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Assessing the Link Between Admission Criteria and College Major Choice in a Saudi Health Science University

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Abstract

This paper explores the relationship between admission criteria and college major selection among 1,595 undergraduate students at King Saud bin Abdulaziz University for Health Sciences (KSAUHS) in Saudi Arabia. The study examines how the admission criteria—high school GPA, General Aptitude Test (GAT), Scholastic Achievement Admission Test (SAAT), and corrected percentage—differ across various health science colleges, including the College of Medicine, College of Pharmacy, College of Dentistry, and College of Applied Medical Sciences. The results reveal significant differences in admission criteria across the different colleges, and these criteria were shown to be related to the college major that students ultimately chose. The paper concludes by emphasizing the importance of a well-designed and comprehensive student admission process in higher education and calls for further research in this area.

Keywords: admission criteria, college education, student performance

1. Introduction

College admission criteria are crucial as they assist colleges in selecting the most suitable candidates for their programs. National test scores, extracurricular activities, and essays are some of the criteria used by colleges to evaluate students. These criteria aid in identifying students who are academically ready, have the potential to thrive in college, and will be a good match for the campus community.

However, the relationship between admission criteria and college selection is a complex one. On the one hand, colleges and universities use admission criteria to select students who are likely to be successful in their programs. On the other hand, students choose college majors based on their interests and career goals.

Such a relationship encompasses several factors shaping students' decisions and outcomes (Bastedo et al., 2017; Black et al., 2023; Cortes et al., 2019). Admission criteria, typically centered around academic performance metrics like standardized test scores and GPA, serve as initial gatekeepers to various majors. However, beyond academic readiness, factors such as socioeconomic status significantly influence this connection. Students from more affluent backgrounds may have access to resources like tutoring or extracurricular activities that bolster their academic profiles, thus affecting their likelihood of gaining admission to competitive majors. Moreover, the perceived prestige or selectivity associated with certain majors can sway students' decisions, sometimes irrespective of their personal interests or aptitudes. Non-cognitive elements, including personal statements and recommendations, further complicate the picture by offering insights into students' motivations and values. The intersection of these factors underscores the need for nuanced approaches to admissions that consider a broad range of indicators to ensure equitable access and opportunity for all students (Bastedo et al., 2018; Roberts and Prideaux 2010, Prideaux et al. 2011; McManus et al. 2011; Schwartz, 2004).

There is some evidence to suggest that admission criteria are related to college selection (Kamis et al., 2023;

Carnevale & Cheah, 2013; Hoxby, 2009). For example, one study found that students with higher SAT scores were more likely to major in science, technology, engineering, and mathematics (STEM) fields (Carnevale & Cheah, 2013). Another study found that students with higher GPAs were more likely to major in business (Hoxby, 2009).

These studies suggest that admission criteria can play a role in determining which college major a student chooses. However, it is important to note that these studies are correlational, meaning that they cannot prove that admission criteria cause students to choose certain college majors. Other factors, such as students' interests and abilities, also help determine college majors.

As within this study context, Saudi undergraduate students must meet certain admission criteria to be considered for King Saud bin Abdulaziz University for Health Sciences (KSAUHS). These criteria include high school GPA, General Aptitude test (GAT), Scholastic Achievement Admission Test (SAAT), and corrected percentage. They begin their academic studies with a one-year pre-professional program to assess their English and science skills before being admitted to their college and they are assigned to different health science colleges including college of medicine (COM), college of pharmacy (COP), college of dentistry (COD), and college of applied medical sciences (CAMS) based on their cumulative GPA in the pre-professional program as each college has its own GPA requirement, which is the minimum grade point average that a student must have in order to be considered for admission. The GPA requirement can vary depending on the college, the program of study, and the student's academic record. For example, a highly selective college such as COM may require a GPA of 4.9 or higher, while a less selective college like CAMS may accept students with a GPA of 2.5 or higher. This study aims to determine the patterns of admission criteria among colleges and whether there is a significant difference in each criterion among colleges. It focuses on how the admission criteria—high school GPA, General Aptitude Test (GAT), Scholastic Achievement Admission Test (SAAT), and corrected percentage—differ across the colleges.

This study is unique in the Saudi health education context because it is one of the few studies which analyze the relationship and difference between admission criteria and college, given the large number of students.

By conducting such an analysis, we can gain a more nuanced understanding of the role that the selection process plays in shaping the future of students. Also, the analysis can help identify gaps or weaknesses in the current selection process, paving the way for improvements and reforms that can lead to a more equitable and effective system. Ultimately, a well-designed and comprehensive student selection process can contribute to a stronger and more capable workforce, benefiting society. Therefore, it is crucial that we continue to explore this topic and strive for a more holistic approach to student selection in higher education.

2. Method

There are four samples of students in the study, across two years in KSAUHS. They completed their first year at the university and took all the courses. Sample 1 consists of 264 female students; sample 2 consists of 357 female students. Sample 3 consists of 481 male students; sample 4 consists of 493 male students. The total number of all participants is 1,595 students.

For this study, the data of these participants were extracted and used as a basis for analysis. In order to conduct a thorough analysis, we utilized both descriptive statistics and ANOVA F test. However, before delving into the specifics of our analysis, it's important to first explain some of the key terms used throughout the figures below.

One such term is "final_Quadrat," which stands for the General Aptitude Test (GAT). Another term that you'll encounter is "final_tahseeli," which refers to the Scholastic Aptitude Achievement Test (SAAT). Finally, we have "total points," which is a measure of the corrected percentage.

3. Results

3.1 Individual Analysis of Each Sample

This section presents an individual analysis of each sample. Tables 1 through 4 provide descriptive statistics for high school grade, GAT, SAAT, and corrected percentage across assigned colleges for each sample, as well as the results of ANOVA F tests. Additionally, a means plot of all four variables is included for each sample.

In all samples, high school grade, GAT, SAAT, and corrected percentage showed significant differences across assigned colleges. Post hoc comparisons showed that students assigned to COM had a significantly higher mean high school grade, GAT, and SAAT than those assigned to COP or CAMS.

Sample 1

High school grade shows significant difference across assigned colleges ($F(3, 268) = 9.618$, $p = <.001$). Means plot of high school grade is shown in Figure 1. Results of post hoc comparisons indicate that students assigned to

COM and COD showed significantly higher mean high school grade compared to those who were assigned COP or CAMS (p = <.05). The typical range of high school grade for those assigned to COM was 95.20 to 100 and that for COD was 95.85 to 100. The range of high school grade for those assigned to COP was 94.17 to 100 and that for CAMS was 93.46 to 100.

GAT showed significant difference across assigned colleges (F (3, 272) = 10.111, p = <.001). Means plot of GAT is given in Figure 2. Results of post hoc comparisons indicate that students assigned to COM had significantly higher mean GAT compared to those who were assigned COD, COP or CAMS (p = <.05). The typical range of GAT for those assigned to COM was 76.00 to 98.00. For COD the range was 77 to 96. The range of GAT for those assigned to COP was 79 to 93 and that for CAMS was 75 to 96.

SAAT had significant difference across assigned colleges (F (3, 272) = 24.49, p = <.001). Means plot of SAAT is given in Figure 3. Results of post hoc comparisons indicate that students assigned to COM reported significantly higher mean SAAT compared to those who were assigned COD, COP or CAMS (p = <.05). Typical range of SAAT for those assigned to COM was 78.00 to 96.00. For COD the range was 74 to 94. Range of SAAT for those assigned to COP was 74 to 92 and that for CAMS was 74 to 92.

Corrected percentage report significant difference across assigned colleges (F (3, 268) = 29.35, p = <.001). Means plot of corrected percentage is given in Figure 4. Results of post hoc comparisons indicate that students assigned to COM reported significantly higher mean corrected percentage compared to those who were assigned COD, COP or CAMS (p = <.05). Typical range of corrected percentages for those assigned to COM was 86 to 97. For COD the range was 85 to 96. Range of corrected percentages for those assigned to COP was 85 to 94 and that for CAMS was 85 to 93.

Table 1. Sample 1 descriptive Statistics High School Grade, GAT, SAAT and corrected percentage and ANOVA Test for Difference

		N	Mean	SD	Minimum	Maximum	F	p
High school	COM	66	99.16	1.12	95.20	100.00	9.618	<.001
	COD	40	98.74	1.10	95.85	100.00		
	COP	40	98.42	1.32	94.17	100.00		
	CAMS	126	98.07	1.63	93.46	100.00		
GAT	COM	70	88.63	4.65	76.00	98.00	10.111	<.001
	COD	40	86.60	4.28	77.00	96.00		
	COP	40	85.70	3.87	79.00	93.00		
	CAMS	126	85.24	4.04	75.00	96.00		
SAAT	COM	70	86.49	4.53	78.00	96.00	24.49	<.001
	COD	40	82.70	4.55	74.00	94.00		
	COP	40	82.38	4.29	74.00	92.00		
	CAMS	126	81.37	3.48	74.00	92.00		
Corrected percentage	COM	66	90.85	2.95	86.00	97.00	29.35	<.001
	COD	40	88.68	2.51	85.00	96.00		
	COP	40	88.18	2.40	85.00	94.00		
	CAMS	126	87.52	1.90	85.00	93.00		

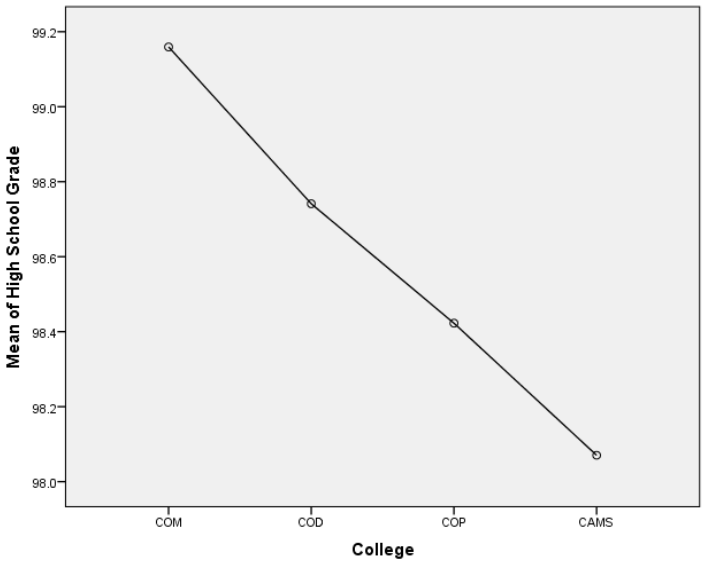

Figure 1. Means plot of high school grade across assigned colleges

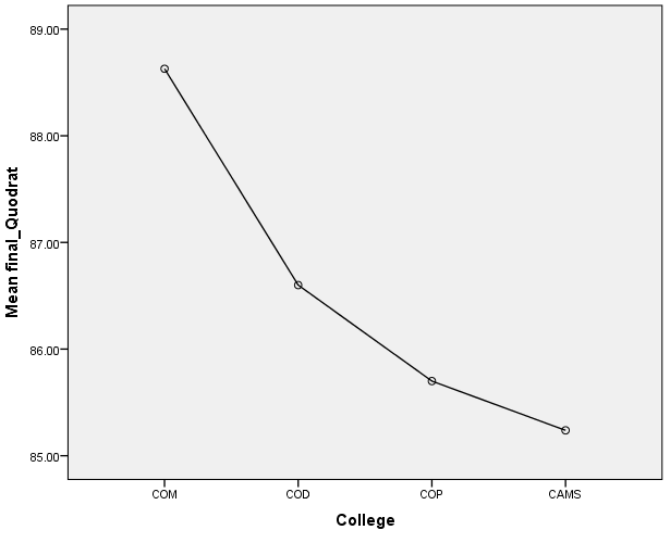

Figure 2. Means plot of GAT across assigned colleges

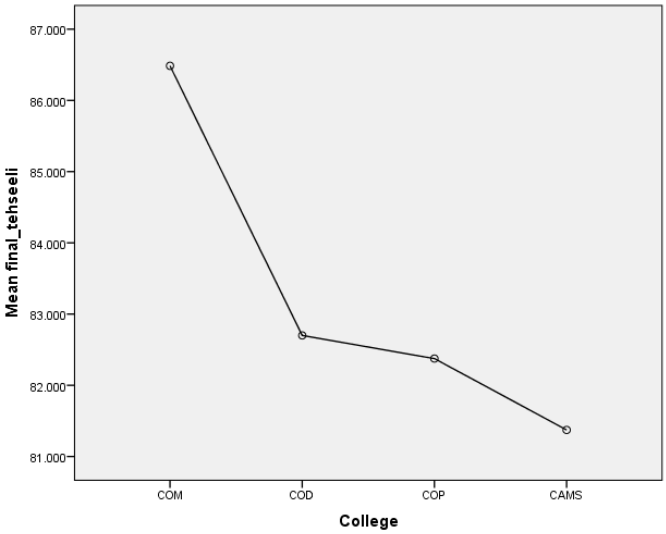

Figure 3. Means plot of SAAT across assigned colleges

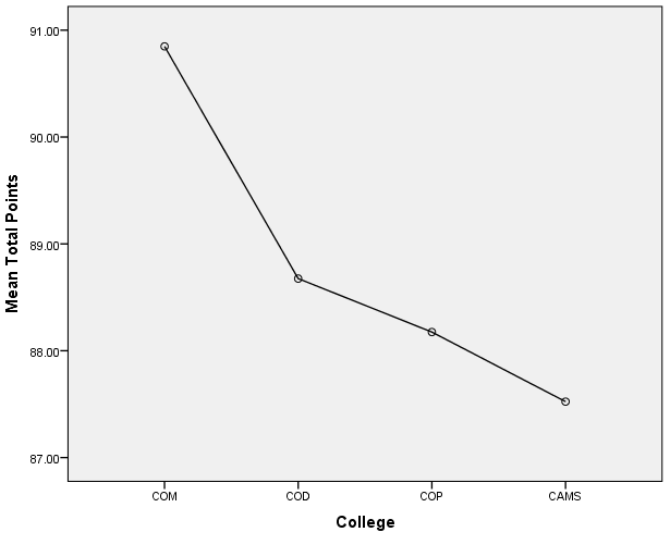

Figure 4. Means plot of corrected percentage across assigned colleges

Sample 2

Table 2 gives descriptive statistics of high school grade, GATand SAATand Corrected percentages across assigned colleges. Results of ANOVA F test results are also reported.

High school grade had significant difference across assigned colleges (F (3, 353) = 13.10, p = <.001). Means plot of high school grade is given in Figure 5. Results of post hoc comparisons indicate that students assigned to CAMS reported significantly lesser mean high school grade followed by COD and COP with those assigned COM reporting significantly higher mean high school grade compared to others (p<.05). Typical range of high school grade for those assigned to COM is 96 to 100 and that for COD is 94 to 100. Range of high school grade for those assigned to COP is 96 to 100 and that for CAMS is 94 to 100.

GAT had significant difference across assigned colleges (F (3, 352) = 15.206, p = <.001). Means plot of GAT is given in Figure 6. Results of post hoc comparisons indicate that students assigned to COM reported significantly higher mean GAT compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of GAT for those assigned to COM is 78 to 100. For COD the range is 80 to 97. Range of GAT those assigned to COP is 72 to 92 and that for CAMS is 76 to 96.

SAAT had significant difference across assigned colleges (F (3, 352) = 15.617, p = <.001). Means plot of SAAT is given in Figure 7. Results of post hoc comparisons indicate that students assigned to COM reported significantly higher mean SAAT compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of SAAT for those assigned to COM is 71 to 99. For COD the range is 80 to 96. Range of SAAT for those assigned to COP is 78 to 96 and that for CAMS is 77 to 96.

Corrected percentages report significant difference across assigned colleges (F (3, 363) = 23.214, p = <.001). Means plot of corrected percentages is given in Figure 8. Results of post hoc comparisons indicate that students assigned to CAMS reported significantly lesser mean corrected percentages followed by COD and COP with those assigned COM reporting significantly higher mean corrected percentages compared to others (p = <.05). Typical range of corrected percentages for those assigned to COM is 83 to 99. For COD the range is 88 to 97. Range of corrected percentages for those assigned to COP is 83 to 95 and that for CAMS is 84 to 97.

Table 2. Sample 2 descriptive Statistics High School Grade, GAT, SAAT and Corrected percentage and ANOVA Test for Difference across College Assigned

		N	Mean	Std. Deviation	Minimum	Maximum	F	p
High school	COM	67	99.21	.993	96	100	13.10	<.001
	COD	51	99.02	1.288	94	100		
	COP	51	98.43	1.253	96	100		
	CAMS	188	98.00	1.806	91	100		
GAT	COM	67	88.67	4.409	78	100	15.206	<.001
	COD	51	86.53	3.568	80	97		
	COP	51	85.53	3.931	72	92		
	CAMS	187	84.80	4.166	76	96		
SAAT	COM	67	91.25	5.321	71	99	15.617	<.001
	COD	51	88.49	3.854	80	96		
	COP	51	88.04	3.779	78	96		
	CAMS	187	87.37	3.528	77	96		
Corrected percentage	COM	75	92.41	3.366	83	99	23.214	<.001
	COD	52	91.02	2.119	88	97		
	COP	51	90.45	2.230	83	95		
	CAMS	189	89.75	1.984	84	97		

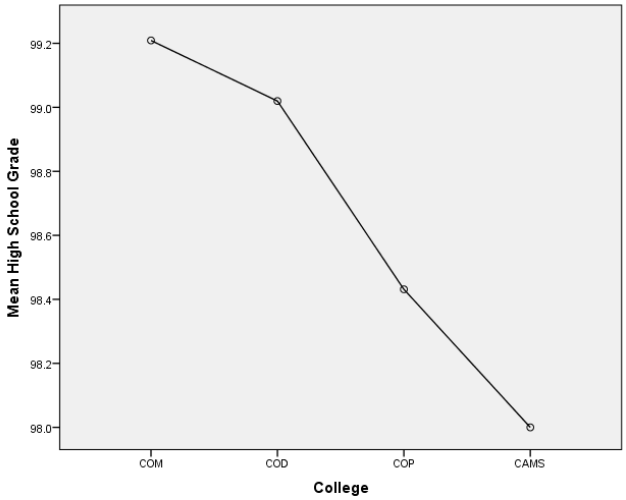

Figure 5. Means plot of high school grade across assigned colleges

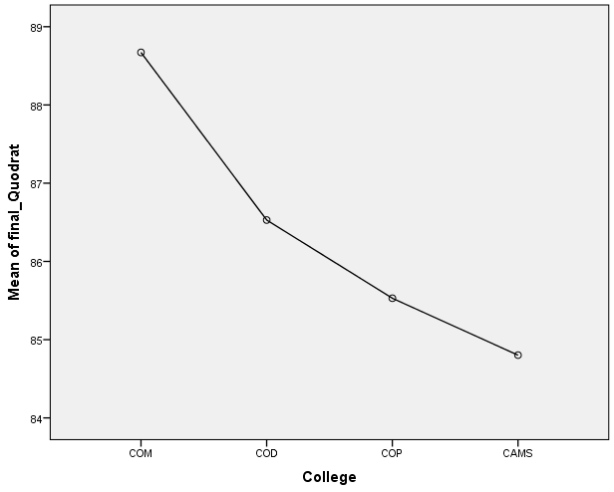

Figure 6. Means plot of GAT across assigned colleges

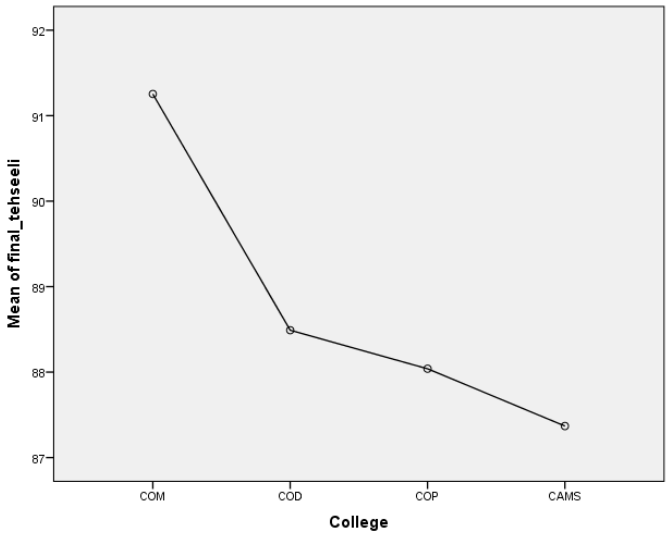

Figure 7. Means plot of SAAT across assigned colleges

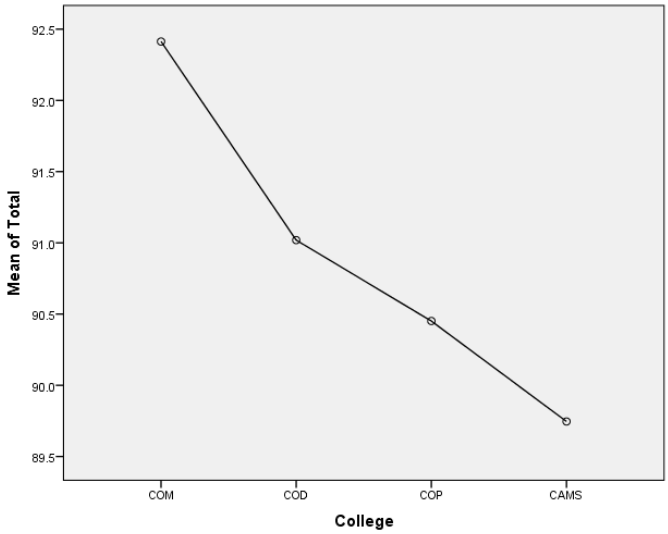

Figure 8. Means plot of corrected percentage across assigned colleges

Sample 3

High school grade shows significant difference across assigned colleges (F (3, 530) = 23.455, p = <.001). Means plot of high school grade is given in Figure 9. Results of post hoc comparisons indicate that students assigned to COM reported significantly higher mean high school grade compared to those who are assigned to COD, COP or CAMS (p = <.05). Typical range of high school grade for those assigned to COM is 91 to 100 and that for COD is 91 to 100. Range of high school grade for those assigned to COP is 91 to 100 and that for CAMS is 84 to 100.

GAT showed significant difference across assigned colleges (F (3, 528) = 59.088, p = <.001). Means plot of GAT is given in Figure 10. Results of post hoc comparisons indicate that students assigned to CAMS report significantly lesser mean GAT compared to others while students assigned to COM report significantly higher mean GAT compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of GAT for those assigned to COM is 75 to 99. For COD the range is 75 to 91. Range of GAT those assigned to COP is 72 to 94 and that for CAMS is 67 to 94.

SAAT showed significant difference across assigned colleges (F (3, 528) = 82.549, p = <.001). Means plot of SAAT is given in Figure 11. Results of post hoc comparisons indicate that students assigned to CAMS report significantly lesser mean SAAT compared to others while students assigned to COM report significantly higher mean SAAT compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of SAAT for those assigned to COM is 65 to 99. For COD the range is 67 to 91. Range of SAAT for those assigned to COP is

65 to 88 and that for CAMS is 64 to 90.

Corrected percentages report significant difference across assigned colleges (F (3, 530) = 108.674, p = <.001). Means plot of corrected percentages is given in Figure 12. Results of post hoc comparisons indicate that students assigned to CAMS report significantly lesser mean Corrected percentages compared to others while students assigned to COM report significantly higher mean corrected percentages compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of corrected percentages for those assigned to COM is 80 to 98. For COD the range is 80 to 92. Range of corrected percentages for those assigned to COP is 80 to 93 and that for CAMS is 75 to 91.

Table 3. Sample 3 Descriptive Statistics High School Grade, GAT, SAAT and Corrected percentage and ANOVA Test for Difference across College Assigned

		N	Mean	SD	Minimum	Maximum	F	p
High School	1.00	179	98.18	2.054	91	100	23.455	<.001
	2.00	50	96.92	2.389	91	100		
	3.00	74	96.58	2.607	91	100		
	4.00	231	96.13	2.777	84	100		
GAT	1.00	179	88.39	5.201	75	99	59.008	<.001
	2.00	50	84.56	4.568	75	91		
	3.00	74	83.97	5.053	72	94		
	4.00	229	81.82	4.827	67	94		
SAAT	1.00	179	81.754	7.0739	65	99	82.549	<.001
	2.00	50	76.480	5.6937	67	91		
	3.00	74	74.838	5.3840	65	88		
	4.00	229	73.000	4.3629	64	90		
Corrected percentage	1.00	179	88.68	4.305	80	98	108.674	<.001
	2.00	50	85.12	3.268	80	92		
	3.00	74	84.09	3.520	80	93		
	4.00	231	82.53	2.639	75	91		

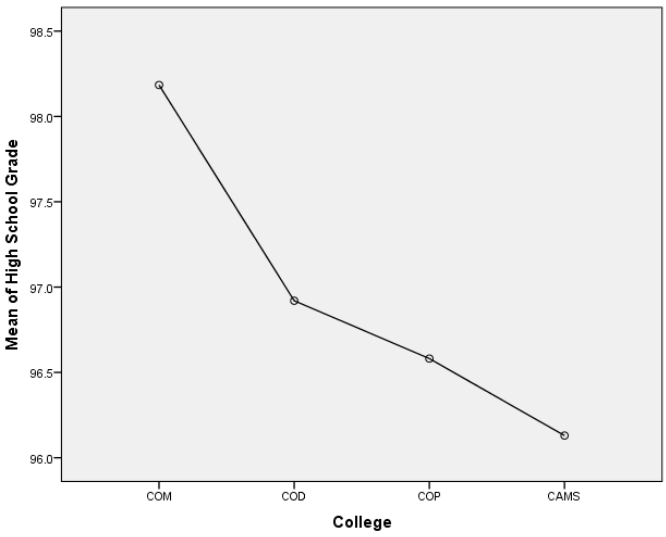

Figure 9. Means plot of high school grade across assigned colleges

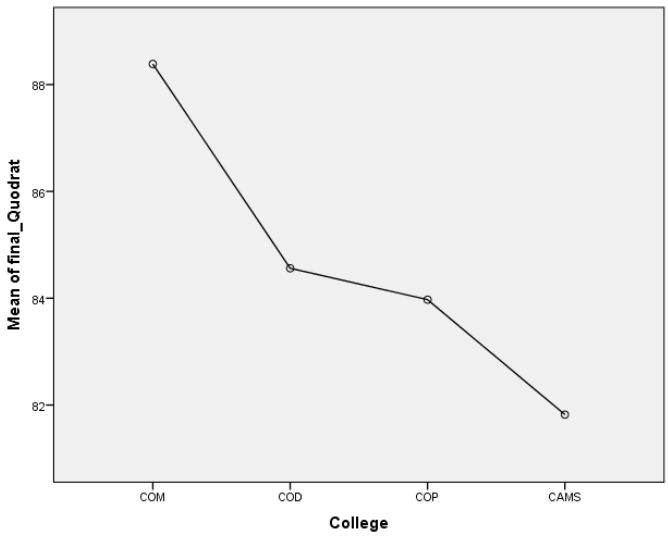

Figure 10. Means plot of GAT across assigned colleges

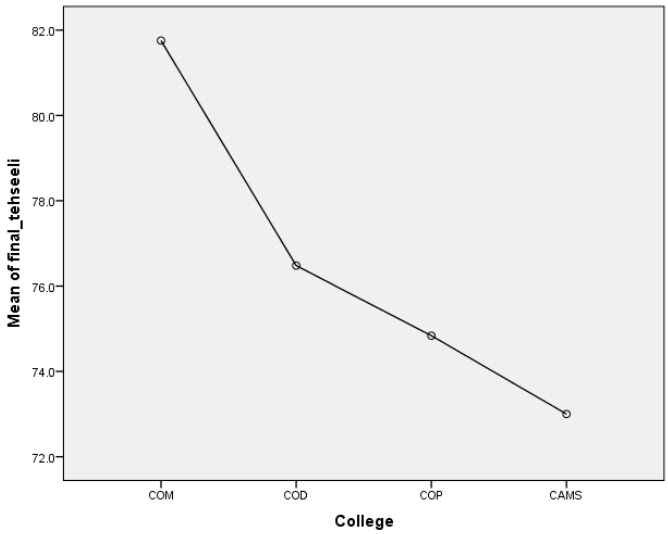

Figure 11. Means plot of SAAT across assigned colleges

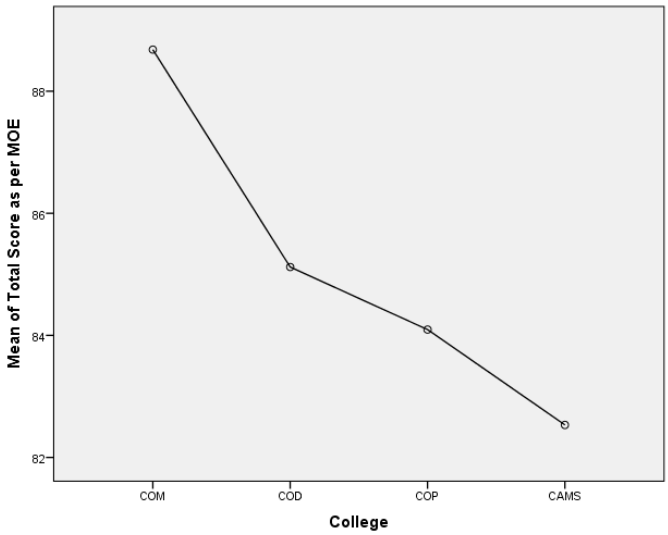

Figure 12. Means plot of corrected percentage across assigned colleges

Sample 4

High school grade showed significant difference across assigned colleges (F (3, 474) = 20.742, p = <.001). Means plot of high school grade is given in Figure 13. Results of post hoc comparisons indicate that students assigned to COM had significantly higher mean high school grade compared to those who are assigned for COD, COP or CAMS (p = <.05). Typical range of high school grade for those assigned to COM is 91 to 100 and that for COD is 91 to 100. Range of high school grade for those assigned to COP is 90 to 100 and that for CAMS is 90 to 100.

GAT showed significant difference across assigned colleges (F (3, 479) = 50.907, p = <.001). Means plot of GAT is given in Figure 14. Results of post hoc comparisons indicate that students assigned to COM had significantly higher mean GAT compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of GAT for those assigned to COM is 77 to 98. For COD the range is 71 to 93. Range of GAT those assigned to COP is 70 to 95 and that for CAMS is 72 to 94.

SAAT reports significant difference across assigned colleges (F (3, 479) = 66.921, p = <.001). Means plot of SAAT is given in Figure 15. Typical range of SAAT for those assigned to COM is 71 to 99. For COD the range is 71 to 98. Range of SAAT for those assigned to COP is 71 to 91 and that for CAMS is 69 to 95.

Corrected percentages report significant difference across assigned colleges (F (3, 469) = 96.439, p = <.001). Means plot of corrected percentages is given in Figure 16. Typical range of corrected percentages for those assigned to COM is 82 to 99. For COD the range is 82 to 94. Range of corrected percentages for those assigned to COP is 82 to 94 and that for CAMS is 80 to 95.

Table 4. Sample 4 Descriptive Statistics High School Grade, GAT, SAAT and Corrected percentage and ANOVA Test for Difference across College Assigned

		N	Mean	SD	Minimum	Maximum	F	p
High School	1.00	170	97.90	2.27	91	100	20.742	<.001
	2.00	62	96.69	2.26	91	100		
	3.00	61	96.25	2.66	90	100		
	4.00	185	95.87	2.68	90	100		
GAT	1.00	174	88.38	4.69	77	98	50.907	<.001
	2.00	62	83.31	5.08	71	93		
	3.00	62	83.21	4.81	70	95		
	4.00	185	82.39	4.94	72	94		
SAAT	1.00	174	87.53	6.38	71	99	66.921	<.001
	2.00	62	81.42	5.97	71	98		
	3.00	62	81.08	5.22	71	91		
	4.00	185	79.14	5.25	69	95		
Corrected percentage	1.00	166	91.02	3.88	82	99	96.439	<.001
	2.00	61	86.59	3.27	82	94		
	3.00	61	86.31	3.17	82	94		
	4.00	185	85.12	2.87	80	95		

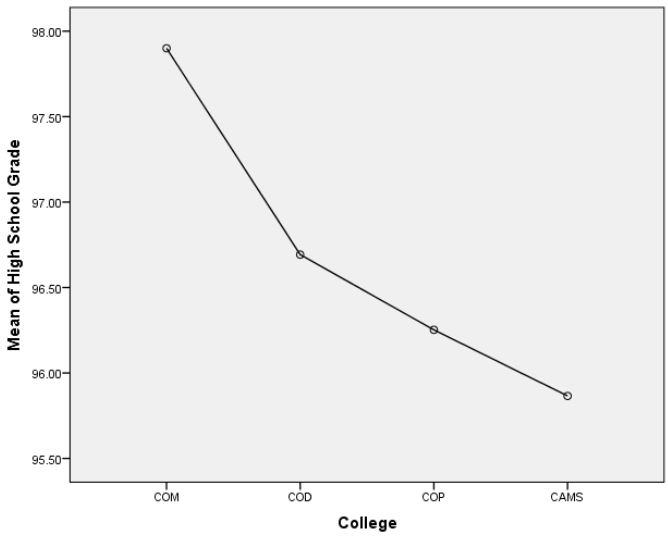

Figure 13. Means plot of high school grade across assigned colleges

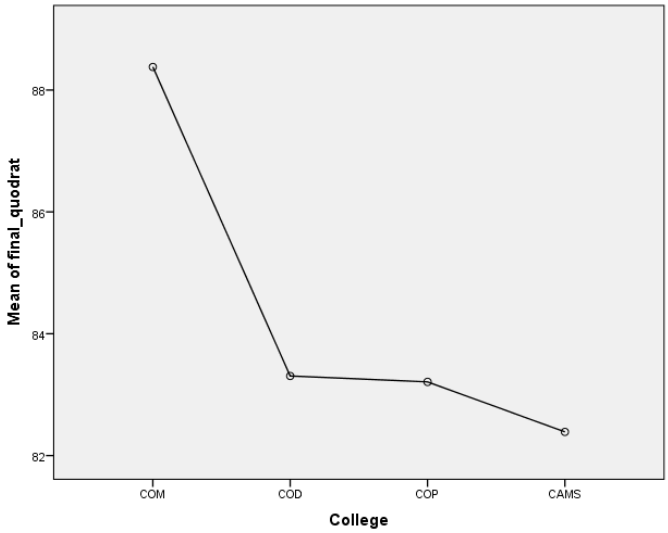

Figure 14. Means plot of GAT across assigned colleges

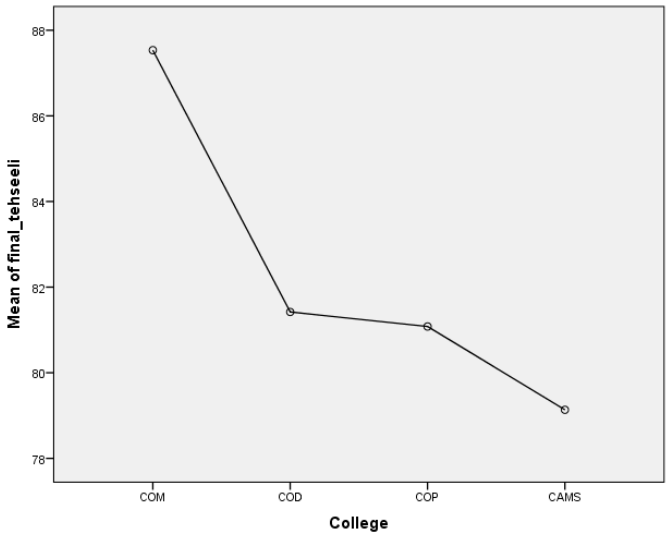

Figure 15. Means plot of SAAT across assigned colleges

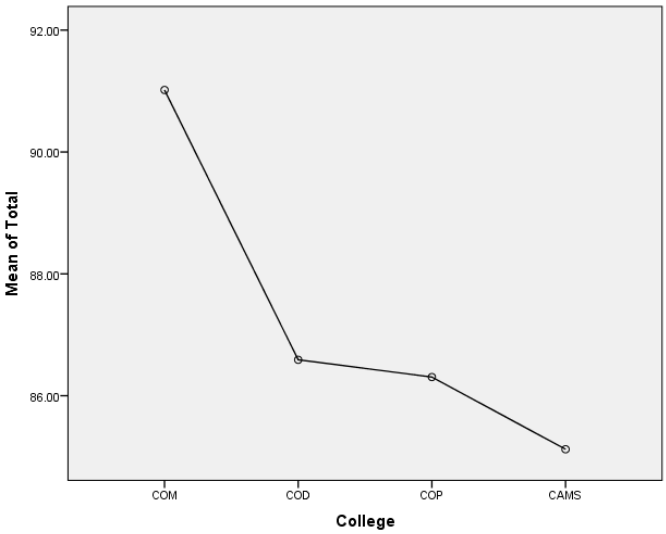

Figure 16. Means plot of corrected percentage grade across assigned colleges

Combined Samples

Table 5 provides descriptive statistics for high school grades, GAT, and SAAT, as well as the corrected percentage across assigned colleges. Results of ANOVA F tests are also included.

High school grade showed significant difference across assigned colleges (F (3, 1637) = 40.612, p = <.001). Means plot of high school grade is given in Figure 17. Results of post hoc comparisons indicate that students assigned to COM had significantly higher mean high school grade compared to those who are assigned for COD, COP or CAMS (p = <.05). Typical range of high school grade for those assigned to COM is 91 to 100 and that for COD is 91 to 100. Range of high school grade for those assigned to COP is 90 to 100 and that for CAMS is 84 to 100.

GAT showed significant difference across assigned colleges (F (3, 1643) = 116.406, p = <.001). Means plot of GAT is given in Figure 18. Results of post hoc comparisons indicate that students assigned to COM had significantly higher mean GAT compared to those who are assigned COD, COP or CAMS (p = <.05). Typical range of GAT for those assigned to COM is 75 to 100. For COD the range is 71 to 97. Range of GAT those assigned to COP is 70 to 95 and that for CAMS is 67 to 96.

SAAT showed significant difference across assigned colleges (F (3, 1643) = 76.986, p = <.001). Means plot of SAAT is given in Figure 19 Typical range of SAAT for those assigned to COM is 65 to 99. For COD the range is 67 to 98. Range of SAAT for those assigned to COP is 65 to 96 and that for CAMS is 64 to 96.

Corrected percentages report significant difference across assigned colleges (F (3, 1642) = 133.112, p = <.001). Means plot of corrected percentages is given in Figure 20. Typical range of corrected percentages for those assigned to COM is 80 to 99. For COD the range is 80 to 97. Range of corrected percentages for those assigned to COP is 80 to 95 and that for CAMS is 75 to 97.

Table 5. Combined Samples Descriptive Statistics High School Grade, GAT, SAAT and Corrected percentage and ANOVA Test for Difference across College Assigned

		N	Mean	SD	Minimum	Maximum	F	p
High school	COM	482	98.36	1.99	91	100	40.612	<.001
	COD	203	97.74	2.16	91	100		
	COP	226	97.24	2.39	90	100		
	CAMS	730	96.88	2.56	84	100		
GAT	COM	490	88.46	4.83	75	100	116.406	<.001
	COD	203	85.07	4.64	71	97		
	COP	227	84.42	4.64	70	95		
	CAMS	727	83.32	4.79	67	96		
SAAT	COM	490	85.78	7.11	65	99	76.986	<.001
	COD	203	82.23	6.68	67	98		
	COP	227	80.84	6.85	65	96		
	CAMS	727	79.71	6.94	64	96		
Corrected percentage	COM	486	90.35	4.09	80	99	133.112	<.001
	COD	203	87.77	3.63	80	97		
	COP	226	86.85	3.82	80	95		
	CAMS	731	85.91	3.73	75	97		

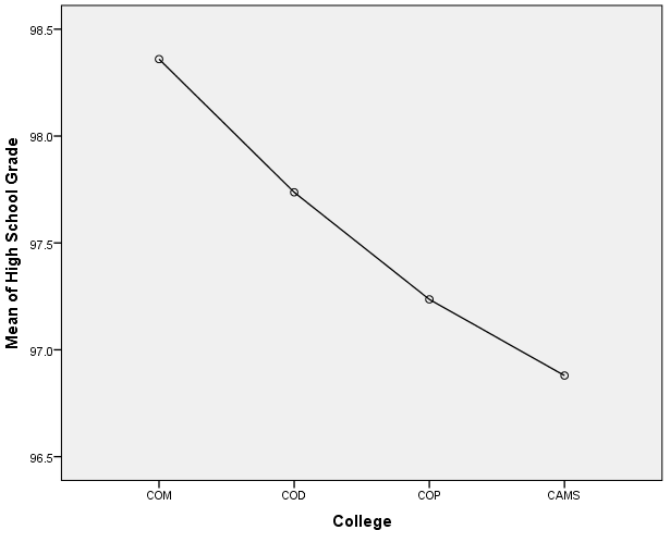

Figure 17. Means plot of high school grade across assigned colleges

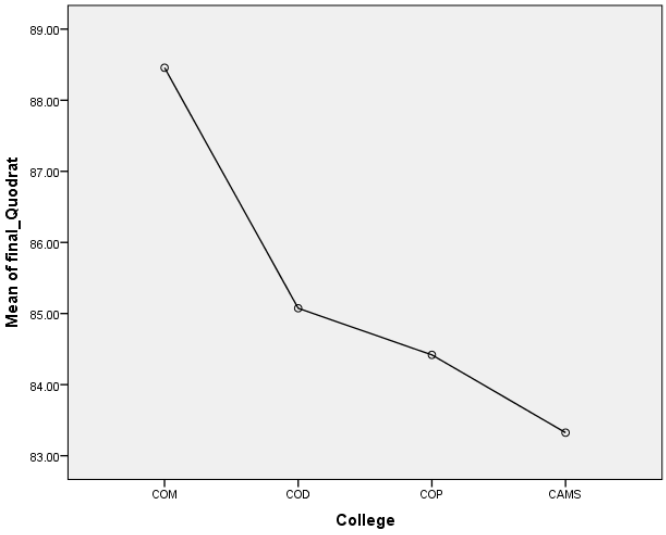

Figure 18. Means plot of GAT across assigned colleges

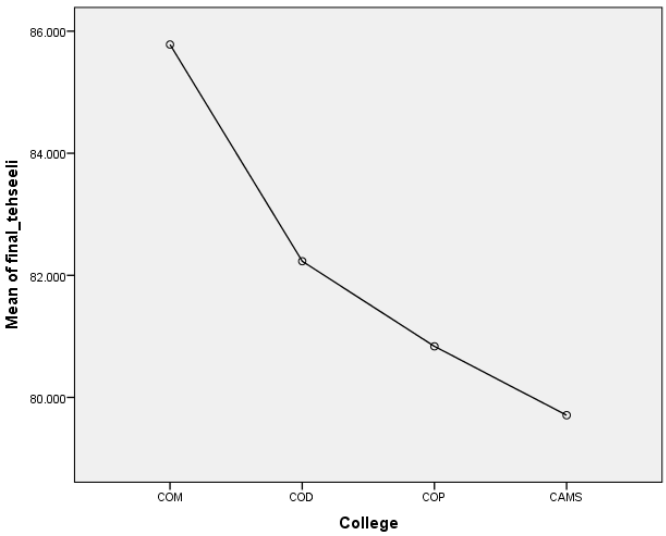

Figure 19. Means plot of SAAT across assigned colleges

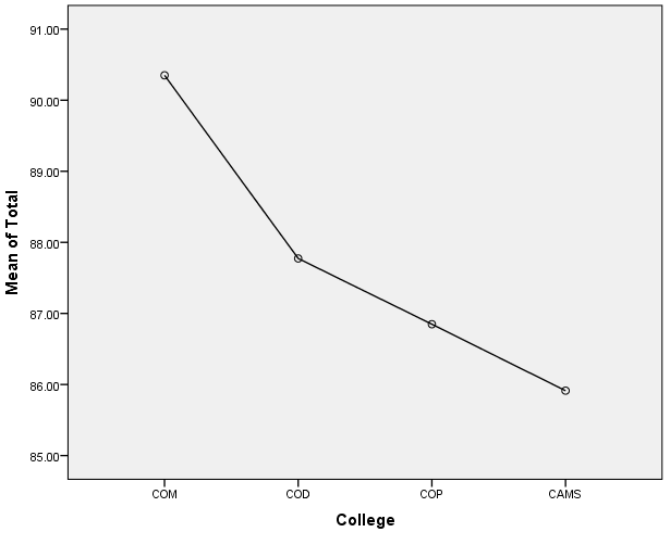

Figure 20. Means plot of corrected percentage across assigned colleges

4. Discussion

The analysis presented in the study highlights the significant differences in high school grades, GAT, SAAT, and corrected percentage across assigned colleges. Students assigned to COM had significantly higher mean high school grades, GAT, and SAAT compared to those assigned to COD, COP, or CAMS. It was clear in all samples that a certain group of students with certain parameters of high school, GAT, and SAAT have more tendency to be accepted into a specified college. For instance, anyone with a GAT score of 88.46 is more likely to be within COM whereas a GAT score of 85 is more likely to be accepted into COD. These results underscore the importance of selecting students based on a wide range of criteria, including academic performance and aptitude; it tells that these parameters do mean a lot for college selection.

However, the results of this analysis implied an emphasized need for a comprehensive approach to student selection in higher education. For instance, Roberts and Prideaux (2010) and Ferguson et al. (2002) found that selecting students based on a wide range of criteria, including cognitive ability, personality, and personal qualities, can lead to a more diverse and capable workforce. Similarly, McManus et al. (2011) highlighted the importance of selecting students based on a combination of academic performance and aptitude to achieve better outcomes in terms of clinical practice and patient care.

Furthermore, a study by Hiss and Franks (2014) found that considering a range of factors, including high school grades, standardized test scores, and extracurricular activities, can lead to better outcomes in terms of academic

success and graduation rates. Another study by Chisholm-Burns et al. (2021) highlighted the importance of considering non-cognitive factors, such as grit and perseverance, in the student selection process and its impact on their college performance. The study found that students who exhibited higher conscientiousness, academic resilience, and grit were generally more likely to succeed in their academic pursuits and contribute positively to their society.

Therefore, to make admission differences among colleges more meaningful and relevant, we suggest embracing a more comprehensive and holistic approach to student selection in higher education. By considering a wide range of criteria, including academic performance, personal qualities, and non-cognitive factors, policymakers can ensure that the most capable and diverse students are admitted to colleges, which can lead to a stronger and more capable workforce. This, in turn, can benefit society as a whole.

5. Conclusion

It is worth noting that the study has some limitations, including a lack of data on other important factors that may influence student performance, such as socio-economic status and cultural background. Future research should aim to address these limitations and provide a more comprehensive understanding of student selection in higher education.

One of the most significant findings of the analysis presented in this study is that KSAUHS provides a unique and equitable opportunity for all students to compete equally for admission to their desired college, regardless of any differences in admission criteria. This finding is noteworthy given the growing need for a comprehensive and holistic approach to student selection in higher education. By providing disadvantaged students with a chance to be real candidates for their dream college, KSAUHS is taking a critical step towards ensuring that academic ability, rather than socio-economic status or other factors, is the primary determinant of college admission.

Moreover, the results of the study demonstrate that students with higher scores in GAT and SAAT, were assigned to colleges with higher first-year GPA requirements, such as COM and COD. It also suggests that KSAUHS views GAT and SAAT, along with high school grades, as essential components of university admission, but not necessarily of college selection.

Interestingly, the findings also indicate that the scores of all admission criteria play a significant role in students' college selection, regardless of whether KSAUHS considers them or not. In other words, students who received lower admission scores tend to have lower GPAs and were consequently enrolled in CAMS or COP. The study confirms that students who take or do not take the pre-professional program for college selection still attend the same colleges just based on their admission scores; and as we said this finding highlights the importance of considering a wide range of meaningful admission factors, including academic performance, aptitude, and personal qualities, when selecting students for admission.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal’s policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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