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ASSOCIATION OF EXTRACURRICULAR ACTIVITIES AND BURNOUT AMONG STUDENTS IN A DENTAL TEACHING INSTITUTION IN INDIA- A CROSS SECTIONAL SURVEY

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ABSTRACT
Background: Stress may be experienced by all in different aspects of their lives but burnout syndrome is related to work and is generally seen among healthcare professionals including students. Both undergraduates and post graduates experience work related stress. **Methodology:** A cross sectional e-questionnaire study was done among 288 dental students for a period of one month**. Results:** Majority of all the participants were females (76%), final year students (38.2%), and hostellers (47.6%). Participation in extracurricular activities showed a significant association with EE (Educational Demands), CY (Cynicism) and PE (Perception of incompetence as a student). **Conclusion:** Early screening for burnout in dental students should be done so that effective interventions at the earlier stages can be taken.

KEYWORDS: burnout, dental, students, activities, extracuriccular.

INTRODUCTION
Health care professionals experience several challenging problems in daily routine. One of the problems faced is stress.[1] Burnout is the end result of prolonged exposure to stressful environment.[2]

Burnout syndrome can be considered as a public health issue due to its physical, mental and social health implications for individuals.[3] It is related to work and is generally seen among health care professionals, teachers, social workers and other occupation where caring for others is required.[4]

Dental students, both undergraduates and post graduates experience work related stress such as fear of academic grades, frequent examination, excessive workload and exposure to an immense amount of knowledge which they are expected to master in a short span of time.[1]

Preclinical years are stressful because of the need to accumulate vast amounts of theoretical data while patient care, clinical knowledge and skill acquisition.[5] Students use various coping mechanisms like music, reading, sports, arts, community services etc. to deal with stress and burnout.[6][7] Therefore the current study assessed the attitude and practices of dental students towards participation in extracurricular activities.

MATERIALS AND METHODS
Study Design: A cross sectional e-questionnaire study among dental students.
Study Population: Undergraduates and interns of a dental college in Northern India.
Time Frame: Study was conducted for a period of one month.
Ethical Clearance: Informed consent was obtained from the participants and Prior approval was taken from the Institutional Ethical Committee.
Sampling Technique: Convenience sampling technique
Sample Size: Total of 357 students in dental college out of which 288 students consented for the study.

Data Collection: The purpose of the study was explained in the respective classes of 1st year to final year BDS students and interns in clinical postings of various departments. The questionnaire was forwarded in the whatsapp group of the students and interns of the dental college. Seven days were given for response and a reminder message was put thereafter for final submission within a week.

Tool for Data Collection: A pretested self administered questionnaire consisting of three sections was used. The final section consists of socio-demographic data like gender, current year of study, place of residence along with questionnaire assessing their involvement in extracurricular activities. The second section includes 5 statements assessing the attitude of students towards extracurricular activities. Finally, the third section consists of 15 questions from the "Maslach Burnout Inventory- Student Survey (MBI-SS)".[8]

Burnout syndrome (BS) has three domains, namely "(EE- due to educational demands)," "Cynicism (CY) (CC- indifference/apathetic attitude toward academic activities)," and "low professional efficacy (PE – perception of incompetence as a student)." MBI-SS consists of 15 items to evaluate BS with five items evaluating EE, four items evaluating CC, and six items evaluating PE. All the responses were scored on a five-point Likert scale, namely "never", "sometimes", "often", "regularly" and "always". The scoring for items in PE domain was reversed. Higher scores in EE, CC and lower scores in PE indicate BS.

The BS is grouped into three categories based on the total scores as low level("EE"[0-9], "CY" [0-1], "PE"[>27]), moderate level ("EE"[10-14], "CY"[2-6], "PE"[23-27]), and high level ("EE" [>14], "CY"[>6], "PE"[<23]). This study also classified students having tri-dimensional burnout ("EE"[>14] and " CY" [>6] and low for "PE"[<23] and bi-dimensional burnout ("EE" [>14] and "CY"[>6]).

Pretesting of the questionnaire was done on a sample of 10 students which were not included in the main study.

Statistics: The statistical package for the social sciences (SPSS version) was used for analysis. $p<0.05$ was considered as statistically significant. Poisson regression analysis was performed to evaluate the relationship between predictors and outcome variables.

RESULTS

A total of 288 participants were included in the final analysis. Majority of all participants were female (76%) final year students (38.2%) and hostellers (47.6%). Nearly 85.1% have involved themselves in extracurricular activities. Around 75.7% students sometimes not always participate in extracurricular activities. Almost all the students (98.3%) feel good about extracurricular activities.

More than half of the students (59.4%) felt that extracurricular activities have perks of participation. Around 48.6% students opined that extracurricular activities does not clash with academics, 82.6% believed that it enhances skills and nearly 50% felt it adds to resume. Nearly 40% felt non- hostelite gets less chance of participation in extracurricular organized by university.

Table 1 showed the mean score of EE (3.40 ±1.11) and PE (3.91 ± 0.81) were significantly better among the students who participated in extracurricular activities (P = 0.028, 0.02 resp.). The students who had a good opinion about extracurricular activities has significantly lower values for EE (P= 0.044), CY (0.042) and PE (0.01).

Table 2 shows participation in extracurricular activities showed a significant association with EE (RR= 1.330, 95% CI) CY(RR = 1.411, 95% CI) and PE (RR= 1.517, 95% CI).

Table 1: Mean domain scores according to items on perception on extracurricular activities and domains of Maslach Burnout Inventory Student Survey.

Questions	Responses	EE		CY		PE	
		Mean	SD	Mean	SD	Mean	SD
Have you ever involved yourself in extracurricular activities?	Yes	3.40	1.11	3.92	1.06	3.91	0.81
	No	2.93	1.28	3.68	1.01	3.53	1.04
	t value	2.258		1.434		2.277	
	p value	0.028*		0.157		0.02*	
What is your perception about extracurricular activities?	Good	2.00	1.05	2.65	0.96	2.43	0.38
	Bad	3.36	1.14	3.91	1.04	3.88	0.84
	t value	2.865		2.893		8.091	
	p value	0.044*		0.042*		0.01*	
How often do you participate in extracurricular activities?	Sometimes	3.36	1.14	3.85	1.07	3.80	0.87
	Always	3.45	1.10	4.10	0.95	4.12	0.76
	Never	2.53	1.17	3.60	1.08	3.68	0.94
	F value	4.073		1.759		3.318	
	p value	0.018*		0.174		0.038*	

Table 2: Poisson regression model to evaluate the participation in extracurricular activities and domains of Maslach Burnout Inventory Student Survey.

	EE	CY	PE
Have you ever involved yourself in extracurricular activities ?	1.330(.940-1.881)	1.411(.792-2.516)	1.517(.804-2.861)
	1.617(1.021-2.57)	1.371(.892-2.10)	1.418(.886-2.27)
Extracurricular activities enhance skills.		5.285(.324-8.63)	
		5.322(.738-3.84)	

DISCUSSION

The 11th Revision of the International Classification of Diseases-11 defined burnout as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed."[9] Burnout syndrome(BS) is a multidimensional syndrome, usually associated with dehumanization, reduced work efficiency, emotional fatigue, insomnia, and depression. BS can be considered as a public health issue due to its physical, mental, and social health implications for individuals.[3]

There are numerous factors that can contribute burnout leading to stress among medical and dental students viz., "adaptation difficulties" at the beginning of curriculum and the frustration due to "Basic Sciences Cycle". Some other factors include "transition from the pre-clinics to the clinics", excessive workload and high levels of educational demands, limited time for friends and family. All these along with many other factors contribute to the high prevalence of suicide attempts, depressions, use of psychoactive substances in students.[10]

In order to deal with everyday stress, Undergraduate students involve themselves in extracurricular activities. Therefore the present study was conducted to assess the attitude and practices of dental students towards participation in extracurricular activities.

The MBI-SS was validated across Europe[8][11] and Asia[12] in different languages. Although many other instruments are available in literature such as "Oldenburg inventory-SS,"[7] "Copenhagen inventory-SS,"[13] "Utrecht work engagement scale for students,"[14] and "professional quality of life 9,"[15] the MBI-SS is most commonly used, and hence, we used the same instrument in our study to assess the burnout levels.

In the present study, majority of the participants were females i.e. 76%. Dentistry is one such that has grown from strength to strength in the area and female numbers are on rise. Dentistry offers women more flexibility and better work life balance than other industries like medicine. A positive attitude regarding extracurricular activities among participants was reported in the present study in accordance with a study done by Fredricks JA et al in 2006.[16]

Results of the present study showed that nearly 40% of the participants felt that non-hostelites get less chance of participation in extracurricular activities organized by university. The probable reason behind this could be distance of university from their residence, lack of transport or security issues by parents. Significant differences for all the three domains of Burnout (BS) between the students who participate in extracurricular activities and who do not were reported in the present study.

Similar trend was observed by a study done by Fontana MC et al in 2020[17] which showed that the interns who were participating in some kind of community activities had lower levels of depolarization. A study on dental students also reported a positive and protective influence of extracurricular activities done by Kumar YS et al in 2021.[2] A study done by Almalki SA et al in 2017[18] reported that the students who were organizers for various extracurricular activities were less likely to have low professional efficiency.

The present study highlights the importance of extracurricular activities in coping with the day to day stress among dental students. Since it is a single centric study, chances of selection bias and social desirability bias may be present in the study. Being a cross- sectional study, the possibility of direct relation between burnout and extracurricular activities could not be explored.

CONCLUSION

A significant difference was seen for the participation in extracurricular activities and all the three domains of MBI-SS. Early screening for burnout in dental students should be done so that effective interventions at the earlier stages can be taken.

REFERENCES

1. Avasthi A, Aasdhir SS, Assessing stress and burnout in dental students in a dental institution. Dent Med Res., 2021; 9(2): 82-7.
2. Kumar YS, Ramanarayanan V, Rajesh R, Francis ST, Ganesan S, Kumar SV. Association of Extracurricular Activities and Burnout among Students in a Dental Teaching Institution in India. J Indian Assoc Public Health Dent, 2021; 19(4): 294-8.
3. Batista JB, Carlotto MS, Coutinho AS, da Silva Augusto LG. [Prevalence of Burnout Syndrome and sociodemographic and work factors of elementary education teachers of the City of João Pessoa]. Rev Bras Epidemiol, 2010; 13: 502-12. Portuguese.
4. Ashkar K, Romani M, Musharrafieh U, Chaaya M. Prevalence of burnout syndrome among medical

residents: Experience of a developing country. Postgrad Med J., 2010; 86: 266-71.
5. Fares J, Saadeddin Z, Al Tabosh H, Aridi H, El Mouhayyar C, Koleilat MK, *et al.* Extracurricular activities associated with stress and burnout in preclinical medical students. J Epidemiol Glob Health, 2016; 6: 177-85.
6. Cherkil S, Gardens SJ, Soman DK. Coping styles and its association with sources of stress in undergraduate medical students. Indian J Psychol Med, 2013; 35: 389-93.
7. Farrell SM, Kar A, Valsraj K, Mukherjee S, Kunheri B, Molodynski A, *et al.* Wellbeing and burnout in medical students in India; a large scale survey. Int Rev Psychiatry, 2019; 31: 555-62.
8. Campos JA, Jordani PC, Zucoloto ML, Bonafé FS, Maroco J. Burnout syndrome among dental students. Rev Bras Epidemiol, 2012; 15: 155-65.
9. World Health Organisation. Burn-Out An "Occupational Phenomenon": International Classification of Diseases. Available from: https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases. [Last accessed on 2021 Jan 04].
10. Dyrbye LN, Thomas MR, Massie FS, Power DV, Eacker A, Harper W, et al. Burnout and suicidal ideation among U.S. medical students. Ann Intern Med., 2008; 149: 334-41.
11. Schaufeli WB, Martínez IM, Pinto AM, Salanova M, Bakker AB. Burnout and engagement in university students: A cross-national study. J Cross Cult Psychol, 2002; 33: 464-81.
12. Hu Q, Schaufeli WB. The factorial validity of the maslach burnout inventory-student survey in China. Psychol Rep, 2009; 105: 394-408.
13. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands-resources model of burnout. J ApplPsychol, 2001; 86: 499-512.
14. Kristensen TS, Borritz M, Villadsen E, Christensen KB. The Copenhagen burnout inventory: A new tool for the assessment of burnout. Work Stress, 2005; 19: 192-207.
15. Stamm BH. The Concise ProQOL Manual. Vol. 74. Pocatello, ID: ProQOL.org.; 2010.
16. Fredricks JA, Eccles JS. Extracurricular involvement and adolescent adjustment: Impact of duration, number of activities, and breadth of participation. Appl Dev Sci., 2006; 10: 132-46.
17. Fontana MC, Generoso IP, Sizilio A, Bivanco-Lima D. Burnout syndrome, extracurricular activities and social support among Brazilian internship medical students: A cross-sectional analysis. BMC Med Educ, 2020; 20: 81.
18. Almalki SA, Almojali AI, Alothman AS, Masuadi EM, Alaqeel MK. Burnout and its association with extracurricular activities among medical students in Saudi Arabia. Int J Med Educ, 2017; 8: 144-50.