Studi sperimentali

Anxiety, depression and personality traits in Italian medical students

Ansia, depressione e tratti di personalità in studenti di medicina in Italia

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SUMMARY. **Background.** Anxiety and depressive symptoms are common worldwide and, according to the World Health Organization, their prevalence has increased in the last decades. Further, dysfunctional personality traits are frequently coupled with anxiety and depressive symptoms. The prevalence of these symptoms is particularly relevant in medical students. **Methods.** This study assessed the prevalence of anxiety and depressive symptoms in Italian medical students from the University of Modena and Reggio Emilia, by using the Hospital Anxiety and Depression Scale (HADS). Personality traits were assessed as well by employing the Personality Inventory for DSM-5, Brief Form (PID-5-BF), to explore their association with anxiety and depressive symptoms. A self-administered questionnaire was sent by e-mail to all the 944 students and 459 (48.6%) were enrolled. Besides the HADS and the PID-5-BF, the questionnaire included items concerning everyday life activities such as sports and academic features such as the years of attendance and average marks. **Results.** A high prevalence of anxiety (n=92; 20%), depression (n=32; 7%), and comorbid anxiety-depressive symptoms (n=218; 47%) was reported. Multiple binary logistic analysis showed increased levels of anxiety and depression to be associated with personality traits, namely detachment and negative affect, and use of cognitive enhancers. On the other hand, sports activities, social activities and distraction were related to lower levels of symptoms. **Conclusions.** Symptoms of depression and anxiety are common among Italian medical students and specific interventions should be implemented to target them.

KEY WORDS: anxiety, depression, epidemiology, medical students, personality traits, prevalence, psychiatry, survey.

RIASSUNTO. **Introduzione.** I disturbi mentali comuni con depressione e ansia sono universalmente diffusi e, secondo l'Organizzazione Mondiale della Sanità, negli ultimi decenni la loro prevalenza è in costante aumento. Tratti disfunzionali di personalità sono frequentemente associati a sintomi ansiosi e depressivi. La prevalenza di sintomi depressivi e ansiosi è particolarmente elevata negli studenti di medicina. **Metodi.** La presente ricerca ha valutato la prevalenza di sintomi di ansia e depressione in studenti del Corso di Laurea in Medicina e Chirurgia dell'Università di Modena e Reggio Emilia, attraverso la somministrazione della Hospital Anxiety and Depression Scale (HADS). Sono stati esplorati anche i tratti di personalità con il Personality Inventory per il DSM-5, Brief Form (PID-5-BF), per valutare la loro associazione con i sintomi di ansia e depressione. Un link al questionario, compilabile online, è stato inviato per mail a tutti i 944 studenti iscritti ed è stato compilato da 459 (48,6%). Oltre alla HADS e al PID-5-BF, il questionario comprendeva anche item su attività della vita quotidiana e sul percorso accademico, come l'anno di corso e la media dei voti. **Risultati.** Si è riscontrata una elevata prevalenza di ansia (n=92; 20%), depressione (n=32; 7%), e di ansia e depressione insieme (n=218; 47%). L'analisi di regressione ha mostrato che aumentati livelli di ansia e depressione sono associati ai tratti di personalità di distacco e affettività negativa e all'uso *di cognitive enhancers*, mentre l'attività sportiva, gli incontri sociali e la distrazione erano correlati ad un minore livello di sintomi. **Conclusioni.** Sintomi di depressione e ansia sono comuni anche tra gli studenti di medicina in Italia e si dovrebbero intraprendere interventi specifici per ridurne la prevalenza.

PAROLE CHIAVE: ansia, depressione, epidemiologia, studenti di medicina, tratti di personalità, survey.

BACKGROUND

According to the World Health Organization, the prevalence of anxiety and depressive symptoms has steadily increased in the last years[1]. Medical students are not immune to this phenomenon. In fact, it is widely recognized that they represent a population at risk for high distress, burnout and psychological suffering. High or extremely high stress levels have been reported in studies carried out around the world, as a cause for increased risks of developing burnout, suicidal thoughts, sleep disorders, alcohol abuse and anxious-depressive disorders. In particular, medical students show a prevalence of anxiety up to 65.5%, depression up to 66.5%, and psychological distress up to 96.7% depending on different samples and measures[2-5]. A meta-analysis of 183 studies involving medical students from 43 countries reported a mean

prevalence of 27.2% of depressive symptoms and 11.1% of suicidal ideation[3]. These rates are remarkably high and above those found in the general population; they are also above those reported by students pursuing other degree courses[6].

Possible causes of this high level of stress can be traced back to various factors, both socio-demographic, such as gender, economic status and cultural background, and academic, such as high workload, number of hours spent in curricular lessons and hospital internships, competitive environment, complex and mnemonic subjects and frequent exams[7]. Moreover, being exposed to complex interactions with patients and relatives can increase the psychological and emotional burden of the degree course.

Individual factors may play a role in the development of psychological distress. These factors include the presence of dysfunctional personality traits or diagnosable personality disorders[8]. It has been proposed that specific personality traits may be associated with stress, anxiety and depression among medical students[9].

Stress, anxiety and depression are also associated with the phenomenon of burnout, first described in health professionals, defined by the presence of emotional exhaustion, depersonalization and low personal accomplishment[2]. Doctors, postgraduates and medical students are particularly at risk of burnout[10-13], which impairs performance, increases medical errors, decreases operational skills and negatively affects the relationship with patients. Among medical students, burnout can cause poor study performance, social withdrawal and ultimately university dropout[5,14,15].

Special attention should be paid to the issue of suicidal ideation among medical students. In fact, suicidal ideation ranges between 11.1% and 15% in medical students, while lifetime prevalence rises up to 43%[3]. These percentages are higher than those found in the general population. Notably, only 15.7% of students suffering from psychological distress seek help. Medical doctors are also a high-risk population group for suicide, with suicidal ideation rates well above the general population[16,17].

In light of the above statistics, specific evidence-based programmes have been proposed, aimed at reducing stress among medical students, ranging from individual targeted interventions such as relaxation techniques, meditation and mindfulness to structural interventions such as redistribution of workload, increase in practical activities and improvement of dialogue between students and teachers[18]. Further, it has been suggested that in order to reduce stress levels, medical undergraduate courses could benefit from adopting a model of transversal teaching, as is used in business schools. This model is based on problem solving and the stimulation of creative thinking as well as development of personal projects. It can be integrated with more traditional methods of study such as frontal lectures[19].

Research on depression and anxiety among Italian university students is scant[20] and there is a substantial lack of studies investigating the prevalence of anxiety-depressive symptoms and personality traits among Italian medical students. Therefore, the present study was conceived, with the aim to identify the prevalence and severity of anxiety and depressive symptoms and their association with personality traits, in the medical students attending the University of Modena and Reggio Emilia, Italy. Building on existing literature, our hypothesis stated that the prevalence of such symptoms will be high, consistent with the international studies available and associated with personality traits.

METHODS

Study Design

The study is cross-sectional, involving all medical students from the University of Modena and Reggio Emilia, Italy.

In 2017, all 944 enrolled medical students from across all six years of the medical school were sent an email on their institutional email address. The email invited them to join the study and contained a restricted access link to an electronic questionnaire. The survey could only be filled in once. Access to the questionnaire was granted from 25 May, 2017 to 31 July, 2017. The study was approved by the Local Ethical Committee and was conducted according to the Declaration of Helsinki.

Measures

The socio-demographic features as well as information concerning university training, namely, age, gender, course year, number of exams left behind, status of supplementary year student and average marks, were collected for each participant.

Anxiety and depressive symptomatology were assessed by means of the Hospital Anxiety and Depression Scale (HADS), which is designed to measure the presence and severity of anxiety and depression in the 7 days prior to the administration of the rating scale. The HADS consists of 14 items, of which 7 are for anxiety and 7 for depression. The score for each item can range from 0 to 3, yielding a total score ranging 0-21 for each symptom class. Scores equal to or higher than 8 indicate the presence of symptoms of anxiety and/or depression[21].

Personality traits were studied by means of the brief form of the Personality Inventory for DSM-5, with 25 items (PID-5-BF). The PID is divided into five domains (negative affect, detachment, antagonism, disinhibition and psychoticism), each containing five items, for a total of 25 items with score ranging from 0 to 3. The higher the score in a single domain, the greater the presence of a maladaptive personality trait[22]. These five broad domains are the maladaptive variants of the 'Big Five', or Five-Factor Model of personality (FFM), a widely known and validated model of personality traits, and are also similar to the maladaptive variants of Personality Psychopathology Five (PSY-5). The DSM-5 defines negative affectivity as frequent and intense negative emotional experiences, detachment as avoidance of social-emotional experiences with withdrawal and anhedonia, antagonism as behaviour in contrast with others and lack of empathy, disinhibition as a search for immediate gratification and impulsiveness, and psychoticism as bizarre and incongruous behaviour, both form and content-wise.

The third, ad hoc section of the questionnaire included three mixed-answer questions (open-ended and closed-ended), which explored the students' opinions about the causes of their perceived distress, the coping mechanisms adopted and the solutions proposed to reduce or address this issue. The questionnaire is available on request from the corresponding author.

Statistics

The data were analysed using Gretl 1.9.4 software package for Windows.

Descriptive statistics were performed by using means, medians, frequencies, standard deviations and ranges. The inferential analysis was performed by two different approaches. First, a correlation analysis was implemented in which all co-variables were tested against the HADS, which was used as a continuous and categorical variable (the latter indicating the absence or presence of symptoms according to standardized cut-offs: 0-7= no symptoms, 8-21= presence of symptoms) for both anxiety and depression. Further, simple and multiple logistic regression models were run. All co-variables were individually tested against the dependent variables, operationalised in three possible combinations, as follows: a) 0= absence of anxiety (HADS-A <8) vs. 1= presence of anxiety (HADS-A ≥8); b) 0= absence of depression (HADS-D < 8) vs. 1 = presence of depression (HADS-D ≥8); and c) absence of anxiety and depression (both HADS-A and HADS-D <8) vs. 1= presence of anxiety and depression (both HADS-A and HADS-D ≥8). The variables analysed as possible confounders were age (dichotomised according to the median); sex (dichotomised as: 0= female; 1= male); average marks (dichotomised according to the median); number of exams left for the students to attempt (dichotomised according to the median); the five personality domains (negative affect, detachment, antagonism, disinhibition and psychoticism) all dichotomised according to the median; coping strategies; causes identified by students as responsible of stress; and suggestions by students to overcome it. An alpha level below p=0.25 was considered significant at the univariate regression. Only variables reporting a p<0.25 at the univariate analysis were included in the multiple model. This cut-off was chosen to reduce the risk of type II errors[23]. The usual alpha level below p=0.05 was considered significant at the multiple regression analysis.

Table 1. Demographic characteristics, HADS and PID 5 BF scores of the surveyed medical students.

	All sample	Men	Women
Number of participants	459	185 *(40%)*	274 *(60%)*
Transfer students	141 *(30%)*	83 *(18%)*	58 *(12%)*
Age (years)	23.09±2.64	23.03±2.3	23.13±2.8
Mean marks (from 1 to 30)	27.1±1.52	27.05±1.5	27.13±1.5
Number of exams left for the student to attend	1.75±1.9	1.70±1.8	1.79±1.9
HADS scale score ≥8			
Anxiety only	92/459 *(20%)*	41/185 *(22%)*	51/274 *(20%)*
Depression only	32/459 *(7%)*	14/185 *(7%)*	18/274 *(7%)*
Anxiety and depression	218/459 *(47%)*	72/185 *(38%)*	146/274 *(57%)*
PID scale score			
Negative affect	6.2±3.1	5.6±3.1	6.6±3.0
Detachment	4.4±3.0	4.1±3.0	4.5±3.0
Antagonism	3.6±2.7	4.0±2.8	3.2±2.6
Disinhibition	3.5±2.7	3.7±3.0	3.4±2.5
Psychoticism	4.4±2.8	4.5±2.8	4.3±2.8

RESULTS

Of the 944 students initially contacted, 459 filled in the questionnaire (response rate of 48.6%). The demographic features of the respondents are presented in Table 1. The sample consisted of 185 male participants (40%) and 274 female participants (60%). Of the 459 participants, 141 (30%) were transfer students who had moved to Modena from other cities. The mean age was 23±3 years, ranging between 19 and 50 years. The average university marks (out of a maximum of 30) ranged from 21 to 30, with a median of 27.1 and the range of exams left for the students to attend was between 0 and 8, with a median of 1.

Significant levels of distress, defined as the presence of anxiety, depression or both, were found in 342 (74%) students; of these, 92 participants (20%) showed only anxious symptoms, 32 (7%) showed only depressive symptoms and 218 (47%) showed symptoms both of anxiety and depression. The prevalence of comorbid anxiety-depressive symptoms in female participants (n=146, 57%) was significantly higher (χ^2=9.14, p<0.01) than male participants (n=72, 38%). Among the personality domains, negative affect had the highest mean score (6.2±3,1). Female participants showed higher levels of negative affect (6.6 vs. 5.6; t=4,9; p<0.01) and detachment (4.5 vs. 4.1; t=5.5; p<0.01) compared to male participants. Male participants instead had higher scores than female participants in antagonism (4 vs. 3.2; t=5.9; p<0.01), psychoticism (4.5 vs. 4.3; t=5.1; p=0.01) and disinhibition (3.7 vs. 3.4; t=4.8; p=0.01).

As shown in Figure 1, the prevalence of anxious and depressive symptoms decreases from the first to the fifth year of study with an inflexion during the sixth year, which in the case of anxiety even exceed the levels of the first year (72% in the first year to 85% in the sixth year). On the other hand, in the case of depression, symptoms remain more or less stable (66% to 62%).

As Table 2 shows, students rated the high study load as the main cause of personal distress (n=385, 84%). Among the coping strategies adopted to deal with psychological dif-
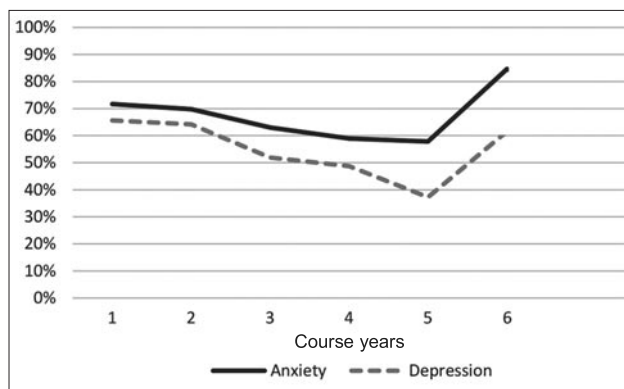
Figure 1. Anxiety and depression prevalence by course year.

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Table 2. Perceived causes of stress, coping mechanisms and suggestions to address it given by surveyed medical students.

Perceived causes of stress		Coping mechanisms		Advices	
High workload	385 (*84%*)	Social activities	295 (*64%*)	Intermediate tests to break up big exams	305 (*66%*)
High levels of competitiveness	250 (*54%*)	Sports	263 (*57%*)	Increase in practical activities	262 (*57%*)
Uncertainty about the future	225 (*49%*)	Recreation	259 (*56%*)	Better comunication with teachers	187 (*41%*)
		Procrastination	117 (*25%*)	Decrease of workoad	156 (*34%*)
		Supplements used as cognitive enhancers	107 (*23%*)	Psychological support from university	107 (*23%*)
		Alcohol and substance use	57 (*12%*)	Pass/fail evaluation system	84 (*18%*)

ficulties, the most reported (n=295, 64%) were social activities such as going out with friends, volunteering and group activities. Students suggested actions such as providing intermediate tests to break up the workload of big exams (n=305, 66%) and increasing practical activities such as internships and practical training (n=262, 57%) could be implemented to reduce their levels of stress.

Simple Regression Analysis

As given in Table 3, the 'anxiety only' symptomatology showed a direct correlation with social and sporting activities. Further, procrastination, detachment, negative affectivity and the use of dietary supplements as cognitive enhancers were inversely related to anxiety, together with the request to add intermediate tests to break up the workload of big exams. Depressive symptoms were directly associated only with detachment. Notably, comorbid anxious-depressive symptoms showed a peculiar reversal of the odds ratios (compared to those of anxiety alone); they increased when associated with disinhibition, procrastination and use of dietary supplements as cognitive enhancers. On the other hand, female gender, sport and social activities and recreation were associated with decreased odds of comorbid anxiety-depressive symptoms.

Multiple Regression Analysis

Table 4 shows the results of the multiple regression analysis. Sport activities were associated with increased levels of anxiety, while the use of enhancers, procrastination and the request for intermediate tests were associated with decreased levels of anxiety. The presence of depressive symptoms was once again associated only with detachment. Finally, comorbid anxiety-depressive symptoms were associated with negative affectivity, detachment and use of cognitive enhancers, whereas, sports, social activities and recreation were associated with decreased odds of comorbid anxiety-depressive symptoms.

DISCUSSION

The prevalence of anxiety and/or depressive symptoms in our sample of medical students is substantially consistent

with the findings from other similar studies[24,25]. In a previous study by our group in the same population, we showed that use of cognitive enhancers is associated with higher perceived academic pressure[26]. The wide range of prevalent symptoms reported in the literature may be explained by several factors[27], including the use of heterogeneous and multiple psychometric instruments (with different degrees of sensitivity and specificity) and socio-cultural differences between populations of students from different countries, wherein the mechanisms of expression and recognition of emotionality can vary greatly, both in intensity and in the way they are shown and reported[28,29].

Our findings show that the prevalence of anxiety and depressive symptoms is higher in the students studying in the first year of medical school and gradually decreases up to the sixth and last year, when another peak is noticed. This is consistent with other studies[30,31] and may be due to the greater challenges faced by students during their final months of university, including the final dissertation presentation, that precede the start of their working life.

The different prevalence of comorbid anxiety-depressive symptoms among men and women is consistent with existing literature[32-34]. Several potential reasons for this finding have been hypothesised, such as neuroendocrine features linked to hormonal cycles, environmental factors and social, work and family stressors[35-37].

The association between anxiety-depressive symptoms with detachment and negative affectivity found in the multiple regression is in line with the literature. This association includes two personality dimensions belonging to the area of internalisation, marked by depression, anxiety, anhedonia and social withdrawal[38,39]. Our findings confirm the link between personality and anxious-depressive symptoms and suggest the importance of early identification of maladaptive personality traits. Nevertheless, since the study is transversal, it does not allow the demonstration of a unilateral relationship of the cause and effect type; it could also prove how the onset of anxiety or mood disorders can lead to the development of maladaptive behavioural characteristics.

The association between comorbid anxiety-depressive symptoms and sports and social activities (including recreation) is well known. The effects of sport activities, mainly aerobic ones, were proved beneficial to both physical and mental health[40-42]. On the other hand, loneliness is a well-known risk factor for various conditions[43]. Our data suggest

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Table 3. Results of the simple binary logistic regression. Outcomes: anxiety only, depression only, anxiety and depression.

	Anxiety only			Depression only			Anxiety and depression		
	OR	P	95%CI	OR	p	95%CI	OR	P	95%CI
Female gender	1.25	0.35	0.78-1.97	1.16	0.68	0.56-2.4	**0.56**	**<.01**	**0.38-0.82**
Age >=23	1.09	0.73	0.68-1.74	1.16	0.7	0.55-2.43	0.77	**0.17**	0.53-1.12
Mean marks>=27.1	1.21	0.41	0.76-1.92	0.59	**0.16**	0.28-1.23	0.73	**0.09**	0.51-1.06
Number of exams left for the student to attend	0.83	0.45	0.52-1.33	1.46	0.35	0.66-3.23	1.35	**0.12**	0.92-1.99
Negative affect	**0.92**	**0.02**	**0.86-0.99**	1	0.99	0.89-1.12	**1.4**	**<.01**	**1.29-1.51**
Detachment	**0.85**	**<.01**	**0.78-0.92**	**1.09**	**0.06**	**1-1.19**	**1.49**	**<.01**	**1.37-1.62**
Antagonism	0.92	**0.08**	0.85-1.01	1.1	**0.1**	0.98-1.23	**1.07**	**0.04**	**1-1.15**
Disinhibition	1	0.99	0.91-1.09	1.02	0.71	0.93-1.12	1.08	**0.02**	1.01-1.16
Psycoticism	0.93	**0.07**	0.86-1.01	0.98	0.69	0.87-1.1	**1.29**	**<.01**	**1.2-1.39**
Sports	**2.19**	**<.01**	**1.33-3.6**	1.26	0.54	0.6-2.65	**0.39**	**<.01**	**0.27-0.57**
Social activities	**1.75**	**0.03**	**1.05-2.91**	0.7	0.33	0.34-1.44	**0.41**	**<.01**	**0.28-0.61**
Recreation	1.33	0.23	0.83-2.13	1.31	0.47	0.63-2.75	**0.63**	**0.01**	**0.43-0.91**
Supplements used as cognitive enhancers	**0.43**	**0.01**	**0.22-0.82**	1.1	0.81	0.48-2.54	**2.75**	**<.01**	**1.75-4.33**
Procrastination	**0.46**	**0.01**	**0.25-0.85**	1.16	0.72	0.52-2.57	**1.95**	**<.01**	**1.27-2.99**
Alcohol and substance use	1.21	0.58	0.62-2.35	1.34	0.57	0.49-3.62	0.85	0.56	0.48-1.48
Uncertainty about the future	0.94	0.8	0.6-1.49	1.57	**0.23**	0.76-3.26	1.12	0.56	0.77-1.61
High levels of competitiveness	1.11	0.66	0.7-1.76	0.82	0.6	0.4-1.69	1.25	0.24	0.86-1.8
High workload	0.62	0.1	0.35-1.1	0.82	0.68	0.33-2.07	1.23	0.42	0.74-2.03
Decrease of workoad	0.67	0.12	0.41-1.12	1.18	0.66	0.56-2.48	1.16	0.44	0.79-1.71
Intermediate tests to break up big exams	**0.44**	**<.01**	**0.28-0.7**	1.31	0.5	0.59-2.91	**1.55**	**0.03**	**1.05-2.3**
Pass/fail evaluation system	1.21	0.51	0.68-2.14	1.27	0.59	0.53-3.05	1.13	0.61	0.7-1.82
Psychological support from university	1.49	0.13	0.89-2.49	0.74	0.53	0.3-1.86	1.23	0.36	0.8-1.89
Better comunication with teachers	1.36	0.19	0.86-2.15	1.71	**0.14**	0.83-3.52	0.73	0.09	0.5-1.06
Increase in practical activities	1.36	**0.2**	0.85-2.18	1.11	0.79	0.53-2.3	**0.58**	**<.01**	**0.4-0.84**

OR= Odds Ratio; p= p-value; 95%CI= 95% confidence intervals.

that relational and group activities aimed at reducing isolation may play a key role in the reduction and prevention of severe distress, as pointed out by other authors[44-46]. With respect to recreation, it is worth noting that leisure and relaxation activities such as meditation and cognitive based distraction proved to reduce the levels of anxiety even after a single session[47].

With respect to sport activity, two categories of participants stemmed out from the multiple regression analysis. On the one hand, there are individuals featured only by anxiety symptoms; in this group, the higher the levels of anxiety, the higher the levels of sport activity. On the other hand, there are individuals featured by comorbid anxiety-depressive symptoms; in this group, the more severe the symptoms, the

less the levels of sport activity. Building on these findings, we hypothesize that in the first group (anxiety only), sport activity may be conceived as a sort of coping mechanism to manage anxiety. In this sense, the higher the levels of anxiety, the higher the need to play sports to cope with it and manage it. Differently, the second group (comorbid anxiety-depressive symptoms) may be somehow discouraged from sport activity from the further development of clinical symptoms of anxiety and depression. This interpretation in consistent with previous research[48], pointing out the need to clearly distinguish anxiety disorders from anxious-depressions, as well as with psychopathological research[49].

Our results confirm that monitoring the levels of anxiety and depression in medical students is important. Further, in-

Table 4. Results of the multiple binary logistic regression. Outcomes: anxiety only, depression only, anxiety and depression.

	OR	p	95%CI
Anxiety Only			
Sports	1.78	0.03	1.06-2.97
Supplements used as cognitive enhancers	0.43	0.01	0.22-0.84
Procrastination	0.48	0.02	0.26-0.90
Intermediate tests to break up big exams	0.5	<.01	0.31-0.81
Depression only			
Detachment	3.34	<.01	1.35-8.29
Anxiety and depression			
Increase in practical activities	0.61	0.02	0.40-0.94
Negative affect	2.77	<.01	1.73-4.42
Detachment	2.89	<.01	1.80-4.64
Sports	0.59	0.02	0.38-0.91
Social activities	0.61	0.03	0.39-0.96
Recreation	0.57	0.01	0.37-0.89
Supplements used as cognitive enhancers	2.03	<.01	1.21-3.41

OR= Odds Ratio; p= p-value; 95%CI= 95% confidence intervals.

creased levels of anxiety and depression should be addressed with a multi-systemic and comprehensive approach, and with specific policies. Examples of this approach are the VMS Wellness Program of the Vanderbilt School of Medicine and the Dutch 4T-CABS (Four-Tier Continuum of Academic and Behavioural Support)[50,51]. The integration of similar programmes in the university curriculum improved the psychophysical wellbeing of students, reducing burnout symptoms and increasing their performance.

This study has several limitations that need to be acknowledged. First, the cross-sectional design does not allow the establishment of causal inferences about the relationship between anxious-depressive symptoms and other variables. Second, a volunteer bias may also be present which may have resulted in the selection of the most directly involved and interested participants. Third, carrying out the study in only one Italian medical school limits the generalisability of our findings to the rest of the country. Future studies should overcome all these limitations.

Despite the limitations listed above, our research shows that symptoms of depression and anxiety are likely to be common among Italian medical students. Therefore, specific interventions that target this population should be implemented to overcome them.

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