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Factors affecting student participation in extra-curricular activities: A comparison between two Middle Eastern dental schools



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Abstract *Objective:* This study was conducted to assess the level of participation of dental undergraduate students in extracurricular activities (ECAs) and the factors affecting this participation.

Methods: The study included dental students enrolled in undergraduate programs at the Faculty of Dentistry, Alexandria University, Egypt, and the College of Dentistry, University of Dammam, Saudi Arabia. A questionnaire was developed to collect background information about students, their participation in ECAs, and time allocated for these activities. Students were asked about their perceptions of the relationship between ECAs and academic studies, and their reasons for participating in and satisfaction with ECAs.

Results: The study included 199 students from Alexandria and 146 students from Dammam, with response rates of 99.5% and 73%, respectively. The percentages of those reporting ECA participation were 27.1% and 43.8%, respectively, mostly in community service, sports, and social activities. About 60% of students did not think that ECAs affected their studies, although the perceived difficulty of balancing ECAs and academics was associated with lower odds of participation (odds ratio = 0.51). Most students participated in ECAs to socialize and make friends, and the majority was dissatisfied with school-organized ECAs (52% and 59%, respectively). Gender and/or

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perceived relation between ECAs and academic studies affected actual participation in ECAs in one school but not the other.

Conclusions: ECA participation among these students was low. Gender and perception of ECAs in relation to academic studies affected ECA participation differently in the two schools. Better planning and management of ECAs that incorporate students' preferences and reasons for participation is needed. Gender issues and the relationship between ECAs and academic performance should be addressed in relation to school and social characteristics.

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1. Introduction

Extracurricular activities (ECAs) are defined as activities that students undertake apart from those required to earn a degree. They may include hobbies and social, sports, cultural, or religious activities. They have some benefit and possess some structure/organization. ECAs are expected to enrich students' experience, develop students' soft skills, help them cope with stress, and provide them with added advantages to increase their employability (Veronesi and Gunderman, 2012; Thompson et al., 2013).

In some studies, ECA participation has been associated positively with academic achievement (Miller et al., 2005; Baker, 2008; Derous and Ryan, 2008). However, students may refrain from participating in ECAs for fear that it will affect their grades (Thompson et al., 2013), and may drop ECAs when their attention is needed elsewhere (Roulin and Bangerter, 2013). Some qualities of graduates may be inferred from ECA participation; for example, those who belong to organizations/clubs are assumed to have more interpersonal skills, whereas those who volunteer for community activities are judged as being more extroverts than others (Roulin and Bangerter, 2013). ECAs are also important for higher education institutions and form a part of their public image, adding to their prestige and reputation.

Dental schools aspire to improve the educational experience they offer by adhering to accreditation criteria (Schneider et al., 2014). Historically, none of these improvement activities have addressed ECAs (Hans, 1999). In dental schools, characterized by high stress levels (Al-Omari, 2005; Pau et al., 2007), ECAs can serve a double purpose by offering a means of stress management and serving as an informal teaching tool for the development of generic/employability skills (El Tantawi et al., 2014). However, the extent of dental students' participation in ECAs has not been reported internationally or in Middle Eastern countries, possibly due to the demanding nature of these academic environments. Although the general features of dental schools in different Middle Eastern countries are similar, variations in cultural background and educational systems do exist. For example, Musaiger et al. (2013) reported differences among a number of Middle Eastern countries in barriers to physical activity, whereas Abdel-Khalek and Alansari (2004) reported differences in anxiety level among undergraduates from 10 Middle Eastern countries.

Egypt and Saudi Arabia are two countries with similar attributes, which may lead policy makers in these countries to apply similar solutions to problems in educational institutions. Yet, several educational and cultural differences do exist

between them. Students in Egypt exhibit noticeable diversity of gender and nationality; classes in dental schools include male and female students of various nationalities. In Saudi Arabia, dental education is fully sponsored by the government and is available only for Saudi nationals. In addition, classes are gender segregated according to cultural norms. Many middle-class Egyptian families share values related to engaging their children in ECAs at an early age, as social capital to improve their employability (Bathmaker et al., 2013). In Saudi Arabia, sports club memberships, team practices, and outdoor activities in general are restricted to males, while females are encouraged to engage in other social activities.

The aim of the present study was to assess the extent of dental students' participation in and satisfaction with ECAs in two Middle Eastern dental schools in Egypt and Saudi Arabia. The study also investigated factors related to students' participation in ECAs, including their backgrounds, academic status, and perceptions of ECAs. The results provide information to aid the establishment of realistic expectations for this area of the educational environment and the development of appropriate ECAs that respond to students' needs and the characteristics of educational settings.

2. Materials and methods

2.1. Study design and setting

A descriptive cross-sectional study was used to collect data. It was conducted in two dental schools; one school is located in Egypt (Faculty of Dentistry, Alexandria University) and the other is located in Saudi Arabia (College of Dentistry, University of Dammam). Data were collected from January to March 2014.

2.2. Study sample

The study targets were undergraduate students in the two dental schools. In Alexandria, the Bachelor of Dentistry program is 5 years long (including one preparatory year). Average class size is 300–350 students, including males and females in the same class, with a total of about 1500 students in the entire program. In Dammam, the Bachelor of Dental Sciences program is 6 years long (including one preparatory year). The average class size was about 20–25 students until the 2010–2011 academic year, when the college began to accept female students. Concomitant expansion of class sizes for male and female students led to an average size of about 50 students. Following cultural norms, male and female students are physically segregated. A sample of 200 students was selected from

Alexandria to match the total number of students in Dammam. The Alexandria sample was stratified by year, with proportional allocation to ensure inclusion of students from all program levels, whereas the Dammam sample included all students from all program levels who were available in class at the time of questionnaire administration. Thus, a total of 400 students were included from both schools. Students included in this study were enrolled in the 2013–2014 academic year.

2.3. Study tool

A questionnaire was developed in Arabic to assess students' participation in and satisfaction with ECAs. It included eleven, close-ended, multiple choice questions about students' backgrounds [year of program, gender, grade point average, and graduation from private/public high school]. It also solicited information about whether students participated in ECAs and activity type (community service, sports, social activities and trips, artistic, governance and student representation, cultural, scientific, and intellectual). Students were further asked about the number of weekly hours they spent on ECAs, whether they thought that ECAs conflicted with their studies, whether balancing ECAs and academic activities was difficult, and whether they thought that ECAs affected their grades. They were also asked to select among five potential reasons for participating in ECAs, and to indicate whether they were satisfied with ECAs organized by their school.

The questionnaire was approved by the Vice Deanship for Academic Affairs of the College of Dentistry, University of Dammam for quality purposes, and by the college's board and research ethics committee. Students reported no problem related to ambiguity of content or difficulty understanding questions.

2.4. Study methods

The questionnaire was distributed to students during lectures after securing the permission of instructors. Students were given 5 min to answer the questions, and the forms were collected during the same class periods.

2.5. Analysis

Data from students in the two schools on background characteristics, ECA participation and reasons for participating, perceptions of the relationship between ECAs and their studies, and satisfaction with ECAs organized by their schools were compared using chi-squared tests. The median time spent on ECAs was compared using the Mann–Whitney test, as a Kolmogorov–Smirnov test indicated that this variable was not distributed normally. Chi square test was used to assess bivariate associations between participation in school- and non-school-organized ECAs and several variables such as gender, program level, grade last year, type of high school, perception of conflict between ECA and academic studies, perception of difficulty in balancing studies with ECA and perception that studies are affected by participation in ECA. Variables with statistically significant bivariate relationships with participation in school-organized ECAs were entered into multivariate logistic regression models for the entire sample and for each school separately. Odds ratios (ORs) and confidence

intervals were calculated. No model was developed for non-school-organized ECAs because few students were involved in such activities. Analysis was performed using SPSS version 17.0. Significance level was set at 5%.

3. Results

Of 200 students in each school invited to participate, 199 (99.5%) students in Alexandria and 146 (73%) in Dammam filled out questionnaires. Table 1 shows the characteristics of the study sample. Significant differences were observed in the proportions of junior and senior students, gender, grade in the last academic year (all $P < 0.0001$), and type of high school from which students graduated ($P < 0.05$).

The percentage of students reporting ECA participation differed significantly between schools [54 (27.1%) in Alexandria, 64 (43.8%) in Dammam; $P = 0.001$, Fig. 1]. The most frequently reported ECAs were community service (31.4%), sports (29.4%), and social activities such as trips (23.1%), with no significant difference between schools ($P > 0.05$ for all). Significantly greater percentages of students in Alexandria participated in cultural and intellectual activities than in Dammam ($P = 0.005$ and $P = 0.04$, respectively). The number of weekly hours spent on ECAs did not differ between schools (overall median = 0; range, 0–84; $P = 0.33$).

Eighty-three of 227 (36.6%) students who did not participate in school-organized ECAs reported involvement in at least one type of ECA, with no significant difference between schools ($P = 0.15$). About one-third of these students participated on their own in community service, social activities, and sports (31.7%, 31.7%, and 30.5%). A significantly greater percentage of students in Dammam were involved in student representation activities outside of school compared with students in Alexandria (22.9% and 6.2%; $P = 0.05$). Students practiced other ECAs outside of schools including cultural activities (such as scientific competitions), artistic and intellectual activities (9.6%, 8.4% and 6%).

Students in the two schools were equally undecided about whether ECAs conflicted with their studies (52.7% “sometimes” responses; $P = 0.33$, Table 2), and whether balancing ECAs and academic life was difficult (47.8% “sometimes” responses; $P = 0.06$). Most (59%) students in the two schools indicated that their studies were not affected by ECA participation ($P = 0.22$).

About half (51.9%) of students in both schools cited socialization and making friends as reasons for participating in ECA ($P = 0.48$ between schools, Fig. 2). The least frequently reported reason was stress release (32.5%, $P = 0.17$). A significantly greater percentage of Saudi than Egyptian students reported participating to gain experience (49.6% and 36.2%; $P = 0.02$), whereas a significantly greater portion of Egyptian than Saudi students participated to build personality (39.5% and 28.2%; $P = 0.05$). The majority (58.9%) of students in both schools were dissatisfied/very dissatisfied with ECAs, with a significantly greater portion of Egyptian than Saudi students expressing this opinion (65.6% and 50.4%; $P = 0.03$).

Overall, a significantly greater portion of participants than non-participants was male (68.4% and 46.2%; $P < 0.0001$, Table 3). The gender difference was significant only in Alexandria ($P = 0.03$). A significantly greater percentage of ECA participants than non-participants in Alexandria had high grades (86.1% and 67.9%; $P = 0.04$). A significantly smaller percentage of participants than non-participants in Dammam attended public schools (67.7% and 82.7%; $P = 0.04$). A smaller percentage of participants than non-participants felt that balancing studies and ECAs was difficult (27% and 41.6%; $P = 0.01$); this association was significant in Alexandria, but not in Dammam ($P = 0.02$ and $P = 0.24$). In Alexandria, significantly fewer participants than non-participants reported that ECA participation affected their studies (13.5% and 29.1%; $P = 0.04$). Being a senior student and reporting conflict between ECAs and academic activities

Table 1 Description of samples in the two dental schools (Alexandria and Dammam).

Background variables		Alexandria <i>N</i> (%)	Dammam <i>N</i> (%)	All <i>N</i> (%)	<i>P</i> value
Program level	Junior	92 (46.2)	115 (78.8)	207 (60)	<0.0001*
	Senior	107 (53.8)	31 (21.2)	138 (40)	
Gender	Male	67 (34.9)	115 (78.8)	182 (53.8)	<0.0001*
	Female	125 (65.1)	31 (21.2)	156 (46.2)	
Grade	Excellent	39 (32.5)	11 (9.6)	50 (21.4)	<0.0001*
	Very good	49 (40.8)	56 (49.1)	105 (44.9)	
	Good	30 (25)	47 (41.2)	77 (32.9)	
	Pass	2 (1.7)	0	2 (0.9)	
High school	Governmental	128 (66.3)	109 (76.2)	237 (70.5)	0.05*
	Private	65 (33.7)	34 (23.8)	99 (29.5)	

The total does not always add to number of subjects in each sample because of item non-response.

* Statistically significant at $P \leq 0.05$.

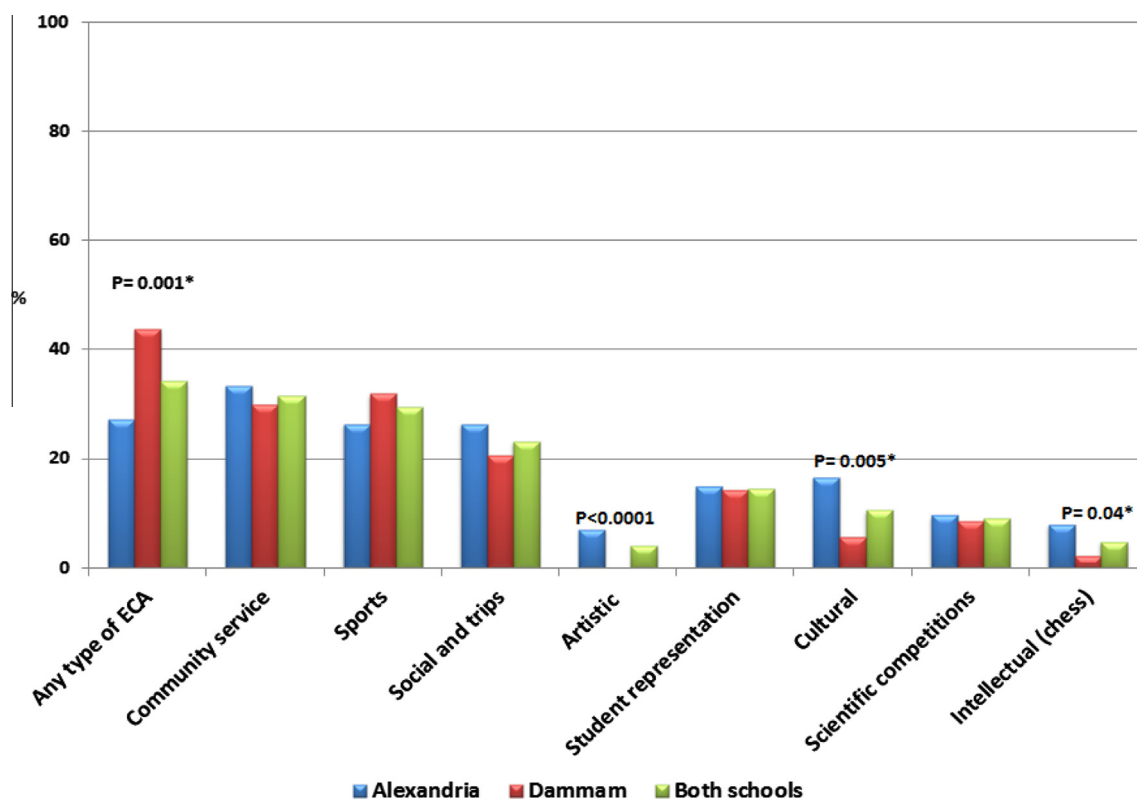


Figure 1 Percentage of students participating in school-organized ECA. (*Statistically significant at $P \leq 0.05$.)

were not related to ECA participation (overall $P = 0.96$ and $P = 0.07$).

Participation in non-school-organized ECAs was affected only by the perception of difficulty balancing studies and ECAs ($P = 0.02$); a smaller percentage of participants than non-participants had this perception (31.9% and 50.6%; $P = 0.02$). A significant association with gender, favoring males, was observed only in Alexandria (43.5% of participants and 23.7% of non-participants, $P = 0.02$).

Gender and perception of difficulty balancing ECAs and academics had significant effects on ECA participation in the total sample ($P = 0.005$ and $P = 0.01$; Table 4). Males were more likely than females to participate (OR = 2.10), and those who perceived difficulty

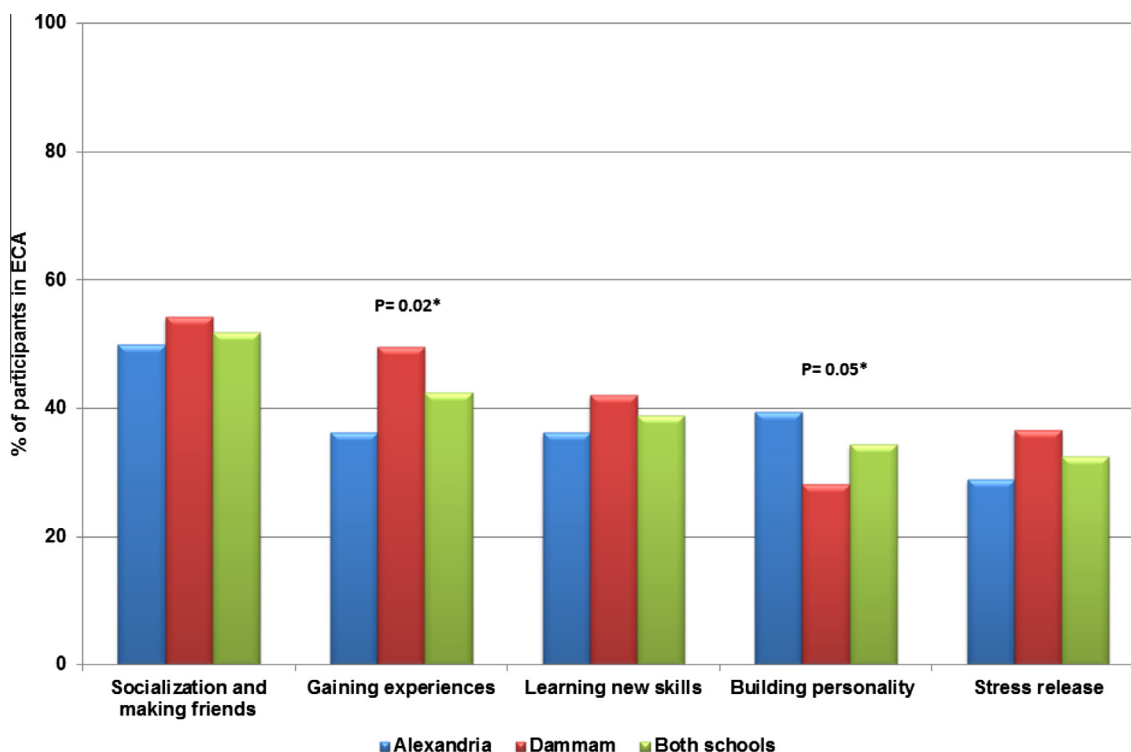
were less likely to participate (OR = 0.51). In a separate analysis of data from Alexandria, neither gender nor perception of difficulty had a significant effect ($P = 0.11$ and $P = 0.07$), but students with high grades in the previous academic year were less likely to participate in ECAs (OR = 0.33). In Dammam, graduating from a public school was associated with lower odds of participation (OR = 0.44).

4. Discussion

To our knowledge, this study is the first to report on dental students' participation in ECAs, in the Middle East or

Table 2 Students' perception of the relation between ECA and academic activities.

Perceptions		Alexandria <i>N</i> (%)	Dammam <i>N</i> (%)	All <i>N</i> (%)	<i>P</i> value
Conflict between ECA and academic activities	Yes	43 (29.5)	37 (31.9)	80 (30.5)	0.33
	Sometimes	74 (50.7)	64 (55.2)	138 (52.7)	
	No	29 (19.9)	15 (12.9)	44 (16.8)	
Have difficulty balancing studies and ECA	Yes	53 (35.1)	40 (35.4)	40 (35.4)	0.06
	Sometimes	55 (36.4)	54 (47.8)	54 (47.8)	
	No	43 (28.5)	19 (16.8)	19 (16.8)	
Studies affected by participating in ECA	No	83 (60.1)	62 (57.4)	145 (59)	0.22
	Not sure	23 (16.7)	27 (25)	50 (20.3)	
	Yes	32 (23.2)	19 (17.6)	51 (20.8)	

**Figure 2** Students' reasons for participating in ECA. (*Statistically significant at $P \leq 0.05$.)

elsewhere. The study included data from two dental schools in different countries, which increases the generalizability of results to other settings. The chief limitation of the study is that it depended on students' responses to the questionnaire, which was developed in Dammam. Underlying cultural differences may have affected Alexandria students' understanding of the questions. In addition, because the questionnaire was anonymous and for reasons of confidentiality, we could not check the accuracy of students' reporting of their grades in the previous year.

About one-third of all students participated in ECAs. This percentage was greater among Saudi than among Egyptian students overall and in the sports category. These results may be explained by the predominance of males, who are more likely than females to be able to participate in ECAs, among Saudi students. The ECA participation level is generally lower

than that reported in other studies conducted among non-dental students. Roulin and Bangerter (2013) found that 94% of 66 undergraduate and postgraduate business and economics students in French-speaking Swiss Universities were active in ECAs. They reported that sports and artistic activities were most popular, with fewer students participating in associative or community activities. Thompson et al. (2013) found that 87% of 67 undergraduate students in UK schools of science and technology, arts and social sciences, and management were engaged in at least one form of ECA; among others, 39% of these students were involved in sports, 14% in volunteer work, and 8% were involved in arts activities. Stuart et al. (2011) reported that male undergraduate students from several UK Universities and schools spent more time in sports and committees and were less likely than females to see volunteer work as beneficial to their careers. In the same study, Arab

Table 3 Factors affecting participation in ECA.

	Participation in school-organized ECA						Participation in non-school organized ECA					
	Alexandria		Dammam		Both schools		Alexandria		Dammam		Both schools	
	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)
Being a senior student	31 (57.4)	76 (52.4)	16 (25)	15 (18.3)	47 (39.8)	91 (40.1)	20 (41.7)	56 (57.7)	9 (25.7)	6 (12.8)	29 (34.9)	63 (43.1)
<i>P</i> value	0.53		0.33		0.96		0.07		0.13		0.23	
Males	25 (47.2)	42 (30.2)	55 (85.9)	60 (73.2)	80 (68.4)	102 (46.2)	20 (43.5)	22 (23.7)	24 (68.6)	36 (76.6)	44 (54.3)	58 (41.4)
<i>P</i> value	0.03*		0.06		<0.0001*		0.02*		0.42		0.06	
Previous academic year grade (excellent/very good)	31 (86.1)	57 (67.9)	31 (54.4)	36 (63.2)	62 (66.7)	93 (66)	15 (62.5)	42 (70)	13 (56.5)	23 (67.6)	28 (59.6)	65 (69.1)
<i>P</i> value	0.04*		0.34		0.91		0.51		0.39		0.26	
Graduation from public high school	37 (72.5)	91 (64.1)	42 (67.7)	67 (82.7)	79 (69.9)	158 (70.9)	34 (70.8)	57 (60.6)	29 (82.9)	38 (82.6)	63 (75.9)	95 (67.9)
<i>P</i> value	0.27		0.04*		0.86		0.23		0.98		0.20	
Conflict between ECA and academic activities	13 (25)	30 (31.9)	15 (24.2)	22 (40.7)	28 (24.6)	52 (35.1)	12 (27.3)	18 (36)	14 (48.3)	8 (32)	26 (35.6)	26 (34.7)
<i>P</i> value	0.38		0.06		0.07		0.37		0.23		0.90	
Have difficulty balancing studies and ECA	12 (22.6)	41 (41.8)	19 (30.6)	21 (41.2)	31 (27)	62 (41.6)	15 (33.3)	26 (49.1)	8 (29.6)	13 (54.2)	23 (31.9)	39 (50.6)
<i>P</i> value	0.02*		0.24		0.01*		0.12		0.08		0.02*	
Studies affected/affected a lot by participating in ECA	7 (13.5)	25 (29.1)	11 (17.7)	8 (17.4)	18 (15.8)	33 (25)	11 (25.6)	14 (32.6)	4 (16)	4 (19)	15 (22.1)	18 (28.1)
<i>P</i> value	0.04*		0.96		0.08		0.48		1.00		0.42	

* Statistically significant at $P \leq 0.05$.

Table 4 Multivariate logistic regression for factors affecting participation in ECA in Alexandria, Dammam and the two schools combined.

Schools	Variables	Wald χ^2	<i>P</i> value	OR (CI)
Alexandria	Males vs females	2.57	0.11	2.16 (0.84, 5.53)
	Previous academic year excellent/very good grades vs lower grades	5.52	0.02*	0.33 (0.07, 0.79)
	Perception of difficulty vs none	3.25	0.07	0.40 (0.15, 1.08)
Dammam	Graduating from public vs private high school	4.24	0.04*	0.44 (0.20, 0.96)
Overall	Males vs females	7.90	0.005*	2.10 (1.25, 3.54)
	Perception of difficulty in balancing ECA and academics vs none	6.08	0.01*	0.51 (0.30, 0.87)

OR: odds ratio, CI: confidence interval,

* Statistically significant at $P \leq 0.05$.

and Persian students reported engaging in the largest number of solitary activities. The differences in participation level between these European studies and the present study may

be attributed to differences in cultural background and academic discipline, as none of these studies included dental or health care students.

At least 50% of students in the present study spent no time on ECAs. [Kiersma et al. \(2011\)](#) found that 29.6% of 514 undergraduate students at the School of Pharmacy, Purdue University, were involved in ECAs for 1–2 h/week, and 34.8% were involved for 2–7 h/week. Students in that study were more confident than those in the present study that ECAs did not affect their studies. Similarly, 64% of French-speaking Swiss students believed that their involvement in ECAs had a positive effect or no impact on their academic performance ([Roulin and Bangerter, 2013](#)). Undergraduate students from UK schools reported that they sometimes experienced tension between ECAs and academic work, with some ascribing less satisfactory academic achievement to ECAs and others reporting that they dropped ECAs to avoid negative effects on their grades ([Thompson et al., 2013](#)).

The most frequently cited reason for ECA participation in the present study was socialization. In the age of online information availability at the click of a button in the comfort of one’s home, students still value the communities of learning that higher education institutions represent. Social support from friends is essential to students’ success ([Burk and Bender, 2005](#); [Wilcox et al., 2005](#)). A group of undergraduate students from the UK reported engaging in ECAs because it provided a sense of belonging among colleagues, as well as a means to cope with stress. Some students explained that ECAs provided the feeling that they did something useful for the community, whereas others reported that ECAs allowed them to develop skills and gain experience that would be useful for later employment ([Thompson et al., 2013](#)). In another study,

students cited the continuation of an activity begun as a child, stress reduction, maintenance of well-being, and gaining of experience, in addition to creating networks, as reasons for ECA participation (Roulin and Bangerter, 2013).

In the present study, most students were dissatisfied with school-organized ECAs. This result may explain the participation of one-third of these students in non-school-organized, but not school-organized, ECAs. Community service was the most frequently cited activity in both categories. Data from the US National Survey of Student Engagement (2011) indicate that those participating in service learning (community service within an educational program) reported higher gains in several areas of learning and development (Thompson et al., 2013). Another study showed that teaching staff from a large UK university valued the characteristics of volunteering, whether organized as part of community learning or entirely extracurricular (Clegg et al., 2010). The incorporation of community service in a curriculum conforms to the latest recommendations of accrediting bodies in dental education (CODA, 2013). The results of the present study support the introduction of such courses in dental curricula based on students' independent acceptance of and commitment to these activities.

In the present study, most ECA participants in Alexandria were male, although gender segregation is applied in Dammam. Interestingly, the relationship between participation in non-school-organized ECAs and gender in Dammam was not only statistically insignificant, but also reversed, as a greater percentage of females participated. Gender was also a significant predictor of ECA participation in the total sample and in Alexandria, but not in Dammam. At face value, one would associate gender predilection with the participation of more males in the school where segregation is applied. The results, however, indicate that this assumption is not true and that Saudi female students are greatly motivated to engage in ECAs, even beyond those that the school offers. Although the two schools and student groups share several common factors, basic differences prevent direct extrapolation of one group's experience to the other. On the other hand, in the study conducted among French-speaking Swiss students in which the participation level was high (94% overall), no difference was observed between males and females (Roulin and Bangerter, 2013). One study addressing the issue of gender difference in ECA participation reporting suggested that females underestimate their levels of participation because they considered their activities to be non-extracurricular. When prompted, however, the percentage of female students reporting participation in ECAs increased from 48% to 60% (Stevenson and Clegg, 2012).

In Dammam, a significantly greater percentage of students participating in ECAs graduated from private schools. Stuber (2009) documented cultural and social differences in students' ECA participation upon enrollment in college; those with more assets because of their/their families' social status were more likely to participate. Similarly, Gracia-Marco et al. (2010) found that indicators of social status, such as parental education and occupation, were related to ECA participation.

Previous academic performance was another factor that had mixed associations with participation in school-organized ECAs in the present study. Participation was greater among high achievers in Alexandria, whereas the opposite was observed in Dammam. This difference between schools may be

regarded as reflecting a composite of cultural norms and characteristics of the educational systems. It can be interpreted to signify that students with high academic achievement are also those with greater ECA involvement due to the holistic approach taken in the Egyptian educational system. An alternative explanation can be that Egyptians participate in ECAs only if their studies are not affected to the extent that they can achieve very good/excellent grades. This latter explanation was confirmed in Alexandria by the relationships observed between ECA participation and the perceptions of difficulty balancing activities and studies, and that students' grades were affected. Saudi students, on the other hand, participated in ECAs regardless of how well/poorly they were doing in their studies.

Although response rates in the two schools were adequate, a higher response rate was achieved in Alexandria. This result may be explained by the administration of the questionnaire in Dammam at the end of the first semester, when students were preparing for exams and had no time to respond. In Alexandria, the questionnaire was distributed at the beginning of the second semester, when attendance was highest.

ECAs are important for students' well-being; they provide a healthy outlet for energy and an optimal educational environment. Portions of schools' budgets are allocated to support these activities. In this light, the percentage of students in this study seeking participation in ECAs away from their schools represents an opportunity lost by the educational system and the failure to include students in ECA planning. Efforts should be made to improve the efficiency of the system so that students are willing to use it. The potential of ECAs to develop students' soft skills also needs to be further emphasized and enhanced (Divaris et al., 2008). This approach is one way to build on students' interest in the social aspects of ECAs for the benefit of learning. Another method would be to leverage students' preference for community service by providing such opportunities as part of formal education (Brush et al., 2006).

5. Conclusions

A minor portion of students from the two dental schools included in the study participated in ECAs organized by their schools or independently. They allocated little time to these activities and valued mostly community service, sports, and other activities, highlighting their social aspects. Most students did not think that ECAs affected their grades or conflicted with their studies. Although dental educational environments are characterized by increased stress levels, students in the present study did not use ECAs to alleviate this stress.

A one-size-fits-all kind of approach to problems in educational environments in general, and those related to ECAs in particular, will clearly not work. Adaptation to individual differences among educational institutions, program types, specialty fields, and student characteristics, including their cultural and social backgrounds, is necessary.

Conflict of interest

The authors have no conflict of interest to declare.

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