



RESEARCH ARTICLE

THE MENTAL HEALTH RESILIENCE OF STUDENTS AT MEDICAL UNIVERSITY – SOFIA

\*Elia K. Georgieva, Nikolai M. Hristov and Peshka A. Pesheva

Faculty of Public Health, Department of Social Medicine, Medical University-Sofia, Sofia, Bulgaria

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ABSTRACT

During medical education students are faced with various factors that affect their resilience. High levels of academic stress, poor role modelling and abuse are often associated with depression and a wish to quit studying medicine. This study was conducted to define the factors that affect the resilience of students at Medical university-Sofia. The results from our study showed that medical student's mental health resilience suffers by poor role modelling, abuse, high levels of academic stress, lack of mentoring, etc.

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INTRODUCTION

Many studies abroad suggested that mental health resilience of medical students worsens during their education (Dyrbye *et al.*, 2005; Dahlin *et al.*, 2005). High levels of academic stress and depression are common among medical students (Dahlin *et al.*, 2005; Compton, Carrera and Frank, 2008; Yusoff *et al.*, 2013). During medical education students are faced with various factors that affect their resilience. The poor mental health of medical students leads to worsened quality of life and a wish to quit studying medicine. Factors that affect negatively the mental health resilience of students are high levels of academic stress (Dyrbye, Thomas, and Shanafelt, 2006; Yusoff, Rahim, and Yaacob, 2010), poor role modelling and abuse (Frank *et al.* 2006; Maida *et al.* 2003; Heru *et al.* 2009; Schuchert 1998; Daugherty *et al.* 1998; Rosenberg and Silver 1984; Dyrbye *et al.* 2005; Cook *et al.* 2014). Some medical universities abroad have initiated curriculum changes with positive results for the student's mental health (e.g. mentoring, pass-fail evaluation, stress management programs, etc.) (Spring *et al.*, 2011; Dyrbye *et al.*, 2005; Hillis *et al.*, 2012; Slavin, Schindler, and Chibnall, 2014; Frei *et al.*, 2010). This study was conducted to define the factors that affect the resilience of students at Medical University-Sofia.

MATERIALS AND METHODS

A cross-sectional web-based study was conducted for a two month period (December 2016- January 2017).

\*Corresponding author: Elia K. Georgieva,  
Faculty of public health, Department of social medicine, Medical University-Sofia, Sofia, Bulgaria.

A questionnaire about medical student's mental health resilience was posted on a website visited by all medical students. In the study took part 1186 medical students from Medical faculty of Medical university- Sofia. The response rate was 90% with a significance level of 0.05. The questionnaire in this study was created through an extensive research of the existing literature on the issue of the medical student's mental health resilience. The target group of the study were Bulgarian medical students in all six courses of their medical education. To check understanding of items, the questionnaire was validated in a pilot study with 20 medical students. The students were regularly invited to take part in the web-based study during their practical exercises in Social medicine. The questionnaire consisted of 20 questions about medical student's resilience. The questionnaire covered issues such as stress factors for medical students, a wish to quit studying medicine, role modelling and abuse, self-assessment of physical, social and mental health, sources of support, etc. The data analysis was performed with the program R (version 3.2.3, R Foundation for Statistical Computing, Vienna, Austria).

RESULTS

The sample included 67.7 % of women and 32.3 % of men. The median age of the medical students in the study was 21.5 years. Students were presented with definitions of social and mental health and were asked to self-assess their physical, mental and social health (Table 1). Most medical students said that their physical health was very good (43%).

Physical health was assessed as excellent by 23% and as good by 29.9%. Social health was assessed as poor by 10.4% of the medical students. Just 20.5% of the medical students declared that their social health was excellent. Mental health was assessed as poor by 12.2% of the respondents and as excellent by only 16.1% of the medical students (Table 1). Levels of stress were assessed as very high by 40.2% of the students and as low by 6.6%. The academic stress was the leading source of stress in the medical student’s lives- 73.1% of the respondents declared for academic stress (Fig. 1). Other stress factors were problems in the personal life (28.6%), financial problems (27.1%), loneliness (24.9%), problems in the family (17.6%), and conflicts with educators (11.8%).

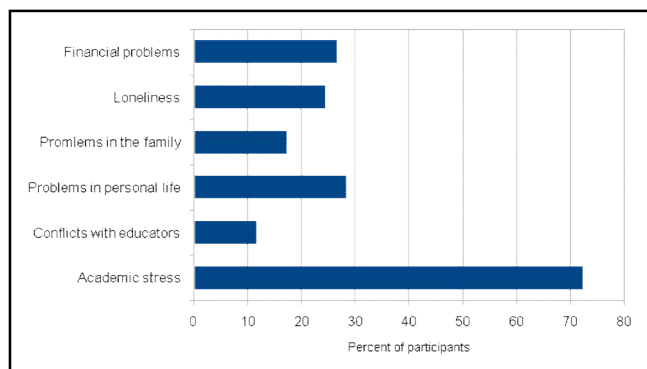


Fig. 1. Main causes of stress for medical students

Thoughts to quit studying medicine were declared by 29% of the medical students. Medical students were asked “What do you do to cope with stress?” Most of them said “meeting with friends” (65.4%), followed by answers such as sporting (35.1%), eating healthy (18.8%), reading books (17.5%), sleeping (0.7%), etc. 14.1% of the respondents said “I can’t cope with stress at all”. We asked medical students “Do you need a support to cope with stress?” and 82.5% of them answered “yes” to this question. Lack of support from family to cope with stress was indicated by 23.2% of the medical students, and lack of support from fellow students was declared by 37.9% of the respondents. 56.4% of the students in this study said they often feel sad. 81.4% of the students approved the introduction of services for support of mental health at Medical university-Sofia. Need of a mentor was indicated by 60.5% of the respondents. Most medical students (52.2%) said they confront mostly negative role models in medical education (Fig. 2).

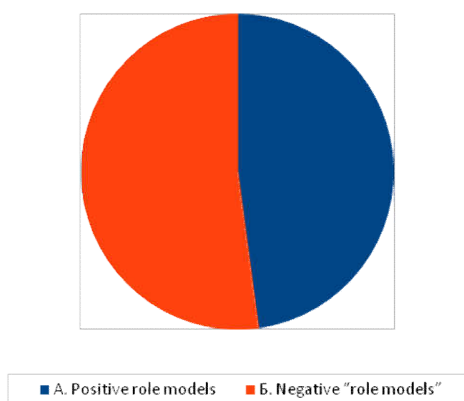


Fig. 2. What kind of role models among medical teachers do you mostly meet in your education?

25.7% of the respondents have faced abuse by medical teachers. To decrease the experienced stress students suggested measures such as better created curriculum with more free time (54%), better attitude of educators (17.5%), a support from the Medical University with availability of stress management courses (13.7%), introduction of pass-fail evaluation(8.6%) (Fig.3). We found a statistically significant link between academic stress and a wish to quit studying medicine ( $p < 0.05$ ) and between negative role modelling and stress ( $p < 0.05$ ).

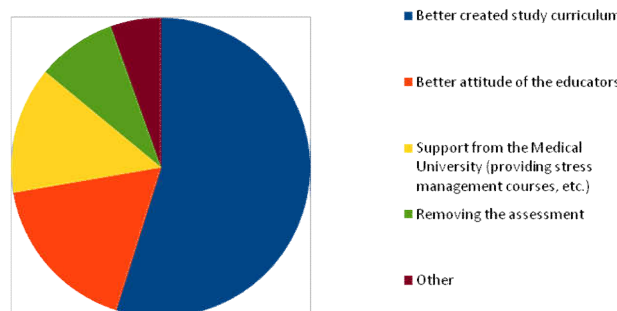


Fig. 3. What kind of measures do you suggest to decrease your stress levels?

Table 1. Self-assessment of health by medical students

	A. Excellent	B. Very good	C. Good	D. Poor
1. How do you assess your physical health?	22.95	43.05	29.82	4.19
2. How do you assess your mental health?	16.25	34.17	37.35	12.23
3. How do you assess your social health?	20.47	34.56	34.56	10.40

DISCUSSION

With performing this study we got more understanding about the viewpoint of medical students of their health and different factors that affect their resilience. Our study aim wasn’t to find out the levels of depression among students. Previous studies of student’s mental health were performed in 2013 and 2015 at Medical university- Sofia. These studies found out high levels of depression among medical students at Medical faculty-Sofia. With our current study we got more information about factors affecting student’s resilience and the opinion of medical students regarding the introduction of measures for promotion and prevention of mental health. According to the definition of the World Health Organization “Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”(WHO constitution). Our study showed that the social and mental health were assessed as poor by a great number of students. Thus according to the WHO definition of health, we can’t say that students studying medicine at Medical University-Sofia are healthy. Mental health was assessed as the poorest of the three dimensions of health. Social health was also assessed as poor by some of the medical students. Many students do not receive support from family and friends, which increases their stress levels. The academic stress was indicated as the leading source of stress in student’s lives. We suggest that introduction of programs for coping with stress in the educational curriculum would be beneficial for medical student’s wellbeing.

More attention should be paid to the support of the mental health resilience of medical students. In this way their overall health and well-being could be improved. Our study showed that students have a positive attitude towards introduction of programs for the support of their mental resilience. Such programs could include elements such as stress management education, introduction of mentoring, etc. The confrontation of medical students with negative role models and abuse was another factor in our study that affects their resilience. The results from our study imply for the lack of supportive learning environment - high levels of stress and poor role modelling. Medical educators need to support students to develop resilience throughout their stay at the Medical school. Medical teachers should be positive role models, supportive mentors and a resource for the improvement of medical student's health.

### Conclusions

Medical student's mental health resilience suffers by poor role modelling, abuse, high levels of academic stress, lack of mentoring, lack of enough support from family and from the Medical University, etc. The results from the study showed that medical students approve the creation of programs for promotion of mental health at Medical University-Sofia. We recommend a provision of support for strengthening the resilience of students at Medical University-Sofia.

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