

ASSOCIATION BETWEEN PERSONALITY TYPE AND ACADEMIC ACHIEVEMENT IN UNDERGRADUATE DENTAL STUDENTS IN KING ABDULAZIZ UNIVERSITY

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ABSTRACT

The understanding of an individual's personality type is important for better communication and to improve personal performances. The goal of this study is to evaluate the distribution of personality types amongst dental students and to study the relationship between academic achievement and personality type. This is a cross-sectional study with a total of 251 dental students at King Abdulaziz University, Dental college in Jeddah. Using validated DiSC assessment questionnaire, data was collected. A chi-square test was used to analyze the data. Participants in the study 147(58.5%) female, while 104 (41%) were male. The GPA 137 (54.5%) was 5 - 4.5, 88 (35.2%) was 4.4 – 3.75, and 26 (10.3%) was 3.74 – 2.75. A total of 68 (26.9%) of the participant belonged to D category, comprising 42 females and 26 males, 66(26.1%) of the participant belonged to I category, comprising 34 females and 32 males, 70 (28.1%) belonged to S category, comprising 43 females and 28 males and a total of 47 (19%) belonged to C category, comprising 29 females and 18 males. The relationship between academic achievement and DiSC assessment revealed no significance having P value (0.05). The highest percentage of dental students in King Abdulaziz University, is conformed to the S personality type, whilst the C personality type had the lowest percent, with no significant relation between academic year and personality types. There is significant association, between personality type and GPA, yet there was proximity in the number of students under each DiSC personality type and their performance.

Key words: Personality type, DiSC, Dental student, Academic achievement, Undergraduate.

Introduction

Dental and Medical Students' performance depends on two interdependent factors that contribute to their practice and study. The first element is concerned with the cognitive aspect that is usually evident in their intellectual competency, such as the ability to recall and apply knowledge during exams. The second element is usually categorized under the non-cognitive skills or personal qualities, which includes personality traits behavioral values, and others [1].

The importance of understanding one's personality is somewhat crucial to achievement at school, work, and communication with others. Personality also can affect one's relationships which in the term could have an impact on achievement in the form of marks and satisfaction [2]. A strong relation was found between student personality and their academic behavioral [3].

In most universities, students would be evaluated on their academic performance based on their grade point average (GPA), which proves to be a valid assessment measurement, as well as the clinical and pre-clinical accomplishment [4]. The clinical aspect of academic performance is evaluated chiefly based on patient management skills, interpersonal

interactions, holistic patient approach, and procedural skills. In addition, they are assessed based on minimum procedural experience and competency examination [4, 5]. Education officials and teachers typically determined achievement using graduation rates, classroom performance, and results from standardized tests, yet this does not account for the variability of students' personalities or other non-cognitive factors [6]. The student's ability to cope with the school's requirements and academic demands may vary from one student to another depending on various preexisting influencing factors, whether cognitive such as knowledge of basic sense, clinical exposure, correlated theoretical and practical training or non-cognitive such as family situations, religion, ambitions and personality traits [6].

The use of personality traits measurement tools as a non-cognitive factor may improve the prediction of academic achievement of dental school students [6-8]. *Personality* was defined by Philip S. Holzman as "a distinctive way of behaving, feeling, and thinking. Personality embraces attitudes, moods, and opinions and is most clearly expressed in interactions with other people. It includes behavioral characteristics, both inherent and acquired, that distinguish one person from another and that can be observed in people's relations to the environment and the social group".

In the education field, many studies have used different personality tests. The first study was conducted in 1953, by using the Minnesota multiphasic personality inventory (MMPI) to investigate the gap between students with the best and worst personality types [9].

The matter of personality type amongst students has been of interest lately, even in dental schools and student performance. Various personality assessment tools have been used over time, each with the same idea to categorize people to understand them better. For instance, the DiSC is one of the most commonly used personality assessment tools that was constructed in 1956 as a checklist to help participants better understand themselves [10]. This test categorizes participants into four distinct domains following the same acronym [11, 12]. D stands for Dominance. People under this category are confident and prioritize competition and success. They tend to be direct, demanding, and have a strong force of will. Dominant people enjoy taking responsibility. As for the I, it stands for Influence. Influential people are optimists, enjoy being around people, have influential personalities, and prefer to be active. Being accepted by others is important to them, as is forming lasting relationships and trusting others. S stands for Steadiness. These individuals are known for being steady or supportive, humble, and accommodating. They do not seek challenges but face life changes. They tend to work at a steady pace to achieve their goals and tend to be patient. They are always prepared in advance for any future changes, they want their accomplishments to be appreciated by others, and dislike pressure situations. People with this style tend to have a consistent steady approach to life. They could be motivated by cooperation, and they seem to be calm, patient, and predictable. The last category is C which stands for Compliance, and these people tend to find security only in order and in rules and concepts that do not change without warning or arbitrarily. Type C personality People often assume a passive role in a hostile environment.

Other personality assessment tools include Myer Bridge Type Indicator (MBTI) which Swiss psychiatrist Carl G. Jung set initially (1875-1961), categorizing people into Extroversion-Introversion, Sensing-Intuition, Thinking-Feeling, and judging-perceiving. Another personality assessment test is known as the Keirsey Temperament Sorter II (KTS II), which is one of the most popular personality tests with four distinct domains, Artisan, Guardian, Idealist, and Rational, that was first introduced in *Please Understand Me* [13]. The difference between Myer Bridge Type Indicator (MBTI) and Keirsey Temperament Sorter II (KTS II) is that the first focuses on the Extroversion-Introversion personality traits, while the second focuses on the Sensing-Intuition personality traits.

Another personality assessment tool is The Five Model of personality, otherwise known as "The Big Five model," which is a suggested taxonomy of personality traits of five domains: openness to experience, conscientiousness,

Extroversion, and agreeableness. Under each category are specific factors that draw a clear picture of the main domain. NEO-PI-3 Is a revised form of The Five-Model of personality that adds a six facets scale for each domain. Lastly, there is the DiSC assessment questionnaire.

The literature provides a wide variety of approaches to assess and determine the relationship between personality types and students' academic performance and creativity [14]. For instance [15] focused on personality traits associated with clinical productivity and broken appointment rates in dental undergraduate students utilizing the Keirsey Temperament Sorter II (KTS II). They have found that introverts had lower clinical productivity and higher broken appointment rates when compared to their extroverted peers. However, that does not necessarily mean that introverts are less successful.

Another approach was explored by directing the focus toward personality types influence on problem-based learning in dental students. This study used the Myer Bridge Type Indicator (MBTI) and concluded that performance cooperative performance was higher in three particular groups, (ENTJ), (ISTJ), and (ESTJ). They argue that including personal variables would help the education process by complementing the educational environment on both the individual and group levels [13, 16].

On 2004 a study was conducted to examine the validity of cognitive and non-cognitive assessment methods in student selection. The personality assessment tool used was NEO-PI-3 (Form S), a personality inventory that examines a person's Big Five personality traits and reports the six subcategories of the Big Five. The findings suggest that dental academic performance was not predicted by conscientiousness. However, openness to experience predicted dental academic and clinical performance success in the second and third years. They found that students less open to new experiences had better performance than those with more openness to new experiences. They concluded that the use of personality measures could aid in predicting clinical success in conjunction with the grade point average (GPA) of previous years [17].

A 2017 study utilized the Myer Bridge Type Indicator (MBTI) as well to investigate the personality preferences of two distinct groups on different tracking methods. The first was a traditional track, and the other was the Problem Based Learning track. They have concluded that in problem-based learning (PBL) admission methods, there were an increased percentage of extroverts' personality types over introverts. They have also observed that extroverts have adapted to this curriculum quickly, and they were more successful consequently when compared to their introverted peers [16].

Another study has taken an interest in assessing the personality measures to predict the success of dental students and comparing their personality traits to dental

practitioners utilizing The Five- Model of personality. They suggested that dental school students who excel best are those who are determined, organized, goal-oriented, emotionally rooted, and compassionate. Furthermore, although the cognitive measures proved to be excellent in predicting students' academic success, personality components were better predictors of students' professional behavior. Especially neuroticism and conscientiousness. [17].

To confirm the findings of those last two studies [16, 17], a study was conducted that used NEO-PI-3. They concluded that grade point average (GPA) clinical performance was best predicted using a combination of cognitive and non-cognitive predictors. They also expressed that NEO-PI-3 and its facets, especially the Conscientiousness facets, were of great importance in predicting clinical and academic outcomes [18]. They concluded that the inclusion of non-cognitive measures would improve the accuracy of the cognitive indicators.

A study investigated Personality traits concerning multiple non-cognitive factors affecting students' selection of advanced dental education. They used the MBTI questionnaire on a total of 253 students, 232 of which completed the questionnaire. They found that "The most common personality type category was ISTJ (27.4%), ESTJ (21%), and ENFJ (12.7%)". They concluded that only one-fifth of dental students were interested in continuing with their advanced education. Extroversion and sensing were found to be the main indicator to pursue further education [19].

The personality aspect has also been studied in terms of student enrollment in dental schools, as found in a study conducted in King Abdulaziz University Faculty of Dentistry in 2017 that used The Five Model of personality in a Mini Multiple Interview system on newly accepted dental students. This study aimed to evaluate the personal non-academic quality of students applying to dental schools as a selection method, besides the regular acceptance method, which is grade point average (GPA). They have found that incoming male students showed higher scores on agreeableness and lower scores on neuroticism, whereas incoming female students scored higher on agreeableness and conscientiousness [20]. Therefore, we hypothesized that students' academic performance is to be affected by different personality types.

This current research aims to assess the relationship between personality types and the academic achievement of dental students. That could help establish a better understanding of the impact of different personality traits on students' academic performance.

Materials and Methods

Research design and participants

This is a cross-sectional, observational study that includes both female and male dental students as participants. Ethical approval for the study was obtained from the institutional ethics committee at the Faculty of Dentistry, King Abdulaziz University in Jeddah, Kingdom of Saudi [IRB number 165-12 - 20].

The participants' inclusion criteria in this study are students who are accepted into King Abdulaziz University Faculty of Dentistry while also being undergraduates who are ranged from the third to the intern year. While a student in their preparatory year, second year, or those who are already graduated are excluded from the study.

A questionnaire was shared in February and March of 2021 with 320 potential participants to be included in this study, and only 251 (79.68%) agreed to participate by answering the questionnaire. Our questionnaire aimed to find the relationship between the number of students in each DiSC category, the variations of DiSC category in each academic year, the relation between grade point average, age, gender, sleeping hours, physical activity, and financial status to the DiSC category, The relation between DiSC category and student patient relation, the relation between the grade point average and the reason for choosing dentistry, and lastly, the relation between the grade point average and the number of patients quit treatment

Study setting

This study was carried out at King Abdulaziz University Faculty of Dentistry, Jeddah, Saudi Arabia, in 2020-2021. The faculty was established in 1984 with its ten distinct departments (Prosthodontics, Endodontics, Periodontics, Oral-maxillofacial, Pediatric Dentistry, Restorative Dentistry, Orthodontics, Oral Medicine, Oral Radiology and Oral Pathology). The student flow is approximately 200, including males and females yearly.

Data collection method

Data was collected using a standardized, thoroughly revised questionnaire. The first part comprised 9 questions relating to demographic information which included the age, gender, academic year, marital status, sleeping hours, physical activity, financial status, grade point average (GPA), and the reason behind choosing dentistry. The second part was the DiSC assessment of personality traits. The validity and reliability of the DISC questionnaire have been thoroughly assessed and confirmed. An expert's (statistician) opinion was sought out to evaluate the understandability and validity of the questionnaire. Twenty-four DiSC questions were answered and submitted anonymously during eight weeks' time frame via a google form and by default uploaded into an excel spreadsheet. Students were informed that they would receive an invitation to a workshop to explain their results as well as an email containing the results. The DiSC questionnaire is comprised of 12 questions, each with four options. Students were asked to choose the most representative option and the least representative option

relating to each question. All responses to the DiSC-related questions were then answered individually on the DiSC Personality Testing website. King Abdulaziz University Faculty of Dentistry utilizes a five-point grading scale to determine the grade point average (GPA), with the following grade classification. Grade A+, A, B+, B, C+, C, D+, D and F represent grade point average (GPA) value (4.76-5.0), (4.51- 4.75), (4.10-4.50), (3.51-4.00), (3.10-3.50), (2.513.00), (2.10-2.50), (1.10-2.00) and (0.00-1.00) respectively.

Statistical analysis

After the data collection, they were coded, checked, and entered into SPSS version 22. For categorical variables, and the tables and figures were plotted including the gender, academic year, grade point average (GPA), marital status, sleeping hours, physical activity, financial status, and were described using frequencies.

To develop inferential statistics, A one-way ANOVA was used to evaluate if there are differences within each category (academic year, gender, GPA, and personality type). Furthermore, Chi-square was used to assess the correlation between the DiSC personality type category with the academic year, grade point average, age, gender, sleeping hours, physical activity, financial status, and the student patient relation. Chi-square was also used to assess the correlation between the GPA and the reason for choosing dentistry as the major of choice. Likewise, the correlation between the GPA and the number of patients who quit treatment was also evaluated using Chi-square. For all statistical tests, it was considered to be significant whenever the p-value < 0.05.

Results and Discussion

In this study, a total of 251 responses were received. Demographic profiles show that the majority of the studied population was female accounting for 58.5% (147), while 41.4% (104) were male with an average age of 22.6 years (Table 1).

Table 1. Frequency of age, gender, marital status, academic year, physical activity, and GPA

Variables	Frequency	Percentage
Age	20	10.8%
	21	19.1%
	22	17.1%
	23	20.3%
	24	19.9%
	25	8.8%
	26	2.8%
	27	1.2%
Gender	Male	58.6%
	Female	41.4%

Marital Status	Single	242	96.4%
	Married	9	3.6%
Academic Year	3 rd Year	65	25.9%
	4 th Year	45	17.9%
	5 th Year	56	22.3%
	6 th Year	36	14.3%
	Interns Year	49	19.5%
Physical Activity	Very Active (Daily)	50	19.9%
	Moderately Active (Sometimes)	147	58.6%
	Sedentary Active (Rarely)	54	21.5%
GPA	5-4.5	137	54.6%
	4.4-3.75	88	35.1%
	3.74-3.75	26	10.4%

A one-way ANOVA was used to evaluate if there were differences between the genders (male and female) and was found to be non-significant (p>0.05) (Table 2).

In this sample population, 242 (96.4%) of the students were single and only 9 (3.6%) were married.

As for the academic year, 65 (25.9%) students were in their 3rd year, 45 (17%) in their 4th year, 56 (22.3%) were in their 5th year, 36 (14.3%) in their 6th year, and 49 (19.5%) were in their interns' year (Table 1). A one-way ANOVA was also used to evaluate if there is a difference between academic years and was found to be non-significant (p>0.05) (Table 3).

Table 2. One-Way ANOVA of genders

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	16.264	68	.239	.975	.538
Within Groups	44.645	182	.245		
Total	60.908	250			

Table 3. One-Way ANOVA of the academic year

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	115.392	68	1.697	.744	.919
Within Groups	414.910	182	2.280		
Total	530.303	250			

When asked about their sleeping hours, the students who sleep more than 6 hours were 123 (49%), while those who sleep less than 6 hours were 128 (51%) students. Regarding the financial status of the students, 130 (51.8%) had low income (less than 10.000 per month), 69 (27.5%) had medium income (10.000 – 24.000 per month), 38 (15.1%) had medium income (24.000 – 50.000 per month), and 14

(5.5%) had a high income (more than 50.000 per month) (Table 4).

Table 4. Frequency of financial status, sleeping hours, number of patients who quit the treatment, clinical skill rating, and personality types.

variables	Frequency	Percentage
Financial Status	Low (Less than 10.000 per month)	130 51.8%
	Medium (10.000-24.000 per month)	69 27.5%
	Medium (25.000-50.000 per month)	38 15.1%
	High (More than 50.000 per month)	14 5.6%
Sleeping Hours	More than 6 hours	124 49.4%
	Less than 6 hours	127 50.6%
No. of Patient Quit the Treatment	1	65 25.9%
	2	32 12.7%
	3 or more	28 11.2%
	Not applicable	126 50.2%
Clinical Skill Rating	Poor	3 1.2%
	Good	53 21.1%
	Very Good	144 57.4%
Personality Type	Excellent	51 20.3%
	D	68 27.1%
	I	66 26.3%
	S	70 27.9%
	C	47 18.7%

As for the physical activity of the students, 49 (19.5%) were very active (work out daily), 148 (58.9%) were moderately active (sometimes work out), and 54 (21.5%) were sedentary active (rarely works out). In regards to the GPA, 137 (54.5%) of students their GPA was 5 - 4.5, while 88 (35.2%) their GPA was 4.4 – 3.75, and 26 (10.3%) their GPA was 3.74 – 2.75 (Table 1). Of our participants, 3 (1.19 %) students reported having poor clinical skills, 53 (21.1 %) students have good clinical skills, 145 (57.7 %) have very good clinical skills, and 52 (20.7 %) students have excellent clinical skills. 66 (26.2 %) students revealed that they had 1 patient that quit the treatment, 33(13.1 %) had 2 patients that quit their treatment and 28 (11.1 %) had 3 or more patients that quit receiving treatment by them (Table 2).

A total of 68 (26.9%) of the participant belonged to the D category, comprising 42 females and 26 males while 66 (26.1%) of the participant belonged to the I category, comprising 34 females and 32 males. Furthermore, 70

(28.1%) of the participant belonged to the S category, comprising 42 females and 28 males and lastly, a total of 47 (19%) of the participant belonged to the C category, comprising 29 females and 18 males (Table 5).

Table 5. Distribution of DiSC personality types among genders

		D	I	S	C	Total
Gender	Female	42 (28.4%)	34 (22.9%)	42 (29.1%)	29 (19.6%)	148
	Male	26 (24.7%)	32 (30.5%)	28 (26.6%)	18 (18.2%)	105
Total		68	66	70	47	253

There was no significant difference between the groups when measured using one-way ANOVA ($p > 0.05$) (Table 6).

Table 6. One-Way ANOVA of DiSC personality types

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	74.648	68	1.098	.931	.627
Within Groups	214.635	182	1.179		
Total	289.283	250			

Amongst the female participants, the largest percentage (28.6%) belonged to the D and S personality types, while the least common personality type was C, at 19.7%. Similarly, the personality type most common among the male participants was I (30.8%), and the least common was C (17.3%). When compared to the academic year, 3rd-year students most commonly had S personality type, while for the 4th and 5th-year students, D was most commonly seen. Furthermore, among the 6th-year students, S was the most common personality type, and in the interns, the year it was I (Table 7).

A chi-square test was conducted to evaluate the correlation between gender, marital status, academic year, sleeping hours, physical activity, financial status, number of patients who quit their treatment, and the clinical skills with the personality type (DiSC assessment) and revealed that there are no statistical significance results ($p > 0.05$). However, there was a statistically significant association between GPA and personality type ($p < 0.05$). When evaluating the correlation between the GPA to the reason behind choosing dentistry and the number of patients who quit treatment, it was found to be not significant ($p > 0.05$).

Table 7. Distribution of DiSC personality types during the academic year

		D	I	S	C	Total
Academic Year	3 rd Year	13(20%)	20(30.8)	23(35.4%)	9(13.8%)	65
	4 th Year	15(33.3%)	8(17.8%)	13(28.9%)	9(20%)	45

5 th Year	19(33.9%)	14(25%)	13(23.2%)	10(17.9%)	57
6 th Year	8(22.2%)	8(22.2%)	13(36.1%)	7(19.5%)	36
Interns Year	13(26.5%)	16(32.7%)	8(16.3%)	12(24.5%)	49
	68	66	70	47	253

It is a well-known fact that different personality types can affect an individual's relationship with others. Also understanding student personality helps in improving our teaching methodology, mentorship, and determines their future goal [5]. However, it has also a strong impact on the academic and clinical accomplishments of the students. Thus; the goal of this current study is to assess the distribution of various personality types as well as to evaluate the relationship between academic achievement represented using grade point average and each DiSC personality type amongst dental students at King Abdulaziz University Faculty of dentistry.

The displayed results suggest that the highest percentage of 70 (27.9%) dental students fall under the S category. People with this style tend to have a consistent steady approach to life. They could be motivated by cooperation, and they seem to be calm, patient, and predictable. They are always prepared in advance for any future changes, they want their accomplishments to be appreciated by others, and dislike pressure situations. The S personality type of the DiSC test is represented in the empathetic quality studied in the Jefferson Scale of Empathy (JSE).

Amongst our sample of dental students, 68 (27.1%) belong to the D personality type. Dominant people are not afraid to face challenges or take risks. They are also blunt, and direct, and sometimes they can come off as rude. In addition, they are demanding of themselves and others and can become bored easily. Thus, they prefer change and having adventures [2].

The third personality type displayed in the results was the I of 66 (26.3%). People under this category can be described as warm, enthusiastic, and trusting. They are friendly and usually have good social skills. However, they might fear disapproval and be ignored [20]. They also can show the following personal qualities: teamwork, communication skills, professional ethics, understanding, collaboration, and cultural and ethnic sensitivity. All qualities that would seem essential to the practice of medicine and to improve students' and physicians' performance [1].

The least observed percentage belonged to the C personality type 47 (18.7%). People with compliance often assume a passive role in a hostile environment. They often possess a high compulsion to be compliant and conscientious and to avoid trouble at all costs. In addition, these people tend to be motivated by showing their expertise and work quality. They may fear criticism or showing when they are wrong. An analog to the C component of the DiSC test is the

conscientiousness factor of the Five-Factor Model (FFM), which is commonly used for personality assessment in the field of medical education.

In contrast to a 2018 study at King Abdulaziz faculty of medicine (KAUFM) on a sample of 414 medical students, the highest percentage of participants were People of the C personality type 148 (36%). the second highest percentage of medical students were the ones with the S personality type 127 (31%). Then D 102 (24%) and lastly the I 37 (9%) [18].

In this study, the distribution of personality types amongst the female dental students was mostly Dominance 42 (28.6%), followed by Steadiness 42 (28.6%) then Compliance 29 (19.7%), and lastly, Influence 34 (23.1%). Whereas with the male dental students Influence 32 (30.8%) had the highest percentage, then Steadiness 28 (26.9%), followed by Dominance 26 (25%), and Compliance 18 (17.3%) was last seen.

In this study, the relationships between gender and the variables of DiSC personality type were measured by using the Chi-square test and concluding no significant difference ($p = 0.596$). This could be attributed to the possibility that both male and female students were exposed to relatively the same academic experience. Also, this result could be explained by the fact that personality is a multifactorial variable, affected by cultural issues. Furthermore, the variations of the DiSC category in each academic year were examined by also using the Chi-square test, and no significant association was found ($p = 0.395$). That could be the result of being exposed to the same routine in life for each dental student mostly, as well as the same school exposure throughout the years. Additionally, their stressful environment requires them to develop prioritization skills and strong time management to adapt to life in dental school. All of these factors could influence the social life of dental students, which makes them more isolated and gives them little time for contact with family or friends.

Other variables assessed were the relation between personality type and sleeping hours, physical activity, socio-economic status of the students, reasons for choosing dentistry, and dentist-patient relationship. All were revealed to have no significant difference.

DiSC personality type and the grade point average (GPA) were examined utilizing the Chi-square test. A significant relation was found ($P = 0.024$). This in contrast to a study on student enrolled in pharmacy program, where there was no significant association between personality type and

cumulative GPA [21]. The association found in this study could be explained and influenced by many factors. For example, not all dental students had the same grade point average in their first year of dental school, as they had at the end of the pre-dental preparatory year. In addition, the intense competition for highly desirable specialties put students in a stressful situation, which results in students getting a different grade point average according to their performance this year before dental school. Finally, the found association could be explained by the fact that, in our faculty, the female and male dental students are taught mostly by the same faculty members or have similar ways of subject's transmission and teaching, which might influence the performance of their students and, in context, their grade point average. Dominant students tend to get higher grades. This could be related to their traits such as being confident, prioritizing competition, and success. This study showed that there is an association between the academic performance of dental students and their personality types. Similarly, a study conducted by Puccio *et al.* [14] revealed a statistically meaningful relationship between cognitive performance and personality traits.

Limitations of the study

Although the study achieved its objectives, some unavoidable limitations were encountered. First, the study was conducted during the pandemic of Covid19. And that had an impact on accessibility as well as ensuring the accuracy of the answers. This could also explain the lack of cooperation received from some of these students, which also affected the ability to treat the grade point average variables as continuous data since most of the students did not want to share the specific value of their grade point average, and for that reason, the grade point average was provided in the form of ranges. Second, the subject of personality is somewhat of less interest amongst dental students, especially since it has no relation to their field of study. Lastly, the original idea was to assess academic achievement and clinical productivity. However, during the pandemic, clinical work was postponed, and for that reason, it was not possible to obtain a full and comprehensive clinical productivity report.

Authors of this study suggest that further cross-sectional studies are recommended using a larger population size and in a different time frame where accessibility to the students is feasible. Also, conducting lectures and seminars to introduce students to the different personality types and ways to tackle them is of great value that could help them achieve better grades in the future. It would be helpful for the high school students too as some of them may have the belief that only certain kinds of personalities would fit appropriately in the dental field or succeed.

Conclusion

Based on the results of our study it was found that the most dominant personality type amongst dental students at KAU

is the S type, which is characterized as being patient, calm, and controlled, having a high willingness to help others, particularly those they consider as friends. Generally, they can deal with the task at hand and do routine work with patience and care. People under this category tend to enjoy change and variety in their work and non-work life. They also enjoy stretching themselves intellectually and physically. On the other hand, the least common personality type found amongst the students was the C type. Furthermore, we found no relationship between marital status, academic year, sleeping hours, physical activity, and financial status, number of patients who quit their treatment and the clinical skills with the personality type. As for the correlation between personality type and grade point average, it was found that there is a statistically significant association, yet there was proximity in the number of students under each DiSC personality type and their performance. Finally, there was no significance when assessing the association between the GPA with the reason behind choosing dentistry and the number of patients who stopped receiving treatment from the students.

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