

# EXTRACURRICULAR ACTIVITIES AMONG UNDERGRADUATE DENTAL STUDENTS IN DENTAL COLLEGES IN RIYADH, SAUDI ARABIA

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## ABSTRACT

The study aimed to determine the current extracurricular activities among undergraduate dental students from different dental colleges in Riyadh, Saudi Arabia, and their perceptions towards these activities. A self-administered questionnaire with close-ended questions was distributed to undergraduate dental students from different governmental dental colleges in Riyadh, Saudi Arabia. The data were entered and analyzed by descriptive analysis using the Statistical Package for the Social Sciences software (SPSS). A total of 453 students responded to the questionnaire and enrolled in the study. The majority of the study subjects were (95.1%) from governmental universities and most of them (88.96%) had GPAs  $\geq$  4.0. 81.3% of the study subjects believed that participation in extracurricular activities could improve their academic performance. Most of the undergraduate dental students who participated in this study believed that the extracurricular activities had positive impacts on their learning experience. Therefore, it is devisable to implement more extracurricular activities in dental colleges and encourage dental students to be enrolled in such activities.

**Keywords:** Extracurricular activities (ECAs), Dental students, Riyadh, Saudi Arabia.

## Introduction

Any activity that students engage themselves in outside their academic curriculum can be regarded as Extracurricular activities (ECAs) [1, 2]. ECAs could serve important functions like the required and elective courses in the curriculum. ECAs allow students to apply the knowledge that they have acquired which in turn leave-positive impacts on their academic performance and other aspects such as good manners and self-confidence [1, 3, 4]. The involvement of students in ECAs may develop their emotional, social, and interpersonal skills. Students who are engaged in ECAs are more open to a diverse group of people as they are more accepting of others' differences. ECAs may help students to apprehend the significance of managing time, academic and intellectual competence, as well as the skills of critical thinking. ECAs could enrich students' experience, soft skills, coping with stress, or increase their employability [5-9].

Studies have shown that self-esteem is strongly correlated with the percentage of participation in an organization and academic self-concept which may have a positive effect on the students' academic performance [10, 11]. These studies prove the developmental benefits of ECAs such as better grades, higher school graduation rates, and motivation.

The association between medical students' engagement in ECAs with their academic achievements shown to be

minimal. However, discontinuing such activities revealed worse examination results [12]. A study involving students of King Abdulaziz University (KAU) in Saudi Arabia reported no significant differences in the students' Grade Point Average (GPA) and the study hours. However, the median was higher in those who participated in ECAs and the ECAs do not hinder the student's academic achievement [13]. Zaman and coworkers [14] reported that ECAs had positive effects on the GPAs of university students in Lahore, Pakistan.

Another study in Saudi Arabia included all health colleges at Imam Abdulrahman Bin Faisal University and found that among all participants, only 9.6% were engaged in ECAs [15, 16]. The main obstacle was that activities were usually at the same time as their classes. Other factors included lack of encouragement from the faculty, insufficient guidance, and the unattractiveness of the available activities [17].

Alansari et al [8] assessed the ECAs participation of the dental students at Dammam University in Saudi Arabia. They reported that only 27.1% of the dental students were involved in ECAs. The most common ECAs reported were community services and sports. The majority of the involved dental students (60%) thought that ECAs had no negative influences on their academic performance, and 52% of them were dissatisfied with collage-organized ECAs.

In the literature, little is known about the undergraduate students in Riyadh, Saudi Arabia regarding their involvement in ECAs, types of ECAs that they are engaged in, how ECAs influence their development and performance, and how they view the value of ECAs. Therefore, the goal of this study was to determine the involvement of dental students in ECAs and their perceptions toward it in different dental colleges, in Riyadh, Saudi Arabia.

## Materials and Methods

A cross-sectional study was carried out in different dental colleges in Riyadh, Saudi Arabia among undergraduate dental students. A questionnaire of 11 items (multiple choice questions) was created to measure the relationship between ECAs and GPA, with the help of a statistician. Validation was achieved by 9 participants from 3 universities in Riyadh. They were instructed to carefully read the questions and answer subjectively and honestly by using an online survey. Edits were done according to the participants' notes.

The approval of the King Saud University Institutional Ethical Committee was obtained (E-19-3913) and the participants were asked to sign a consent form before they participated in the study.

A self-administered, close-ended online questionnaire was distributed among the dental students to evaluate their participation in ECAs and their perception towards it between the period December 2019 to April 2020. Using SPSS 26.0 version statistical software (IBM Inc., Chicago USA), the collected data collected were analyzed. To describe the categorical study variables, Descriptive statistics (frequencies and percentages) were used. Pearson's Chi-square test was used to compare the distribution of responses of categorical study variables also concerning the categorical outcome variable (prevalence of extracurricular activities). A  $p$ -value of  $\leq 0.05$  was used to report the statistical significance of the results.

## Results and Discussion

Out of the 453 study subjects, 431(95.1%) were from governmental universities and they were from all the 5 academic years and 128 participants (28.2%) were from the 4th academic year, while 54 participants (11.9%) and 55 (12.1%) were from 1st and 5th academic years respectively. Most of the study subjects (88.96%) had their GPA's 4.0 and above. The percentage of the students' participation in ECAs was 73.5%.

The students' participation in ECAs concerning their universities, academic year levels, and GPAs, were statistically significant concerning their academic year level as the proportion of undergraduate dental students from 2nd, 3rd, 4th and 5th year who were participating in ECAs was significantly higher than the 1st year students ( $p < 0.0001$ ). There were no statistically significant differences found between the students' enrolment in the ECAs concerning their universities or GPAs. The students' responses to the question "Do you think participation in extracurricular activities leads to better academic performance?" were significantly higher for those who had responded positively (81.3%) than others who responded negatively (66.5%) ( $p < 0.0001$ ) (**Table 1**).

The analysis of responses among the study subjects who were participating in ECAs, for the statements and questions related to such activities shows statistically significant differences in the distribution of responses. For the question "Since when did you start participating in extracurricular activities?", a higher proportion of subjects had responded 'from the beginning of my university studies (37.2%) and 'after a year of my studies (36.9%) which is statistically significant ( $p=0.015$ ). A higher proportion (70.3%) of study subjects were participating in social activities and that was highly statistically significant when compared with the other activities ( $p < 0.0001$ ). About 50% of the enrolled students were participating in ECAs once to twice per semester, 35.4% of them were participating 3 to 5 times and only 14.4% were participating 6 times or more per semester which is statistically significant ( $p < 0.0001$ ). More than half of the surveyed students (53.8%) had specified 'to build the CV' as the reason to participate in ECAs and the remaining 46.2% 'To develop my skills, 'to build my social network and self-satisfaction and enjoyment' as the reasons to participate in ECAs ( $p < 0.0001$ ). About 56.2% of the study participants had responded negatively to the question 'Do you find it difficult to maintain a good academic performance during your participation?', which is statistically significant ( $p < 0.0001$ ). Regarding the question "Have you noticed a change in your grades when you participate in an activity?", a higher proportion of study subjects (85.9%) had responded 'No, I didn't notice any change' and was statistically significant ( $p < 0.0001$ ). 14.1% of the study participants had stated that their grades had reduced due to their participation in extracurricular activities because of the following reasons: 'Not enough time to study'; 'Loss of energy to study after the activity and 'Loss of interest to study after the activity as the reasons. There was no statistically significant difference in the responses of the study subjects towards the question 'Do you think participation in extracurricular activities leads to better academic performance?' ( $p=0.41$ ), (**Table 2**).

**Table 1.** Comparison of prevalence of extracurricular activities concerning the university, year of study, and GPA of the dental students (n=453)

Study variables	Extracurricular activities		χ <sup>2</sup> -value	p-value
	Yes	No		
<b>Type of university</b>				
Government	317(73.5)	114(26.5)	0.007	0.932
Private	16(72.7)	6(27.3)		
<b>Year of study</b>				
1st	22(40.3)	32(59.3)	36.70	<0.0001
2nd	75(72.1)	29(27.9)		
3rd	92(82.1)	20(17.9)		
4th	101(78.9)	27(21.1)		
5th	43(78.2)	12(12.8)		
<b>GPA</b>				
5-4.5	193(76)	61(24)	2.56	0.465
4.4-4.0	105(70.5)	44(29.5)		
3.9-3.5	24(66.7)	12(33.3)		
<3.5	11(78.6)	3(21.4)		
<b>Do you think participation in extracurricular activities, leads to better academic performance?</b>				
Yes				
No	174(81.3)	40(18.7)	12.67	<0.0001
	159(66.5)	80(33.5)		

**Table 2.** Distribution and comparison of responses of the dental students who had participated in extracurricular activities (n=333)

Study variables	No (%)	p-value
<b>Since when did you start participating in extracurricular activities?</b>		
From the beginning of my university studies	124(37.2)	0.015
After a year of my studies	123(36.9)	
After a couple of years of my studies	86(25.8)	
<b>What type of extracurricular activity are you involved in?</b>		
Sports activities	29(8.7)	<0.0001
Social activities	234(70.3)	
Research activities	51(15.3)	
Islamic and other activities	19(5.7)	
<b>How often do you participate in extracurricular activities per semester?</b>		
>= 6	48(14.4)	<0.0001
3-5	118(35.4)	
1-2	167(50.2)	
<b>What is the reason for your participation?</b>		
To build my CV	179(53.8)	<0.0001
To develop my skills	57(17.1)	
To build my social network	33(9.9)	
Self-satisfaction and enjoyment	57(17.1)	
Other	7(2.1)	
<b>Do you find it difficult to maintain good academic performance during your participation?</b>		
Yes	146(43.8)	0.025
No	187(56.2)	
<b>Have you noticed a change in your grades when you participate in an activity?</b>		
Yes, my grades increased	16(4.8)	<0.0001
Yes, my grades decreased	31(9.3)	
No, I didn't notice any change	286(85.9)	
<b>Based on the previous question, if you noticed a decrease in your grades what do you think the reason is?</b>		

Not enough time to study	26(7.8)	<0.0001
Loss of energy to study after the activity	15(4.5)	
Loss of interest to study after the activity	6(1.8)	
I have not noticed a decrease	286(85.9)	
<b><u>Do you think participation in extracurricular activities leads to better academic performance?</u></b>		
Yes	174(52.3)	0.41
No	159(47.7)	

The students were allowed to experience non-academic activities by ECAs, which could be a powerful strategy for bringing their life into balance [18]. To the best of our knowledge, the current study is the first to assess the ECAs of dental students among different dental schools in Riyadh, Saudi Arabia. In this study, the ECAs participation level was (73.5%) indicating that despite the heavy academic involvement in dental college, dental students were willing to be involved in such activities [22, 23]. A similar rate (73.5%) was reported among the medical students in King Saud bin Abdulaziz University for Health Sciences (KSAUHS) in Riyadh, Saudi Arabia [19]. The rate of dental students' participation in this study was higher than the previously reported rate [8]. However, the participation percentage in ECAs is generally lower than that reported among non-dental students in the UK and Swiss universities (87% and 94% respectively) [6, 20]. Additionally, the rate of spending less than 10 hours per week on ECAs was similar to the average rate of 9.8 hours per week that was reported in another study carried out in the United Kingdom [12]. Most study subjects (70.3%) participated in social activities with fewer students participating in sport, Islamic or research activities. Roulin and Bangerter [20] found that artistic and sports activities were most popular, with fewer students participating in associative or community activities. Thompson et al. [6] reported that 39% of 67 undergraduate students in UK schools of science and technology, arts and social sciences, and management were involved in sports, 8% were involved in arts activities, and 14% in volunteer work. Stuart et al. [21] reported that, from several UK Universities and schools, male undergraduate students spent more time in committees and sports and were less to see volunteer work as beneficial to their careers likely than females. The differences between the present study and these European studies may be attributed to differences in academic discipline and cultural background, as none of these studies included health care students or dental.

The limitations of the present study include its cross-sectional design that may hinder the identification of any causal relationships and the convenience sampling of the study population which may affect the generalizability of the study outcomes.

**Conclusion**

Within the limitations mentioned, the ECAs participation rate among dental students at different dental schools in Riyadh, Saudi Arabia was high. It is advisable to encourage

dental students to involve participate in ECAs using good planning and management of ECAs in dental colleges.

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**References**

1. Massoni E. Positive effects of extracurricular activities on students. *Essai*. 2011;9(1):27.
2. Billingsley JT, Hurd NM. Discrimination, mental health and academic performance among underrepresented college students: the role of extracurricular activities at predominantly white institutions. *Soc Psychol Educ*. 2019 Apr;22(2):421-46.
3. Mahoney JL, Cairns BD, Farmer TW. Promoting interpersonal competence and educational success through extracurricular activity participation. *J Educ Psychol*. 2003 Jun;95(2):409.
4. Siddiky M. Examining the Linkage between Students' Participation in Co-curricular Activities and their Soft Skill Development. *J Educ Sci*. 2020 Jul;4(3):511-28.
5. Veronesi MC, Gunderman RB. Perspective: the potential of student organizations for developing leadership: one school's experience. *Acad Med*. 2012 Feb 1;87(2):226-9.
6. Thompson LJ, Clark G, Walker M, Whyatt JD. 'It's just like an extra string to your bow': Exploring higher education students' perceptions and experiences of extracurricular activity and employability. *Active Learning in Higher Education*. 2013 Jul;14(2):135-47.
7. Buckley P, Lee P. The impact of extra-curricular activity on the student experience. *Active Learning in Higher Education*. 2018:1469787418808988.

8. Al-Ansari A, Al-Harbi F, Abdelaziz W, AbdelSalam M, El Tantawi MM, ElRefae I. Factors affecting student participation in extra-curricular activities: A comparison between two Middle Eastern dental schools. *Saudi Dent J.* 2016 Jan 1;28(1):36-43.
9. Jamal AA. Developing interpersonal skills and professional behaviors through extracurricular activities participation: a perception of King Abdulaziz University medical students. *J King Abdulaziz Univ Med Sci.* 2012 Oct 1;19(4):3-24.
10. Abruzzo KJ, Lenis C, Romero YV, Maser KJ, Morote ES. Does Participation in Extracurricular Activities Impact Student Achievement? *J Leadersh Instruct.* 2016;15(1):21-6.
11. Khanna N, Sivaswamy V, Anand M, Ganapathy D. Perception of dental students on the effect of extracurricular activities on academic performance. *Drug Invention Today.* 2020 Jul 15;14(7): 1082-6.
12. Lumley S, Ward P, Roberts L, Mann JP. Self-reported extracurricular activity, academic success, and quality of life in UK medical students. *Int J Med Educ.* 2015;6:111.
13. Bakoban RA, Aljarallah SA. Extracurricular Activities and Their Effect on the Student's Grade Point Average: Statistical Study. *Educ Res Rev.* 2015 Oct 23;10(20):2737-44.
14. Zaman F. Positive Impact of Extracurricular Activities on University Students in Lahore, Pakistan. *Int J Social Sci Manag.* 2017 Jan 23;4(1):22-31.
15. Hanawi SA, Saat NZ, Zulkafly M, Hazlenah H, Taibukahn NH, Yoganathan D, *et al.* Impact of a Healthy Lifestyle on the Psychological Well-being of University Students. *Int J Pharm Res Allied Sci.* 2020;9(2):1-7.
16. Ren-Zhang L, Chee-Lan L, Hui-Yin Y. The awareness and perception on Antimicrobial Stewardship among healthcare professionals in a tertiary teaching hospital Malaysia. *Arch Pharma Pract.* 2020;11(2):50-9.
17. Al-Hariri MT, Al-Hattami AA. Impact of students' use of technology on their learning achievements in physiology courses at the University of Dammam. *J Taibah Univ Med Sci.* 2017 Feb 1;12(1):82-5.
18. 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 Sep 1;6(3):177-85.
19. 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.
20. Roulin N, Bangerter A. Extracurricular activities in young applicants' résumés: What are the motives behind their involvement? *Int J Psychol.* 2013 Oct 1;48(5):871-80.
21. Stuart M, Lido C, Morgan J, Solomon L, May S. The impact of engagement with extracurricular activities on the student experience and graduate outcomes for widening participation populations. *Active Learning in Higher Education.* 2011 Nov;12(3):203-15.
22. Asgari I, Soltani S, Sadeghi SM. Effects of Iron Products on Decay, Tooth Microhardness, and Dental Discoloration: A Systematic Review. *Arch Pharma Pract.* 2020;11(1):60-82.
23. El Ashiry EA, Alamoudi NM, Farsi NM, Al Tuwirqi AA, Attar MH, Alag HK, Basalim AA, Al Ashiry MK. The Use of Micro-Computed Tomography for Evaluation of Internal Adaptation of Dental Restorative Materials in Primary Molars: An In-Vitro Study. *Int. J. Pharm. Res. Allied Sci.* 2019 Jan 1;8(1):129-37.