiple R becomes 0.606 and R² becomes 0.367 and the obtained F-ratio for this variable equals to 84.916 which is significant at 0.01 level of significance. The obtained findings indicate that teacher-related stressor (lack of co-operation from teachers, partiality on the part of the teachers, lack of guidance from teachers, teachers' high expectation not found friendly teachers, teachers' pressure to join their tuition etc.) is the third potent predictor of senior-secondary school students' academic stress.

These results of stepwise multiple regression analysis while taking academic stress as dependent variable have clearly reveal that three stressors jointly contribute substantially to the prediction of sample subjects' academic stress. All three predictors – Peer-related stressor, self-related stressor and teacher-related stressor account for 37% (R²=0.367) of the total variance in the academic stress. The findings of the present study are also in conformation with the findings of the studies conducted by Agolla and Ongori (2009) [2]; Kumar *et al.*, (2011) [14]; Kadapatti and Khadi (2006) and Taragar (2009) [28].

Conclusion

Three major predictors of sample subject's academic stress are peer-related stressor, self-related stressor and teacher-related stressor. These three predictors of academic stress i.e., peer-related stressor, self-related stressor and teacher-related stressor, account for 37% ($R^2 = 0.367$) of total variance to academic stress. Study revealed that the senior secondary school level is a crucial and difficult time, therefore, guidance and counseling services should be provided at the senior secondary level to the adolescents, so that they can overcome their stress and perform better.

Educational Implications

The educational implications of the study are:

1. The study provide better understanding about various stress factors and their consequences.
2. To develop healthy habits and attitude proper guidance must be provided to the senior secondary school students time to time by psychologists and professionals.
3. At secondary school level students should be encouraged to make use of the career counseling services to avoid failure and stress.
4. Guidance services should be provided to the students to develop confidence among students for better adjustment in the classrooms, family, society, to use their potential in the right way which would help them to achieve success.
5. Supporting and stimulating environment is very necessary for the students at home as well as in the school.
6. High expectations by the teachers are too harmful and responsible for stress among students. So, teachers need to be aware about the serious consequences of their high expectations.
7. High self-expectations are also cause stress among adolescents. So, students should have expectations about their study, not beyond their capacity and abilities.
8. Parents should also consider the child's interest, and aptitude and do not impose their will on course selection.
9. Teachers too need to go through workshops where they acquire knowledge and understanding of the adolescents' behaviour and subsequently skills to deal with population effectively.
10. The study also provides better understanding to the academic administrators about the academic stressors and their serious consequences and also provides better insight for initiating efforts to reduce the intensity of academic stress.

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