Gender difference in resilience among the under graduate medical students – A cross sectional study

Mahati Sundar, Archana R*

Department of Physiology, Saveetha Medical College, Saveetha Institute of Medical and Technical Sciences, Chennai-602105, Tamilnadu, India

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ABSTRACT
A health professional requires resilience to be able to handle the depression, anxiety and stress, which may occur when they are in the field. Resilience is the ability to tackle and overcome difficulties, with personal transformation and growth. Studies in undergraduate medical students have shown a difference in the stress scores of males and females, showing the possibility of gender difference in coping strategies and resilience. Therefore, the objective of the study was to assess the resilience scores of undergraduate medical students and to find out the existence of gender difference in their resilience scores. A cross-sectional study was conducted among the first and second-year MBBS students of 18-25 years of age after obtaining informed consent and Institutional ethical clearance. All willing male and female students fulfilling the inclusion and exclusion criteria formed the study participants. A standard resilience questionnaire was used to assess the resilience scores of the students and the male and female participants scores were noted separately. A total of 282 first and second-year undergraduate medical students participated in the study. A significantly higher percentage of female students had a high resilience score in comparison to male participants. Our study highlights the fact that females have a higher resilience compared to males. But still, the majority of male and female students are having moderate resilience. Thus, the future focus should be on the promotion of resilience-building measures to be taught to the students early in their medical curriculum to successfully tackle the stressful situations.

INTRODUCTION
Resilience is the ability to tackle and overcome difficulties, with personal transformation and growth. In medical education, it is important to comprehend the causes of a positive reaction in the face of traumatic, emotionally challenging situations.

This contrasts with concepts that address ‘deficits’ (Morgan and Ziglio, 2007) (what an individual lacks, what makes a person vulnerable), and puts a positive emphasis on recognizing and supporting the coping mechanisms and strengths of individuals. This key concept is of significant relevance to health professionals as resilience also defines a more general concept of responding to difficult situations that affect the individual in terms of their health behaviour (Howe et al., 2012).

Studies show that the present educational regimen may have an unplanned negative effect on students' mental health, with increased occurrence of...
depression, anxiety and stress among medical students (Guthrie et al., 1995). A number of factors, including workload, sleep deprivation, financial concerns, exposure to patients' suffering and deaths, a hidden curriculum of doubtfulness and academic pressure, student abuse - have been thought to contribute to this decline in students' mental health. According to (Dyrbye et al., 2006), psychological suffering among students may negatively affect their academic performance and lead to academic dishonesty.

Being a health professional requires resilience to be able to handle the depression, anxiety and stress, which may occur when they are in the field. As is the situation, the environment under which the students are educated and trained, is authoritarian and exhausting, which leads to the increase in stress, depression and anxiety, which may multiply dramatically due to other reasons like financial problems, peer pressure and family problems. Such an environment will take a toll on the cognitive and learning abilities of the students, affecting the academic performance of the students (Abdulghani et al., 2011).

Studies in undergraduate medical students have shown a difference in the stress scores of males and females, showing the possibility of gender difference in coping strategies and resilience (Dharshini et al., 2017). Therefore, the objective of the study was to assess the resilience scores of undergraduate medical students and to find out the existence of gender difference in their resilience scores.

**MATERIALS AND METHODS**

A cross-sectional study was conducted among a total of 282 first and second-year MBBS students after obtaining informed consent and clearance from the Institutional ethics committee (SMC/IEC/2018/11/365) of Saveetha Medical College & Hospital. Written informed consent was obtained from all the study participants and from the parents or guardian of all the study participants and information sheet regarding the study was given to all the participants after due explanation. The demographic details like name, age, the sex were collected. All the undergraduate first and fourth-year MBBS students in the age group 18-25 years studying in Saveetha Medical College who were willing to participate were included in the study. Students who were unwilling to participate, having medical conditions, depression, undergoing therapy, or treatment were excluded from the study.

A standard resilience questionnaire was used to assess the resilience scores of the students and the male and female participants scores were noted separately.

**Administration of Questionnaire:**

A standardized questionnaire on resilience was administered to the students. All the study participants were asked to fill out the hard copy of the questionnaire during the break time after lucid explanation of the questionnaire. All doubts were rectified at the time of filling the questionnaire and complete confidentiality was maintained (Wagnild and Young, 1993). The answers were marked on a 7 point Likert scale ranging from “1” (Strongly Disagree), “4” (Neutral) to “7” (Strongly Agree). Based on the resilience score (Total=175), they were be allocated into 3 groups – low (25-115), moderate (116-145) and high levels of resilience (146-175).

**Data analysis**

Data was analysed by SPSS 20.0. The depression, anxiety and stress scores between the male and female students was analyzed using Student’s t-test. P-value of less than 0.05 was considered as significant.
RESULTS AND DISCUSSION

A total of 282 first and second-year undergraduate medical students participated in the study. A majority of 53.49% of the male participants had a low resilience score of 95.31±6.21, while 32.79% of the female participants had low resilience in the range of 99.42±8.47 (Figure 1) which was significant (P<0.01). Amongst the students, 41.86% of males had a medium resilience score of 131.31±6.19 and 55.74% of the female students had medium resilience (Figure 2) of 129.14±4.27 (P<0.001). A significantly higher percentage of female students (11.47%) had a high resilience score (Figure 3) of 151.31±6.68 when compared to the percentage of males (4.65%) having high resilience 158.27±8.24 (P<0.001).

To become a capable and healthy professional, the students who are in the process of being trained to be one must be academically resilient to stress, depression and stress, which may burden the students. An academically capable student should be able to handle the stress which is laid upon him, to succeed in his career. (Wang et al., 1994) refer to academic resilience as an increased likelihood of (academic) success despite environmental adversities. Resilient students are described by (Alva, 1991) as those who maintain high motivational achievement and performance even when faced with stressful events and conditions that place them at risk of poor performance and by (Waxman et al., 2003) as those who succeed at school despite the presence of adverse conditions. Female students tend to be calmer during exams compared to male students as they are consistent and regular in their preparation. Further, prior preparation and planning reduces stress and makes them more resilient to face adverse situations. This could account for the higher resilient scores observed in females. Students have also shown male students to have higher stress scores compared to females, which accounts for the low resilience score in them (Hemavathi, 2017). Professionals need to be resilient (persistent, committed, and adaptable) to keep improving systems and to ensure they can take a principled position when necessary. This underpins the importance of embedding core professional values during the training years so that they can find meanings and reference points during difficult experiences, and learn to confront and redress poor practice (Warnock, 2008).

CONCLUSIONS

Our study highlights the fact that females have a higher resilience compared to males. But still, the majority of male and female students are having moderate resilience. Thus, the future focus should be on the promotion of resilience-building measures to be taught to the students early in their medical curriculum to successfully face any adverse situation in their life.

REFERENCES


