Abstract:
Introduction:
Trauma and stress are known to have lasting negative effects on health. However, little is known about the underlying mechanisms which influence the development of stress-related resilience. Sense of coherence-revised plays a major role in this process, as it is formed through overcoming stress or
adversity. The aim of our study was to review the available causes and impacts of stress among dental students.

**Materials and methods:**
A cross sectional study composed of standardized questionnaires was used in this study to assess positive and negative experiences, stress or adversity, current health and well-being, and resilience-related resources. The study was organized and conducted among the first year dental students in Chennai. The collected data were entered into Microsoft Excel and then analyzed using a software called SPSS Software version 23 and a chi square test was done. P<0.05 is considered significant.

**Statistical Analysis:** Univariate ANOVA was done to determine variability between dependent variable groups: year in school and gender.

**Results and discussion:** The results showed that nearly 129 students responded to all the 31 questions asked in our questionnaire. Among the 129 students, 66.4% belong to the age group 18-20 and 23.2% participants belong to the age category 21-23 and 10.4% are between 24-27.

**Conclusion:** From our present study we can conclude that most of the first year students are dealing with some sort of stress in their daily life. Academic, social and even health problems play a major role in the development of stress. Academic stressors are considered as the most important stressors. The majority of students were in favour of stress management education to be included in the curriculum and also steps should be taken for its incorporation.

**Key words:** Stress, coping mechanism, academic workload, trauma, Innovative analysis.

**INTRODUCTION:**
Trauma and stress exposure can have lasting negative effects on psychological health and well-being. Especially, early-life adversity (such as trauma, maltreatment) has been shown to cause long-term health-related problems and therefore the development of psychological state disorders(1). As an example, a large-scale study by the planet Health Organization (WHO) examined the prevalence of psychological state disorders across 21 countries(2). Findings revealed that 38.8% of participants had experienced some sort of early-life adversity, like maltreatment, family violence, or physical abuse. It further revealed that such experiences of early-life adversity accounted for 29.8% of psychological disorders in adulthood.

Stress exposure is additionally related to long-term negative outcomes, with chronic stress especially
being detrimental to health(3). Continuous or repeated exposure to worry may result in cumulative adverse effects on physiological health. However, while stress or adversity can cause long-term negative outcomes, not all individuals continue to develop psychopathology or impaired physical health.

Many individuals are ready to adapt to worry or adversity and maintain healthiness and quality of life(4). Such heterogeneity in response to worry is explained by the concept of “resilience.” Resilience refers to the power to adapt to experiences of stress or adversity and maintain a stable healthy psychosocial and physical functioning. For instance, a study conducted by Howard Chang et al examined the connection between chronic stress, resilience, and depression in 104 cancer patients. Results of his study indicated that at low to moderate levels of chronic stress, individuals showed higher levels of resilience and lower levels of depression(5,6). In reference to early-life adversity, one notable example of longer-term outcomes of trauma and adversity is the recent longitudinal project by Maercker and colleagues(7). A research conducted by Maercker et al examined psychopathological and resilient outcomes in an adult sample of former bound child labourers in Switzerland. Many former bound child labourers experienced high levels of exposure to trauma and maltreatment in childhood, including sexual assault, also as physical and emotional neglect. Findings showed that some child labourers had developed psychological state disorders in later life: 26.3% major clinical depression, 23% posttraumatic stress disorder, and 7.7% generalized mental disorder(8).

Dental course undoubtedly is stressful, extensive and exhaustive. Students commonly encounter numerous stresses within the beginning of dentistry life. The stress is often multifactorial, which is arising from academic and socio-cultural environments and social support issues. Additionally, students within the healthcare field are more susceptible to stress due to the high demand of their education, demanding workload and intense theoretical education. Also, they're facing additional challenges like providing care and treatment for patients, which may cause harm if performed inappropriately. As a result, dental students are repeatedly browsing pressure and stress and put them under risk for depression, burnout and anxiety problems(9). Medical courses and dentistry have always been considered to be stressful to the scholars due to its depth, diversity and competitiveness. These are very extensive courses spread 4 to five years in India. Stress sometimes can cause anger, which causes even more stress(10). Prolonged stress and anger can take a toll on the scholars, both physically and emotionally. It's important to eliminate them by attempting control management and implication of positive coping strategies.(11–19),(20),(21),(22,23),(24),(25),(26–30)
The aim of our study was to review the available causes and impacts of stress among dental students.

MATERIALS AND METHODS:

STUDY DESIGN: A quantitative survey composed of standardized questionnaires was used in this study to assess positive and negative experiences, stress or adversity, current health and well-being, and resilience-related resources.

Survey Instrument: The study was organized and conducted among the first year dental students in Chennai on the topic “Prevalence of stress and sense of coherence”. Standardized questionnaires assessed early-life adversity, recent chronic stress and current health and well-being.

SAMPLE SIZE: The study was organized and conducted among first year dental students in Chennai (N=96)

DATA COLLECTION: The data were analyzed using the Statistical Package for the Social Sciences statistical software (SPSS Inc, Chicago, IL, USA) The collected data were entered into Microsoft Excel and then analyzed using a software called SPSS Software version 23.

DATA ANALYSIS: Univariate ANOVA was done to determine variability between dependent variable groups: year in school and gender. The scholars made their choices consistent with the coping tactic most often wanted to manage the stressful events experienced by them in school of dentistry. The choice of measures on the size was conceived by those who specialize in the scholar population under study, consistent with Carver, who advocated that “researchers can select coping scales of particular interest which don't compromise the validity of this measure”.

Ethical aspects: This study included those students who agreed to the terms of free and informed consent. Ethical approval was granted for the study by the institutional Research Ethics Committee.

RESULTS:
Out of our study sample males were 14% and females were 86%. In that 55% of the overall population are feeling stressed and 38% are not feeling stressed. 7% of the population are maybe stressed. For 6.2% of the population, the NEET score was below 100, 25.6% of the population had between 100-200, 61.2% of the population the score was between 200-500, 7% of the population were above 500. About 52.7% of the population strongly agreed that they can manage the academic workload, 19.4% agreed that they can manage academic workload, 17.8% disagreed that they can manage the academic workload, 10.1% strongly disagreed that they can manage the academic workload.
A total of 129 dental students participated in this survey. In demographics more than half of the respondents were female (62.2%) and others male (37.8%). The result showed in subscales there was a great variation in gender i.e Males had more coping ability than females. The mean Coping score for males was 64.68 with SD of 16.14, for females the mean coping score was 48.43 with SD of 22.76. The difference in score among gender was statistically significant (P=0.007). The mean coping score for respondents who strongly agreed for having workload was 34.14 with SD of 16.15, mean for respondents who agreed for having workload was 61.80 with SD of 7.42, mean for respondents who disagreed was 69.95 with SD of 8.30 and mean for respondents who strongly disagreed for having workload was 83.75 with SD of 11.54. The mean coping score for respondents who felt stressed was 36.14 with SD of 18.03, mean coping score for respondents who didn’t feel stressed was 65.62 with SD of 11.57 and mean coping coping score for respondents who felt that maybe they were stressed was 81.22 with SD of 16.03.

Table 1.

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16</td>
<td>64.68</td>
<td>16.14</td>
<td>0.007</td>
</tr>
<tr>
<td>Female</td>
<td>111</td>
<td>48.43</td>
<td>22.78</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 describes the mean difference in dental coping scores between males and females in our study sample. The mean Coping score for males was 64.68 with SD of 16.14, for females the mean coping score was 48.43 with SD of 22.76. The difference in score among gender was statistically significant (P=0.007).

Table 2.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>P</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower bound</td>
<td>Upper bound</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>68</td>
<td>34.1471</td>
<td>16.15805</td>
<td>30.2360</td>
<td>38.0581</td>
<td>26.00 87.00</td>
</tr>
</tbody>
</table>


Table 2 describes the mean coping score among students who responded for academic workload management. The mean coping score for respondents who strongly agreed was 34.14 with SD of 16.15, mean for respondents who agreed was 61.80 with SD of 7.42, mean for respondents who disagreed was 69.95 with SD of 8.30 and mean for respondents who strongly disagreed was 83.75 with SD of 11.54.

Table 3.

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<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>P</th>
<th>Minimu m</th>
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<tbody>
<tr>
<td>yes</td>
<td>70</td>
<td>36.1429</td>
<td>18.03482</td>
<td>31.8426</td>
<td>40.4431</td>
<td>26.00</td>
</tr>
<tr>
<td>no</td>
<td>48</td>
<td>65.6250</td>
<td>11.57331</td>
<td>62.2645</td>
<td>68.9855</td>
<td>26.00</td>
</tr>
<tr>
<td>maybe</td>
<td>9</td>
<td>81.2222</td>
<td>16.03728</td>
<td>0.001</td>
<td>68.8949</td>
<td>93.5496</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>50.4803</td>
<td>22.66031</td>
<td>46.5010</td>
<td>54.4596</td>
<td>26.00</td>
</tr>
</tbody>
</table>

Table 3 describes the mean coping score among students who responded for feeling stressed. The mean coping score for respondents who felt stressed was 36.14 with SD of 18.03, mean coping score for respondents who didn’t feel stressed was 65.62 with SD of 11.57 and mean coping coping score for respondents who felt that maybe they were stressed was 81.22 with SD of 16.03.

Table 4.

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<td>Lower bound</td>
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Table-4: This table shows the mean coping score among students who responded for Neet marks. The mean coping score for respondents who scored below 100 was 66.87 with SD of 9.50, mean coping score for respondents who scored between 100-200 was 64.0 with SD of 8.58, mean coping score for respondents who 200-500 was 40.53 with SD of 21.44 and mean coping score for respondents who scored above 500 was 75.25 with SD of 27.98.

**DISCUSSION:**

Stress creates havoc on your emotional equilibrium, as well as your physical health. It narrows your ability to think clearly, function effectively, and enjoy life. It may seem like there’s nothing you can do about stress. Effective stress management helps you break the hold stress has on your life, so you can be happier, healthier, and more productive. The ultimate goal is a balanced life, with time for work, relationships, relaxation, and fun—and the resilience to hold up under pressure and meet challenges head on. But stress management is not one-size-fits-all.(9)

People react differently to stressful situations. What is stressful for one person may not be stressful for another, and almost any event can potentially cause stress. For some people, just thinking about a trigger or several smaller triggers can cause stress. There is no identifiable reason why one person may feel less stressed than another when facing the same stressor. Mental health conditions, such as depression, or a building sense of frustration, injustice, and anxiety can make some people feel stressed more easily than others.(9)

Academic, environmental and health problems play an important role in stress development. Academic factors are important stressors and hence there is a need to decrease the burden of stress.. The useful stress busters include utilisation of existing student welfare systems, ‘student-friendly’ environments and extracurricular activities with universal participation. (31)Similarly, feedback from the students should be collected and the complaints of students should be addressed to reduce the stress among hostel students. Most students want stress management education to be included in their curriculum. Health is a major
concern of students, and therefore the promotion of healthy lifestyle and dietary options should be encouraged(32). Even teachers, parents and students themselves should be aware that expectations about academics lead to stress. But with regular study habits and adequate preparation stress could be avoided.(33,34)

Most people think that students are less affected by stress. Stress is now understood as a lifestyle crisis(9) affecting individuals independent of their developmental stage. The only task students were expected to do was to study and studying was never perceived as stressful in some point of view. According to the statistics published by National Crime Records Bureau, for every hour one student commits suicide.(33) The bureau registered about 1.8% students who committed suicide due to failing in examinations and there is an 80% rise in suicide rates in one-year time frame. A 2012 Lancet report quoted that the 15-29 age group in India has the highest rate of suicide in the world.

The primary cause for the stress is identified as academic stress Lee & Larson (2000) explain this stress as an interaction between environmental stressors, student's appraisal and reactions for the same. It has now become a grave reality that is termed as a “career stopper”. It therefore,becomes a significant cause of concern as it is symptomatic of rising mental health concerns in India. (1,9)

CONCLUSION:
From our present study we can conclude that most of the first year students are dealing with some sort of stress in their daily life. The majority of students were in favour of stress management education to be included in the curriculum and also steps should be taken for its incorporation. The introduction of stress management education into the curriculum could be useful in combating this problem. In the present study, male dental students reported higher stress levels and a wider range of coping than female students, hence a stress management program should be implemented that focuses towards dental students. Therefore the current research points to the fact that psychological distress, such as stress, anxiety, and depression, is extremely common among dental students. More research is needed to uncover the causes of such high rates of mental illnesses, as well as confirmatory methods to validate the current study's results.

REFERENCES:
1. Al-Sowygh ZH. Academic distress, perceived stress and coping strategies among dental students in


