Stress among senior secondary school students and its determinants

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Abstract
The study has been designed to investigate the academic stress and its determinants among senior secondary school students of Haryana. In this regard, 444 senior secondary school students were tested on Students Academic Stress Scale (SASS) and on the basis of their combined scores on three dimensions of academic stress i.e. Cognitive Reaction, Affective Reaction and Behavioral Reaction, all the Academic selected subjects were divided into two groups-Low Academic Stress Group and High Academic Stress Group. The subjects scoring below 27% (N=120) constituted the Low Academic Stress Group and the subjects scoring above 27% (N=120) constituted the High Academic Stress Group. The selected subjects were further tested with Academic Stress Determinant Scale (ASDS). The data thus obtained was analyzed by using descriptive statistics, most prominently t-ratios. The results obtained had clearly differentiated the two groups i.e. Low Academic Stress Group and High Academic Stress Group. High Academic Stress Group subject scored significantly high on all the five determinants of academic stress i.e. self-related, parent-related, peer-related, teacher-related and school-related stressors. These findings have wider implications for parents, teachers and academic administrators.

Keywords: Academic stress, stress, academic stress determinants, stressors

Introduction
Stress is a normal part of life so much so that the term ‘stress’ has become part of our colloquial speech. Over the years, Psychologists and theorists used the term ‘stress’ in different ways. Some of them considered stress as a stimulus event that presents difficult demands whereas; others have viewed stress as the response of physiological arousal elicited by a troublesome event (Cooper and Dewe, 2004) [5]. However, the emerging consensus among contemporary researchers is that stress is neither a stimulus nor a response but a special stimulus-response transaction in which one feels threatened or experiences loss or harm (Carver, 2007) [4]. So, stress can be defined as “any circumstances that threaten or are perceived to threaten one’s well-being and thereby tax one’s coping abilities.” 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) [18]. 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 behavior.
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. According to Selye (1956) [25], “Any external event or any internal drive which threatens to upset the organism equilibrium is stress.”

**Academic stress**

Stress has become an important topic in academic circle as well as in our society. Many scholars in the field of behavioural science have carried out extensive research on stress and its outcomes and concluded that the topic needed more attention (Rees and Redfern, 2000; Ongori and Agolla, 2008; Agolla, 2009) [24, 22, 1, 2]. 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. Age of adolescence is the age of identify formation where occupational, educational and personal contents develop. During this stage social expectations of the individual are drastically under modification. At senior secondary school level, students spend most part of their day in attending school, coaching classes/academics, engaging in extracurricular activities and doing homework. School environment influences overall development through the academic demands of formal curricula and through teachers who emphasize academic achievement, motivation to learn and self-improvement. Academic stress is the product of a combination of academic-related demands that exceed the adaptive resource available to an individual (Wilks, 2008) [29]. 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) [10] 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; Sulaiman et al., 2009) [23, 11, 19, 26].

Most of the students at senior secondary level face stress almost every day. Not only is stress faced in their school lives but in their personal, family, work lives and relationships. Some of this stress is good and the balance of the stress can be overwhelming. The overwhelming stress pushes a student to do things they would not normally do. Students with higher grades feel the stress of school even more so than a student with lower grades. Those students with higher grades feel they must continually perform at a higher pace and level in order to reach the high expectation not only teachers but parents and peers place on them and with that comes the expectation that those grade point level will continue. Thereby in doing so, those grades and performances may place highly impractical stress level on a person so young. The students face outside factors that push them to the limit to do things they may not be able to achieve. The students with lower grade levels face a different stress. They may feel that they are underachievers and in no way can ever compete with students with higher grades. Those students struggle with the same outside forces i.e. parents, teachers, peers and, school work. Every day, students feel the stress they put on themselves or that others put on them. Stress can be harmful to not only a students’ physical health but to their mental well-being also.

**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**

**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.

**Tuition and coaching classes:** The other significant source of academic stress in students is tuitions and coaching classes.

**Workload:** Another major factor in student stress is the workload that they receive.

**School:** School related stress is the most prevalent, untreated cause of academic failure in Indian schools. Dobson (1980) [7] 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.

**Review of Literature**

Various studies have been conducted till date to examine academic stressors/determinants among the senior secondary school students. Pukar et al. (1993) surveyed 122 rural high school students and found that most of the rural students reported stress due to family, school, friendship, health and transportation. Helms (1996) examined the school related stress in children with and without disabilities. Results indicated that students without disabilities scored higher on scales of academic stress. Vamadvappa (1999) 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). Kaplan, et al. (2005) 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. Kumar (2008) conducted a study on the academic stress determinants and their influence on the scholastic achievement and found that urban students were higher in their level of stress as compared to the rural students and overall achievement is positively and significantly associated with the level of scholastic achievement. Kuruvilla (2008) found that science students suffered with higher level of academic stress than commerce and arts students. Agolla and Ongori (2009) 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. Kadapatti and Vijayalaxmi (2012) 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. Al- Qahtani and Alsubaie (1920) found that academic and group activity domains were perceived as the major stressors among health profession students. Dickson et al., (2020) conducted a study and found that stress comes from academic tests, interpersonal relations, relationship problems, life changes, and career exploration.

**Objective:** To compare low and high academic stress groups senior secondary school students on determinants of academic stress.

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 causes, 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. Review of literature clearly shows that only a few attempts have been made to investigate the determinants of academic stress among senior-secondary school students. It was also found in early studies that no comparison was done by creating high and low academic stress groups. The present study is designed to seek relevant information about various stressors.

**Hypothesis:** Low and high academic stress groups senior secondary school students do not differ on academic stress determinants.

**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 constituted the sample for investigation on the basis of simple random sampling. All the selected students were administered with Students Academic Stress Scale (SASS), and Academic Stress Determinants Scale (ASDS). To meet out the objective of the study the selected subjects were classified into high and low academic stress groups. For this, 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. The subjects having highest 27% score on SASS constituted the high academic stress group. The high academic stress group consisted of 120 subjects and subjects having lowest 27% score on SASS constituted the low academic stress group. The low academic stress group consisted of 120 subjects.

**Measures**

**Students academic stress scale (SASS)**

For the measurement of academic stress the investigator 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. Chonbach’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 investigator. 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**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t-ratio</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Academic Stress Group</td>
<td>30.450</td>
<td>5.167</td>
<td>11.187</td>
<td>0.01</td>
</tr>
<tr>
<td>High Academic Stress Group</td>
<td>37.775</td>
<td>4.975</td>
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</table>

A closer inspection of the above mentioned table reveals that mean scores of two comparable groups on the measure of self-related stressors of Academic Stress Determinants Scale were 30.450 and 37.775 with their respective standard deviations of 5.167 and 4.975. The calculated t-ratio equals to 11.187 significant at 0.01 level of significance. The obtained results point that two comparable groups differ significantly on the self-related stressors, a sub-scale of Academic Stress Determinants Scale. Further, it reveals that high academic stress group students are more stressed than their counterpart low academic stress group students because of different self-related stressors such as they feel that their learning level is less good than their classmates, watching too much T.V., examination pressure, pressure of extra coaching classes, parental expectations, language problems and pressure for perfection in all the subjects are some of the major causes of their academic stress. These findings also supported by the previous studies conducted by Kadaptni and Khadi (2006) [11], and Tarager (2009).

### Table 2: Means, SDs and t-ratio of Low and High Academic Stress Groups on Parent-related Stressors

<table>
<thead>
<tr>
<th>Groups</th>
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<th>SD</th>
<th>t-ratio</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Academic Stress Group</td>
<td>28.444</td>
<td>4.689</td>
<td>8.357</td>
<td>0.01</td>
</tr>
<tr>
<td>High Academic Stress Group</td>
<td>33.530</td>
<td>4.886</td>
<td></td>
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</table>

Perusal of above table reveals that mean scores of low and high academic stress groups of senior-secondary school students on parent-related stressors of Academic Stress Determinants Scale were 28.444 and 33.530 with the respective standard deviations of 4.689 and 4.886. The t-ratio equals to 8.357 which is significant at 0.01 level of significance, points that subjects belonging to the two comparable groups differ significantly on the measure of parent-related stressors. Further the obtained results reveal that students belonging to high academic stress group are more stressed as compared to their counterpart low academic stress group students. They are stressed because of their parent’s strict attitude, parental pressure for best in all the subjects, parents’ interference in the studies, and lack of parental guidance in the studies. Largely, outcomes of the analysis also support the results of the studies by Vamadvappa (1999) [28] and Kumar et al. (2011) [16].

### Table 3: Means, SDs and t-ratio of Low and High Academic Stress Groups on Peer-related Stressors

<table>
<thead>
<tr>
<th>Groups</th>
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<th>SD</th>
<th>t-ratio</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Academic Stress Group</td>
<td>31.100</td>
<td>5.284</td>
<td>10.290</td>
<td>0.01</td>
</tr>
<tr>
<td>High Academic Stress Group</td>
<td>37.767</td>
<td>4.738</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It can be noted from the above table that mean scores of low and high academic stress groups of senior-secondary school students on peer-related stressors of Academic Stress Determinants Scale were 31.100 and 37.767 with the respective standard deviations of 5.284 and 4.738. The obtained t-ratio equals to be 10.290 which is significant at 0.01 level of significance. It points that subjects belonging to the two comparable groups differ significantly on the measure of peer-related stressors of Academic Stress Determinants Scale. Further the obtained findings reveal that high academic stress group students experienced more stress than their counterpart low academic stress group students. High academic stress group subjects feel more stress due to various factors, e.g. adjustment problems with classmates, feel nervousness at the time of presentation before peer, desire to outperform peer, due to strife and veiled struggle among classmates, comparison of study hours with that of peer and comparison of academic result with the peer etc. The results show similarity with the findings of the studies conducted by Hong Li et al. (2005) [30] and Morris (1990) [31].

### Table 4: Means, SDs and t-ratio of low and high academic stress groups on teacher-related stressors

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t-ratio</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Academic Stress Group</td>
<td>28.283</td>
<td>5.370</td>
<td>6.663</td>
<td>0.01</td>
</tr>
<tr>
<td>High Academic Stress Group</td>
<td>33.325</td>
<td>6.314</td>
<td></td>
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</table>
It can be observed from the above table that mean scores of low and high academic stress groups on teacher related stressors of Academic Stress Determinants Scale (ASDS) were 28.283 and 33.325 with respective standard deviations of 5.370 and 6.314. The obtained t-value equals to be 6.663 which is significant at 0.01 level of significance. It reflects that two comparable groups differ significantly on teacher related stressors of academic stress. Further the findings reveal that the subjects falling in high academic stress group experienced more stress than their counterpart low academic stress group subjects. Various teacher related factors such as teacher’s non-friendly behaviour, teachers’ pressure to join their tuition, partiality by the teachers, lack of cooperation and guidance by the teachers, teachers’ high expectations, teachers’ teaching method or way of their teaching are the major teacher related stressors caused students’ academic stress. The results support the findings of the earlier study conducted by Targar (2009).

Table 5: Means SDs and t-ratio of Low and High Academic Stress Groups on School-related Stressors

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t-ratio</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Academic Stress Group</td>
<td>27.275</td>
<td>6.410</td>
<td>6.101</td>
<td>0.01</td>
</tr>
<tr>
<td>(N=120)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Academic Stress Group</td>
<td>32.417</td>
<td>6.644</td>
<td></td>
<td></td>
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<tr>
<td>(N=120)</td>
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It can be observed from the above table that mean scores of two comparable groups on school-related stressors of Academic Stress Determine Scale (ASDS) were 27.275 and 32.417 with respective standard deviations of 6.410 and 6.644. The obtained t-ratio equals to be 6.101 significant at 0.01 level of significance. It points that two comparable groups differ significantly on school-related stressors of Academic Stress Determinants Scale. Further the obtained results demonstrate that subjects belonging to high academic stress group are more stressed as compared to their counterpart low academic stress group subjects. Different school related factors e.g. continuous periods, lack of guidance and coaching facilities and other facilities like not enough good books in the school library, lot of homework received by the different school teachers, class tests, examination pressure and non-supportive teachers are the major causes (school related stressors) responsible for academic stress among senior secondary school students. The results also support the work of Kaplan et al. (2005) [13], Milkie and Warner (2011) [20] that school environment caused academic stress among students.

Conclusion
The overall findings reveal that high academic stress group subjects have scored high mean scores on all the five determinants of academic stress i.e. self-related stressors, parent-related stressors, peer-related stressors, teacher-related stressors, and school-related stressors. The obtained results hereby portray that two comparable groups i.e. low and high academic stress groups differ significantly on all the five types of determinants of academic stress. Further, the obtained findings suggest that high academic stress group students are more stressed than low academic stress group students because of self-related stressors (watching too much T.V., extra coaching classes, language problems, examination pressure) parent-related stressors (parents’ high expectations, parental interference in studies, parents’ strict attitude, lack of parental guidance), peer-related stressors (adjustment problems with peer, desire to outperform peer, comparison with peer), teacher-related stressors (teacher’s non-friendly behaviour, teachers’ pressure to join their tuition, partiality on the part of the teachers, teachers’ high expectations), and school related- stressors (lack of facilities in the school, class test, examination pressure, non-supportive teachers). It has been hypothesized that low and high academic stress groups senior secondary school students do not differ on academic stress determinants. According to the results of the study the above stated hypothesis has been rejected as significant deference exists between the two groups.

Educational implications
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. The study also provides better understanding to the academic administrators about the academic stressors. High expectation by the parents and teachers are too harmful and responsible for stress among students. So, both parents as well as teachers need to be aware about the serious consequences of their high expectations. High self-expectations are also cause stress among adolescents. So, students should have expectations about their study, not beyond their capacity and abilities. Supporting and stimulating environment is very necessary for the students at home as well as in the school. Parents should also consider the child’s interest and aptitude and do not impose their will on course selection. To develop healthy habits and attitude proper guidance must be provided to the senior secondary school students time to time by psychologists and professionals. 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.

References