Prevalence of burnout and its correlates among medicos of Malappuram district

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Abstract

Introduction: Medical students are continuously exposed to psychosocial stressors throughout training which can lead to Burnout; which is state of emotional, mental and physical exhaustion caused by excessive and prolonged stress.

Objectives: To assess the prevalence and its correlates of burnout among medical students of a tertiary medical college at Malappuram District.

Materials and Methods: A descriptive study was conducted among medical students of a tertiary medical college at Malappuram District using the Copenhagen burnout inventory Scale to find out prevalence and correlates of personal, work and patient related burnout. The data was entered into excel and transferred to Spss version 16 for analysis. Frequencies were calculated for demographic variables using proportions and Chi-square was used as test of hypothesis.

Results: Prevalence of work related burnout was found more among first and least among final year batch of students and the difference were significant. Males experienced higher work related and patient related burnout. Those who stay away from the family experience more personal burnout compared to day scholars. Burnout was higher in smokers and who had history of alcohol intake and least in those who exercise regularly.

Conclusions: About 1/3rd of the students had burnout in one or the other dimensions of Copenhagen burnout inventory. Interventions in Behavior change communication (BCC) should be emphasized regarding regular exercise, adequate sleep and healthy diet various strategies to cope up stress should be incorporated in the medical curriculum.

Keywords: Stress, Burnout, Medical students.

Introduction

Contemporary public health challenges have different causes. Initially the core challenge was regarding infectious diseases. But in the present scenario at developing countries, we are facing challenge of triple burden of disease comprising of infectious disease, non communicable disease (including mental health diseases) and other patterns directly related to globalization such as trauma.[1] As with infectious illnesses, it is the interaction of our biological vulnerabilities with environmental toxins that undermines our health. The contemporary toxins, however, are not microorganisms but the effects of toxic stress and trauma. Stress is a kind of non specific response of the body to any demand made upon it. It has spread like an invisible epidemic and has taken majority of people under its pedigree.

Burnout is state of emotional, mental and physical exhaustion caused by excessive and prolonged stress. It occurs when you feel overwhelmed and unable to meet constant demands. As the stress continues, you begin to lose the interest or motivation in your work or commitment. The cause is quite trivial and happens to germinate from our day to day activity and disturbances we experience around. There is no one specific or clear reason to find the real cause. The excessive workload and educational content, combined with the high level of educational demands, a lack of time for leisure, family and friends contribute to their stress. Burnout syndrome among students has the following three dimensions: 1) emotional exhaustion (due to educational demands), 2) cynicism (indifference/apathetic attitude toward academic activities), and 3) low professional efficacy (perception of incompetence as a student).[2]

Golembiewski et al in the year 1988 explained the experience of too much pressure and few sources of satisfaction can develop into a feeling of exhaustion leading to burnout. In 1982 Maslach conceptualized burnout as having three dimensions and developed the Maslach Burnout Inventory (MBI).[3] She did finally acquiesce to the consensus opinion that burnout is prevalent across other job domains as well. Another scale of burnout was by Copenhagen Burnout Inventory (CBI), a public domain questionnaire developed by the National Institute for Occupational Health, Denmark. The key feature of the CBI is that it differentiates three forms of burnout, which were defined according to the life domain from which it may arise: (1) personal or generic burnout, measuring the degree of physical and psychological exhaustion experienced by the person, regardless of occupational status; (2) work-related burnout, measuring the degree of physical and psychological exhaustion which is perceived by the person as related to work; and (3) client-related burnout – measuring the degree of physical and psychological exhaustion which is perceived by the person as related to work with clients. Scale scores are calculated by taking the mean of the items in that scale.[4]

As future doctors, medicos need to turn inward and reflect to know for what they are chasing for and really what they are trying to achieve productively. The ultimate question is do they really want to manage stress or to continue with existing unstructured path. This has to be asked profoundly before it gets too late to amend the damage they are causing to themselves. Burnout syndrome affects work performance, self-esteem, and psychological health, and it may progress to other mental disorders. Thus,

this study is humble attempt to enable early detection of burnout syndrome and emphasize need to encourage the adoption of preventive measures for medicos at Malappuram district.

Materials and Methods

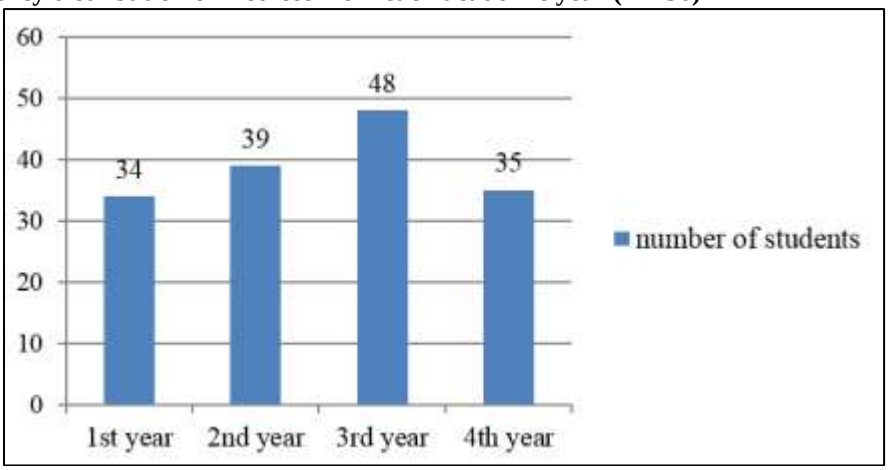
The objective of the study was to assess the prevalence and its correlates of burnout among medical students of a tertiary medical college at Malappuram District. It was a descriptive study conducted at tertiary medical college at Malppuram District, Kerala, India. The duration of sample size collection was 3 months (3rd September to 2nd December of the year 2018). A group of five medical students were trained to collect data using a predesigned questionnaire. The study samples were students of first, second, third and final year MBBS students who were selected on convenient sampling method. Those who were not willing to participate in the study were excluded. The sample size calculated was 156, based on the equation $4pq/d^2$, where prevalence (p) is 11 and absolute error (d) is 5.[5]

Burnout was measured with the Copenhagen Burnout Inventory (CBI), which is a reliable and validated 19-item questionnaire. The Copenhagen Burnout Inventory measures three aspects of burnout in respondents: Personal Burnout (6 questions), Work-related Burnout (7 questions) and Patient-related Burnout (6 questions). In this study, responses were made in the following categories: Always, Often, Sometimes, Seldom, Never/Almost Never with each corresponding to a score 100, 75, 50, 25, 0. Total score on the scale is the average of the scores on the items. Burnout scores less than 50 were coded as no/ low levels and more than 50 as high burnout levels for all the three dimensions. The data was entered into excel and transferred to Spss version 16 for analysis. Frequencies were calculated for demographic variables using proportions and Chi-square was used as test of hypothesis. And the data was expressed in appropriate tables and graph.

Results

In the study, majority (60.2%) of the study population were females. And 59% were females and 6.41 were males. Only 9.7% students were day scholars staying with family, the rest 91.7% were staying in hostel .32.05% doesn't involve in any form of exercise whereas 41.02% exercise occasionally and 26.92% were regular .76.9% had smoked at least once in lifetime and 92.3% have not experienced smoking. History of alcohol intake was seen in 6.41% and 93.5% students never drank alcohol.

Bar Chart 1: Frequency distribution of medicos from each academic year (n=156)



Among different batches, the students who participated most in the study belongs to 3rd year MBBS. Prevalence of work related burnout is more among first year and least in all dimensions relatively among final year batch of students and the difference were found to be statistically significant. First year students had least patient burnout as they have relatively very less interaction with patients compared to other batches. Work related and patient related burnout was mainly experienced by males, whereas personal burnout was least experienced by females and the result were statistically significant. Majority of the students stay in hostels or away from their family. And as most of the study population stay away from the family, they experience more personal burnout compared to day scholars but patient related burnout is very low in students staying in hostel. Students doing regular exercise have comparatively low burnout in all three dimensions. Only very few students among the study population had smoking habit and relatively they had high work related burnout and the results were statistically significant. Relatively proportion of 6.41% students had history of alcohol intake and the students who had history of alcohol intake were comparatively having higher work related burnout and the results were significant.

Table 1: Prevalence of burnout with each dimension of copenhagen burnout inventory

Variables	Total no of students	No of students with personal burnout		No of students with work burnout		No of students with patient burnout	
Academic Year							
1st year	34(21.7%)	9(26.4%)		20(58.8%)	0.001**	0	
2nd year	39(25%)	7(17.9%)	0.04*	5(12.8%)	0.008**	6(15.38%)	0.001**
3rd year	48(30.7%)	8(16.6%)	0.005**	8(16.6%)	0.001**	3(6.25%)	0.008**
4th year	35(22.4%)	8(22.8%)	0.002**	11(31.4%)	0.006**	7(20%)	0.003**
Gender							
Males	64(41%)	11(17.1%)		23(35.9%)		12(18.7%)	0.04*
Females	92(59%)	21(22.8%)		21(22.8%)		4(4.3%)	
Stay							
Stay with family	13(8.3%)	2(15.3%)		4(30.7%)		4(30.7%)	
Stay away from family	143(91.7%)	30(20.9%)		36(25.1%)		12(8.3%)	
Exercise							
No exercise	50(32.05%)	13(26%)		18(36%)		7(14%)	
Some exercise	64(41.02%)	10(15.6%)		17(26.5%)		5(7.8%)	
Regular exercise	42(26.92%)	5(11.9%)		9(21.4%)		4(9.5%)	
Smoking status							
Smokers	12(7.69%)	4(33.3%)		6(50%)	0.03*	1(8.3%)	
Non smokers	144(92.3%)	28(20.7%)		38(24.3%)		15(10.4%)	
Alcohol Intake							
History of alcohol intake	10(6.41%)	3(30%)		3(30%)	0.03*	0	
No history of alcohol intake	146(93.5%)	29(19.8%)		37(25.3%)		16(10.9%)	

*significant, **high significant, ***very high significant

Discussion

Medical students encountering significant amount of stress is inevitable and important part of being a student which motivates and stimulates learning. Interventions which are constructive should be thought of as to maintain life work balance. However chronic intense stress can arouse feelings of fear, uselessness, anger, incompetence and guilt. If it is not managed correctly, stress can lead to high levels of depression, sub-stance abuse, relationship problems, anxiety, and suicide.[6] In a study conducted in Saudi Arabia it was found that female students had significantly higher than their male counterparts, whereas in the present study work related and patient related burnout was mainly experienced by males, whereas personal burnout was least experienced by females and the result were statistically significant.[7]

Warmth of relations with family members like sibling, spouse, and parents can reduce stress. Medical students get few moments with family as they have restricted holidays. Family is always a cushion to balance stressors. In the present study, majority of the students stay in hostels or away from their family. Due to the reason of stay away from the family, they experience more personal burnout compared to day scholars. But patient related burnout is very low in students staying in hostel and this may be due to peer support involvement in combined study, developing skill, knowledge, avoid time for travel which ultimate results in more focus on studies. Cheryl et al interpreted family as a risk factor for burden, highlighting family problems as additional stressors which impose some important resources like time, money and often require interventions to reduce frictions.[8] Most of the studies show that healthy lifestyle with adequate exercise can relieve stress to an extent. A study done by Binub at the same region Malappuram district on health professionals found work related burn out was increased in subjects who had no exercise at all.[9] Parkerson et al emphasized the importance of encouraging students to promote personal health with regular physical activity and adequate sleep.[10] In terms of potential interventions, students who were able to find time to relax and exercise regularly were found to have lower rates of burnout. This underscores the well-known benefits of relaxation and exercise upon mental health. Indeed, mindfulness and exercise are now being shown to not only prevent burnout but also reverse it.[11,12] The present study has concurrence with these findings.

Being an ex-smoker in comparison to never have smoked is a significant predictor of higher burnout levels.[13] Distinct alcohol patterns were related in different ways to the development of burnout. Alcohol abuse /dependence is more common among medical students with burnout, particularly with high burnout and high depersonalization, with burnout representing an increased risk factor for this pattern of consumption.[14] A study from Nigeria suggest that high expectations of parents are stressor for the student.[15] Martin et al emphasized in his study that the students should be provided appropriate periods of rest during holidays and between modules to get relieved from the rigors of education and training.[16] The present study was not able to address into area of rest, hence further Indepth Technique studies should be done to find root causes. To minimize and decrement such issues, training of future doctors should be incorporated with multipronged strategies including physical activity, adequate sleep, psycho-pedagogical support, educational strategies, and a better learning environment.[17,18]

Conclusion

About 1/3rd of the students had burnout in one or the other dimensions of Copenhagen burnout inventory. Males had more work related and patient related burnout. Apart from previous studies, females had comparatively very less work related burnout which shows that they are more empowered in this region. Work and personal related burnout was experienced mainly by first and final year students. Proportion of burnout was higher among students who do not exercise regularly. Prevalence of burnout was more in students who stay with family in aspects of work and patients burnout. Burnout was more among students who smoked or had history of alcohol intake. The students should be trained to recognize symptoms of burnout. They should find meaning in career choice and promote professional fulfillment. Future doctors should set boundaries based on core values. Regular exercises, healthy and balanced diet must be followed strictly. Vacations with adequate rest should be entertained. Spiritual needs should be addressed appropriately and taken care. Motivation and counseling sessions should be held based on the need.

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References

1. Froschl G. Triple Burden of Diseases: Implications for Health Systems. Center for International health. Proceedings of Symposium on *Emerging Challenges of Triple Burden of Diseases and their prospects in Developing Countries*. Munich, Germany; 18 March 2017.
2. Maslach C, Jackson S. Burnout in health professions: A social psychological analysis. In: Sanders G, Suls J, eds. Social psychology of health and illness. Hillsdale, NJ: Lawrence Erlbaum; 1982:79-103.
3. Maslach, Christina, Susan, Michael. The Maslach Burnout Inventory Manual. Evaluating Stress: A Book of Resources 1997;3:191-218.
4. Kristensen TS, Borritz M, Villadsen E, Christensen KB. A new tool for the assessment of burnout. Work &Stress, The Copenhagen Burnout Inventory: 2005;19:192-207.
5. B Ratnakaran, Prabhakaran, V Karunakaran. Prevalence of Burnout and its correlates among residents in a tertiary medical center in Kerala, India. *J Postgrad Med* 2016;62(3):157-161.
6. Finkelstein C, Brownstein A, Scott C, Lan YL: Anxiety and stress reduction in medical education: an intervention. *Med Educ* 2007;41:258-264. 10.1111/j.1365-2929.2007.02685.x
7. Siddiqui A. F., Al-Amri S. A., Al-Katheri A. A., & Al-Hassani K. H. M. Perceived stress in Saudi undergraduate medical students. *J Med Allied Sci* 2017;7(1):41.
8. Cheryl L. H, Bethany E, Powell. Providing Education for Medical Students-Committee on Physician Health and Wellness. Texas medical association. September 2015.
9. Binub K. Burnout among health professionals in a tertiary medical college of northern Kerala, India. *Int J Community Med Public Health* 2019;6.
10. Parkerson GR Jr, Broadhead WE, Tse CK. The health status and life satisfaction of first-year medical students. *Acad Med* 1990;65:586-588.
11. Devibe M, Solhaug I, Tyssen R, Friborg O, Rosenvinge JH, Sørlie T et al. Mindfulness training for stress management: a randomized controlled study of medical and psychology students. *BMC Med Educ* 2013;13:107. doi:10.1186/1472-6920-13-107.
12. Gerber M, Brand S, Elliot C, Holsboer-Trachsler E, Pühse U, Beck J. Aerobic exercise training and burnout: a pilot study with male participants suffering from burnout. *BMC Res Note* 2013;6:78.doi:10.1186/1756-0500-6-78.
13. Cecil J, McHale C, Hart J, Laidlaw A. Behaviour and burnout in medical students. *Med Educ Online* 2014.
14. Croen LG, Woesner M, Herman M, Reichgott M. longitudinal study of substance use and abuse in a single class of medical students. *Acad Med* 1997;72:376-381.
15. Medeiros JT and Leite S. Burnout in Medical Students: The Impact of Lifestyle and Health Behaviours in Development of Burnout. *Ment Health Hum Resilience Int J* 2018;2(1):000114.
16. Yussuf AD, Issa BA, Ajiboye PO, Buhari OI. The correlates of stress, coping styles and psychiatric morbidity in the first year of medical education at a Nigerian University. *Afr J Psychiatry (Johannesbg)* 2013;16:206–215.
17. Gaber RR, Martin DM. Still-Well osteopathic medical student wellness program. *J Am Osteopath Assoc* 2002;102:289-292.
18. Heinen I, Bullinger M, Kocalevent R-D. Perceived stress in first year medical students association with personal resources and emotional distress. *BMC Med Educ [Internet]* 2017;17:4. Available from:http://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-016-0841-8 https://doi.org/10.1186/s12909-016-0841-8 PMID: 28056972.
19. Dyrbye LN, Thomas MR, Shanafelt TD. Medical student distress: causes, consequences, and proposed solutions. *Mayo Clin Proc* 2005;80:1613±22. Available from: www.mayoclinicproceedings.com https://doi.org/10.4065/80.12.1613 PMID: 16342655

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