Pre-University Measures' Predictability for Cumulative GPA of Preservice Teachers of Students with Learning Disabilities

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HOW TO CITE:

Turkey Khalaf Alzahrani (2026). Pre-University Measures' Predictability for Cumulative GPA of Preservice Teachers of Students with Learning Disabilities

International Journal of Special Education, 41(20s), 1097 - 1109

ABSTRACT:

The purpose of this study was to investigate the correlation between the following predictors: General Aptitude Test (GAT), Standardized Achievement Admission Test (SAAT), gender, and the Cumulative Grade-Point Average (CGPA) of preservice teachers of students with learning disabilities (LD). The participants comprised 2346 preservice teachers of students with LD, who obtained their degrees between 2007 and 2023. Three simple regression analyses and a multiple regression analysis were conducted to examine the correlation between the predictors: GAT, gender, SAAT and CGPA. When the correlations between the predictors and CGPA were investigated individually, SAAT was the strongest predictor (R^2 = 0.178), explaining 17.8 of the variance in CGPA. However, in the combined model (GAT, gender, and SAAT), there was a significantly moderate correlation (R = 0.465) between the combination of predictors and the CGPA of preservice teachers of students with LD, and the R^2 value of 0.216 implied that approximately 21.6% of the variance in CGPA was explained by the model. Future policy, research, and practice implications and suggestions are put forth and examined.

Keywords: Preservice Teachers of Students with Learning Disabilities, Cumulative Grade Point Average, General Aptitude Test, Standardized Achievement Admission Test, Gender

Introduction

Since obtaining an undergraduate degree can empower students to get jobs, seek valuable professional opportunities, and pursue graduate studies (Caviglia-Harris & Maier, 2020), many high school graduates apply each year for admission to undergraduate studies in universities. Since the increasing interest in enrolling in higher education institutions, universities have had to set their requirements in order to accept the applicants who are more likely to succeed and graduate from the university (Abdallah, 2019; Al-Asmar et al., 2021; Al Qahtani & Alanzi, 2019), especially when it comes to demanding fields (Althewini, 2025). To identify the most qualified applicants, universities commonly rely on high school grade-point average (HSGPA) and standardized achievement or aptitude tests (Alghamdi & Al-Hattami, 2016; Sperry, 2015).

Universities usually use admission tests because they: (1) reduce the high school's differences in terms of curriculum, (2) enable students to demonstrate their abilities and talents, (3) contribute to solving the issues of high school grade inflation by offering fair standardized tests, and (4) help with identifying high-performing students studying in low-performing schools (Bai et al., 2014; Vista & Alkhadim, 2022); therefore, they provide equal opportunities for all students to join higher education institutions (Abdallah, 2019; Silva et al., 2026). Admissions committees leverage the aforementioned performance indicators under the rationale that early academic measures forecast long-term success, thereby enhancing the university's prestige (Williams et al., 2014).

Across Saudi Arabia, the fast-paced expansion of higher education along with a massive inflow of applicants has driven the Ministry of Education to adopt a robust admission policy for higher education institutions (Al Qahtani & Alanzi, 2019). To maintain competency, universities require applicants to submit three admission requirements: HSGPA along with two nationwide exams: the General Aptitude Test (GAT) and the Scholastic Admission Achievement Test (SAAT) (Al Qahtani & Alanzi, 2019). Acceptance into the university is based on a composite score, which combines HSGPA (30%), GAT (30%), and SAAT (40%) (Alhurishi et al., 2021). This weighted score differs from university to another and from program to another as well (Alnhadi, 2015; Vista & Alkhadim, 2022).

HSGPA is the cumulative grade-point average that high school students obtain by the end of the third year (graduation year). GAT, constructed by the National Center for Assessment (NCA) at the Education and Training Evaluation Commission (ETEC), measures students' verbal and quantitative abilities (e.g., Arabic language competency and mathematical skills) (Education and Training Evaluation Commission, 2026a). High school students have five attempts to take this test prior to graduation. SAAT, developed also by the NCA at ETEC, measures the achievement level of high school students in their 3-year subjects, whether they are in the Scientific or Social Sciences/Humanities Tracks (Education and Training Evaluation Commission, 2026b, 2026c). High school students can take this test two times before and two times after graduation. It should be mentioned that the highest reported score of GAT/SAAT can be submitted for university admission committees (Education and Training Evaluation Commission, 2026a, 2026b, 2026c).

When it comes to special education departments, admitting students can be competitive because those students will become the educators of the future generation; in this case specifically, those teachers will be teaching vulnerable groups, which are special education students (Binammar et al., 2023). Those students require more support than their peers without disabilities (Alzahrani, 2026). Therefore, they need teachers who can support them throughout their educational journey and empower them to become successful individuals within their societies (Thant, 2025). This further makes the admission process more rigorous, as potential applicants must meet certain basic academic requirement to be considered for admission into special education programs (Sulphey, et al, 2023). Given special education teachers, especially teachers of students with learning disabilities (LD), work in inclusive education environments, they must possess the competencies and readiness needed to work effectively with learners with special needs (Segumpan et al., 2025).

2. Literature Review

Throughout the literature, several studies have developed models or provided estimates of students' academic performance. Those studies examined the relationship between college students' CGPA and standardized tests (e.g., American College Test [ACT], Scholastic Aptitude Test [SAT]), GAT, achievement exams (e.g., SAAT), and HSGPA, along with personal attributes and demographic characteristics. Globally, Komarraju et al. (2013) examined the predictability of cognitive (HSGPA, ACT) and non-cognitive factors (college readiness) of CGPA for 375 students at a United States

university. The results revealed that ACT scores (r = .36), HSGPA (r = .43), and academic discipline (r = .28) significantly predicted CGPA, and they together explained 26% of the variance in CGPA. Wao et al. (2017) examined the predictive capability of the ACT and SAT on the CGPA of 155 construction and science management graduates in two universities located in the southeastern part of the United States. The results revealed that ACT and SAT were significant predictors of CGPA. ACT explained 21.13% of the variance, while SAT accounted for 13.55% of the variance in CGPA.

Three years later, Bansiong and Balagtey (2020) explored the predictability of HSGPA, admission test (IQ) scores, and standardized test (General Scholastic Aptitude—GSA) scores of CGPA of 2015 graduates who majored in elementary and secondary education at a university located in the Northern Philippines; they found that all predictors significantly predicted CGPA. Finally, Sanchez (2024) assessed the relationship between first-year GPA, HSGPA, ACT score, and demographics, as well as the CGPA of 7516 students who studied at a southern university in the United States. The findings indicated that FYGPA, ACT score, and demographics were significant predictors of CGPA, and they all accounted for 58.3% of the variance in CGPA. Overall, the aforementioned studies consistently found a significant positive association between the predictors and CGPA.

In Saudi Arabia, many studies examined the predictability of CGPA based on HSGPA, GAT, and SAAT (Alghamdi & Al-Hattami, 2016; Alhurishi et al., 2021; Alnahdi, 2015; Al-Qahtani & Alanzi, 2019; Hassan & Al-Razgan, 2016; Sulphey et al., 2018; Vista & Alkhadim, 2022); other studies added additional variables, such as gender and major (STEM vs. non-STEM; Elmoussa, 2023) and English proficiency and performance in introductory physics (Althewini, 2025). Alnahdi (2015) examined the predictive validity of HSGPA, GAT, and SAAT for the CGPA of 17,565 students who graduated from Prince Sattam bin Abdulaziz University and found that HSGPA was the strongest predictor of CGPA ($R^2 = .30$, $p < .05$), explaining 30% of the total variance. Hassan and Al-Razgan (2016) investigated 657 students in the College of Computer and Information Sciences at King Saud University (2012–2015) and reported that HSGPA predicted CGPA more than entrance exams (GAT and SAAT). Sulphey et al. (2018) explored the relationship between HSGPA and GAT and the CGPA of 1368 undergraduate business students in a Saudi university; the results revealed that HSGPA (B = .045, $p < .01$) and GAT (B = .035, $p < .01$) significantly predicted the CGPA of undergraduate business students.

Al-Qahtani and Alanzi (2019) compared the predictability of HSGPA, GAT, and SAAT on CGPA of 876 students enrolled in health and non-health science colleges at Imam Abdulrahman Bin Faisal University (IAU) and indicated that HSGPA was the most significant predictor for health ($R = 0.340$, $p < 0.01$) and non-health colleges ($R = 0.374$, $p < 0.01$), followed by SAAT and GAT. Alhurishi et al. (2021) similarly investigated the correlation between the abovementioned predictors and CGPA of 1634 graduates of King Saud University; the regression analysis revealed that the most predictive variable for CGPA was HSGPA ($\beta = 0.347$), followed by SAAT ($\beta = 0.270$) and GAT ($\beta = 0.053$) scores, explaining 26.5% of the variance. Vista and Alkhadim (2022) examined pre-university measures (HSGPA, GAT, and SAAT) and university success (first-year GPA, CGPA, graduation) for 330,684 undergraduates across 23 Saudi universities and found all pre-university variables significantly predicted university success. Elmoussa (2023) examined HSGPA, GAT, and SAAT along with gender and major (STEM vs. non-STEM) for first- and final-year GPAs of 3,680 students at a Saudi university and found these variables predicted first-year and CGPA across genders and specializations. Althewini (2025) examined correlations among GAT, SAAT, English proficiency, and performance in introductory physics for 250 students at a Saudi university; these variables explained 29.3% of the variance.

3. Significance, Purpose, and Research Questions

Although a plethora of studies within the context of Saudi Arabia have investigated the predictability of admission tests and HSGPA for university CGPA, they essentially focused on the general population of students at the university or the scientific fields. For example, Alnhadi (2015) and Vista and Alkhadim (2022) focused on all majors at the university, while others focused on scientific colleges, such as the College of Computer and Information Sciences (Hassan & Al-Razgan, 2016), business students (Sulphey et al., 2018), health and non-health science colleges (Al-Qahtani & Alanzi, 2019), STEM vs. non-STEM majors (Elmoussa, 2023), and introductory physics courses (Althewini, 2025); however, none of these studies have focused on social sciences colleges (e.g., education colleges), specifically preservice special education teachers. In addition, only one study (Elmoussa, 2023) investigated the correlation between gender and college students' CGPA.

Therefore, this study is significant for several reasons. First, since the introduction of initiatives, such as the Saudi Vision 2030 (Saudi Vision, 2016), and the advancement in special education regulations, like the Law on the Rights of Persons with Disabilities (2023), the Saudi education system has stressed students' achievement, specifically special education students (Alzahrani, 2026). To ensure the aforementioned goal, special education programs need to set fair admission criteria that enable them to only admit applicants who are more likely to become successful in undergraduate studies. Second, the inclusive education movement in Saudi schools has given all students, regardless of their abilities, access to study in inclusive settings (Alrudayni, 2025; Alquraini & Rao, 2020). Teaching in inclusive settings requires teachers to create innovative, creative, and supportive environments; therefore, teachers' preparation programs should only admit students who are more likely to become enthusiastic professionals, thus supporting all students in inclusive settings. Standardized admission exams, therefore, can enable university admission committees to identify the best applicants for their programs (Althewini, 2025).

Third, this paper can contribute to the special education field through helping policymakers and university committees set a fair composite admission score when considering applicants for their programs. Learning about the relationship between admission tests (GAT and SAAT) and preservice teachers' CGPA should enable university stakeholders to identify which exam predicts students' CGPA (Alzahrani, 2026). Fourth, given the aforesaid literature, no study has investigated the relationship between standardized admission exams (GAT and SAAT) and CGPA of preservice teachers of students with LD. Therefore, learning about such a correlation can empower teacher education programs to revisit their admission criteria as well as develop supportive and engaging teacher preparation curricula; this ultimately can flourish into improving admission policies for teacher education programs.

The purpose of this study was to investigate the relationship between the following scandalized achievement tests (GAT and SAAT) along with gender as well as students' CGPA through posing the subsequent research questions:

(1) How does the CGPA of preservice teachers of students with LD vary across gender cohorts and graduation year?
(2) To what extent do the following predictors (gender, GAT, SAAT) individually predict the CGPA of preservice teachers of students with LD?
(3) To what extent do the following predictors (gender, GAT, SAAT) collectively predict the CGPA of preservice teachers of students with LD?

4. Methods

4.1 Research Design

Given its ability to determine the relationship between variables without manipulation (Putri et al., 2025), we used a quantitative correlational research design to examine the predictive validity of the pre-university measures (GAT and SAAT)

and gender on the CGPA of preservice teachers of students with LD. For the purposes of this study, a descriptive-correlational research design (hybrid model; Thomas & Zubkov, 2023) was used to address the following purposes: (1) illustrate the descriptive values related to the study variables and (2) explore the relationship between gender, GAT-C, and SAAT (predictors) as well as the CGPA (criterion variable) of preservice teachers of students with LD.

4.2 Sample and Procedures

We requested and acquired the data from the National Center for Assessment (NCA) in the Education and Training Evaluation Commission (ETEC). The sample comprised 2346 preservice teachers of students with LD who obtained their degrees between 2007 and 2023. The sample included 1045 male students (44.5%) and 1301 female students (55.5%) who were LD specialists and attended 24 public and private Saudi Arabian universities.

4.3 Measures

4.3.1 Gender

Male or female served as the gender representation.

4.3.2 Cumulative Grade Point Average

CGPA reflects the GPA preservice teachers of students with LD received upon graduating from college. It was represented on different scales (4, 5, or 100) based on the institution, which necessitated conversion to a percentage scale of 100 for uniformity across GPA systems in order to take into consideration the differences in GPA between the universities.

4.3.3 General Aptitude Test (GAT)

The GAT, created by NCA at ETEC, is a test of a cognitive ability (Education and Training Evaluation Commission, 2026a). Because it is a prerequisite for admission to Saudi universities, it is typically taken by students either before or after high school graduation. It assesses both verbal (GAT-V) and quantitative (GAT-Q) cognitive domains through 120 multiple-choice questions. The GAT-V includes 68 multiple-choice questions that are divided into four content-specific domains (that are weighted differently): verbal analogies (17%), sentence completion (7%), contextual error (10%), and reading comprehension (21%). The GAT-Q includes 52 multiple-choice questions that are distributed across four content areas and weighted differently: arithmetic (23%), geometry (10%), algebra (4%), and data analysis (8%) (Education and Training Evaluation Commission, 2026a). GAT's reliabilities for both verbal and quantitative sections range from 0.73 to 0.82 (Dimitrov et al., 2015). In this investigation, the overall GAT score was used.

4.3.4 Standardized Achievement Admission Test (SAAT)

The SAAT, created by NCA as ETEC, is a standardized achievement exam that concentrates on the subjects covered in the Saudi Arabian high schools' three-year scientific curricula. It has two versions: one for the scientific disciplines and the other for the theoretical disciplines (Education and Training Evaluation Commission, 2026b, 2026c). The SAAT for the high school scientific disciplines (available in Arabic and English) covers and evaluates four major areas: Biology, Chemistry, Physics, and Mathematics (Education and Training Evaluation Commission, 2026b). The SAAT for the theoretical disciplines (available only in Arabic) covers the 10 main subjects: Tawhid 1, Hadith 1, Fiqh 1, Literary Studies, Language Competencies, Rhetorical Studies, Language Competencies, History, Geography, Fundamentals of Law, and Digital Technology (Education and Training Evaluation Commission, 2026c). The test includes 120 multiple-choice questions, and its duration is 125 minutes (two hours and five minutes). The alpha reliabilities for SAAT range from 0.62 to 0.74 (Tsaousis et al., 2018). The overall score was used in this investigation.

4.4 Data Analysis

4.4.1 Research Question 1

How does the CGPA of preservice teachers of students with LD vary across gender cohorts and

graduation year? Descriptive statistics (e.g., mean, standard deviation, frequencies, percentages) were utilized to provide insights about the CGPA performance of preservice teachers of students with LD.

4.4.2 Research Question 2

To what extent do the following predictors (gender, GAT, SAAT) individually predict the CGPA of preservice teachers of students with LD? A series of simple regression analyses was performed to individually examine the relationship between gender, GAT, SAAT, and CGPA of preservice teachers of students with LD.

4.4.3 Research Question 3

To what extent do the following predictors (gender, GAT, SAAT) collectively predict the CGPA of preservice teachers of students with LD? A multiple regression analysis was conducted to investigate the correlation between gender, GAT, SAAT, and CGPA of preservice teachers of students with LD.

5. Results

5.1 Descriptive Statistics of the Study Variables

As shown in Table 1, the sample consisted of 2,346 preservice teachers of students with LD; the majority were females (n = 1,301, 55.5%), while males made up the remaining (n = 1,045, 44.5%). The largest group of participants graduated between 2020 and 2023, accounting for 45.3% (n = 1,063) of the sample. This is followed by the 2016–2019 cohort at 35.6% (n = 835). Smaller segments of the participants graduated between 2012 and 2015 (n = 306, 13.0%) and between 2007 and 2011 (n = 142, 6.1%). This indicated that the majority of participants (n = 1898, 80.9%) obtained their degrees between the years 2016 and 2023.

Between standardized tests, preservice teachers of students with LD overall performed better in GAT (M = 70.69, SD = 7.85) than on SAAT (M = 66.87, SD = 8.00). Both the GAT and SAAT exhibited very similar levels of variance (standard deviations of 7.85 and 8.00, respectively), indicating that the spread of the preservice teachers' performance was highly consistent across both standardized tests. The GAT score ranged between 50 and 94, and it was divided into five groups; the highest distribution of scores fell within the 68–76 range, representing 42.0% (n = 985) of the sample, while the least prevalent group was the 86-94 range (n = 55, 2.3%). The SAAT score ranged between 45 and 99, and it was coded into five segments; the distribution was heavily concentrated in the 56–66 bracket, which included 46.7% (n = 1,095) of the sample, and the 67–77 bracket at 36.1% (n = 848). Fewer participants (n = 248, 10.6%) scored within the 78–88 range or the lowest 45–55 range (n = 136, 5.8%). The top score bracket of 89–99 contained the smallest group at 0.8% (n = 19) (Table 1).

Table 1

Participants' Demographics and Performance (N = 2346)

	Frequency	**Percentage**
Gender		
Female	1301	55.5
Male	1045	44.5
Graduation Year		
2007 - 2011	142	6.1
2012 - 2015	306	13.0
2016 - 2019	835	35.6

2020 - 2023	1063	45.3
GAT		
50 - 58	153	6.5
59 - 67	659	28.1
68 - 76	985	42.0
77 - 85	494	21.1
86 - 94	55	2.3
SAAT		
45 - 55	136	5.8
56 - 66	1095	46.7
67 - 77	848	36.1
78 - 88	248	10.6
89 - 99	19	0.8

Note. GAT = General Aptitude Test, SAAT = Standardized Achievement Admission Test

5.2 Research Question 1: How does the CGPA of preservice teachers of students with LD vary across gender cohorts and graduation year?

Table 2 presents the mean and standard deviations of the CGPA of preservice teachers of students with LD based on gender and graduation year cohorts. An equivalency formula was used to convert the universities with 4-GPA and 5-GPA limits into 100 percentages. Overall, preservice teachers of students with LD had a relatively high average CGPA (M = 80.52, SD = 13.49) but with the widest disparity (ranging from 25 to 100). Table 2 indicated that female cohorts had a higher mean CGPA (M = 84.88, SD = 12.16) than the male group (M = 75.10, SD = 13.11). This suggests that female preservice teachers of students with LD obtained a higher average CGPA than male counterparts. When broken by graduation year, the 2020–2023 group obtained the highest mean of CGPA (M = 82.46, SD = 13.12). Performance across the remainder was rightly grouped and relatively consistent since they had lower and fairly close mean scores: 2016–2019 (M = 78.60, SD = 14.32), 2012–2015 (M = 79.58, SD = 10.99), and 2007–2011 (M = 79.39, SD = 14.27). Overall, the aforementioned values indicated slight differences on the CGPAs across graduation years, with the most recent graduates showing the highest average score.

Table 2

The Average CGPA of Preservice Teachers of Students with LD

	Mean	**Standard Deviation**
Gender		
Female	84.88	12.16
Male	75.10	13.11
Graduation Year		
2020 - 2023	82.46	13.12

2016 - 2019	78.60	14.32
2012 - 2015	79.58	10.99
2007 - 2011	79.39	14.27

.3 Research Question 2: To what extent do the following predictors (gender, GAT, SAAT) individually predict the CGPA of preservice teachers of students with LD?

Three simple regression analyses were conducted to examine the individual relationship between gender, GAT, and SAAT and the criterion variable: CGPA of preservice teachers of students with LD. As shown in Table 3, Model 1 (gender) was statistically significant $F(1, 2344) = 349.29$, $p < 0.001$, and it explained 13% of the variance in CGPA ($R^2 = 0.130$); this indicated a notable average score difference between male and female preservice teachers of students with LD. Model 2 (GAT) was also statistically significant, $F(1, 2344) = 307.883$, $p < 0.001$, and it explained 11.6% of the variance in CGPA ($R^2 = 0.116$); for each unit increase in GAT, CGPA increased by roughly .586 points. Model 3 (SAAT) was statistically significant, $F(1, 2344) = 508.458$, $p < 0.001$, and it explained 17.8% of the variance in CGPA ($R^2 = 0.178$); for each unit increase in SAAT, CGPA increased by roughly .712 points. The confidence intervals for all three predictors do not include zero, which further supports that their effects are statistically significant (Table 3).

Table 3

Simple Regression Coefficients of the Individual Correlations between the Predictors and CGPA

Model	Predictor	R	R^2	Adjusted R^2	B	SE	t	P	CI 95%
1	Gender	0.360	0.130	0.129	9.775	0.532	18.689	< 0.001	[8.749, 10.800]
2	GAT	0.341	0.116	0.116	.586	0.033	17.547	< 0.001	[.520,.651]
3	SAAT	0.422	0.178	0.178	.712	0.032	22.548	< 0.001	[.650,.774]

Note. ** Significant at 0.001.

Note. Dependent Variable: Cumulative Grade Point Average (CGPA)

Note. GAT = General Aptitude Test, SAAT = Standardized Achievement Admission Test

5.4 Collinearity Test

As indicated in Table 4, which displayed the Pearson correlation coefficients among the study variables alongside the multicollinearity diagnostics (Tolerance and Variance Inflation Factor [VIF]), the results revealed that the three predictors (gender, GAT, SAAT) had a statistically significant relationship with CGPA. Based on the correlation matrix, SAAT had the strongest correlation with CGPA ($r = .424$), followed by gender ($r = .362$) and GAT ($r = 342$). Prior to running the multiple regression analysis, we ran the tolerance and VIF tests to check for multicollinearity between the independent variables. The VIFs for the independent variables ranged from 1.394 to 2.203, which indicated slightly low multicollinearity between the study's predictors (threshold 5.0). The tolerance values were all above the 0.10 threshold, spanning between .454 and .717. These aforementioned metrics confirmed that the predictor variables

were sufficiently independent to be used together in a multiple regression model.

Table 4

Correlation Matrix and Collinearity Diagnostics.

Correlation among Variables					**Collinearity Test**	
	CGPA	Gender	GAT Score	SAAT Score	Tolerance	VIF
CGPA	1					
Gender	.362**	1			.717	1.394
GAT	.342**	.274**	1		.580	1.725
SAAT	.424**	.525**	.644**	1	.454	2.203

Note. ** significant at 0.01.

Note. CGPA = Cumulative Grade-Point Average, GAT = General Aptitude Test, SAAT = Standard Achievement Admission Test, VIF = Variance Inflation Factor

5.5 Research Question 3: To what extent do the following predictors (gender, total GAT, SAAT) collectively predict the CGPA of preservice teachers of students with LD?

A multiple regression analysis was conducted to investigate whether gender, GAT, and SAAT could predict the CGPA of preservice teachers of students with LD. There was a significantly moderate correlation ($R = 0.465$) between the combination of predictors: gender, GAT, and SAAT and the criterion variable: CGPA of preservice teachers of students with LD at $p < .001$. In addition, the overall model was statistically significant, $F(3, 1297) = 125.139$, $p < .001$, and the R^2 value of 0.216 implied that approximately 21.6% of the variance in CGPA was explained by the model (Table 5).

Within the regression model, the individual correlations between the abovementioned factors and CGPA were further evaluated. SAAT was the most significant predictor of CGPA ($\beta = 0.225$, $p < .001$); the positive correlation coefficient ($B = 0.38$) revealed that for every unit increase in SAAT, CGPA increases by approximately 0.38 points. Following SAAT, gender was also the second significant positive predictor of CGPA ($\beta = .203$, $p < .001$); the positive correlation coefficient ($B = 5.523$) indicated that female preservice teachers of students with LD tend to obtain higher CGPAs compared to males. Although it had a significant correlation with CGPA, GAT was the least significant predictor within the model ($\beta = .140$, $p < .001$); the positive correlation coefficient ($B = .24$

) implied that for every unit increase in GAT, CGPA increases by approximately 0.24 points (Table 5).

Table 5

Regression Coefficient of the Correlation between the Predictors (Gender, GAT, SAAT) and CGPA

Predictor	**B**	**SE**	**β**	**t**	**P**	**CI 95%**
Constant	35.067	2.527		13.875	< 0.001	[30.111, 40.023]
Gender	5.523	.586	.203	9.419	< 0.001	[4.373, 6.672]
GAT	.240	.041	.140	5.817	< 0.001	[.159, .321]
SAAT	.380	.046	.225	8.299	< 0.001	[.290, 470]
Model Summary	R = 0.465		$R^2 = 0.216$	F = 125.139	P < 0.001	

Note. ** significant at 0.001.

Note. Dependent Variable: CGPA

Note. GAT = General Aptitude Test, SAAT = Standard Achievement Admission Test

6. Discussion

The purpose of this study was to investigate the relationship between the CGPA of preservice teachers of students with LD and the following predictors: GAT, SAAT, and gender. Previous studies (e.g., Althewini, 2025; Hassan & Al-Razgan, 2016; Vista & Alkhadim, 2022) within the context of Saudi Arabia have not focused on special education preservice teachers, specifically teachers of students with LD. In this study, therefore, we examined the predictability of gender and standardized admission exams (GAT, SAAT) for the CGPA of preservice teachers of students with LD. The findings of this study posed some critical highlights that should be further mentioned and discussed.

First, preservice teachers of students with LD's performed better in GAT (M = 70.69, SD = 7.85) than SAAT (M = 66.87, SD = 8.00). Further, most students' GAT scores (n = 985, 42%) ranged between 68 and 76, while the majority of their SAAT scores (n = 1,095, 42%) fell within the range 56-66. This indicates that high school students in Saudi schools need more preparation and support prior to taking admission tests, thus increasing their admission opportunity at the universities, especially when it comes to demanding majors. Second, the overall average CGPA of preservice teachers of students with LD was moderately high (M = 80.52, SD = 13.49); however, the highest mean CGPA was attained by the 2020-2023 group (M = 82.46, SD = 13.12). This shows that there is a possible grade inflation in Saudi higher education institutions (Al-Jarf, 2022), and in this case in special education programs. Third, female cohorts achieved a higher mean CGPA (M = 84.88, SD = 12.16) than the male group (M = 75.10, SD = 13.11); this is similar to the findings shown in Elmoussa (2023), who found that female students achieved a higher mean CGPA than male students.

Fourth, once the relationship between the study predictors (gender, GAT, SAAT) and the criterion (CGPA) was examined individually, SAAT was found to be the strongest predictor, and it explained 17.8% of the variance in CGPA (R^2 = 0.178). This finding should be taken into consideration by policymakers and college committees because preservice teachers of students with LD performed lower in SAAT than GAT, which calls for further investigation into such issue. Fifth, when the relationship between the combined predictors (gender, GAT, SAAT) and the criterion (CGPA) was examined, the model was statistically significant, $F(3, 1297) = 125.139$, $p < .001$; it explained 21.6% of the variance in CGPA. This means 79.4% of the variance can be explained by other variables that were not included in this study. This finding confirms the results revealed in previous studies (e.g., Alhurishi et al., 2021; Hassan & Al-Razgan, 2016; Sulphey et al., 2018) since those studies also found a significant correlation between admission exams and CGPA. Finally, even within the combined model, SAAT is still the most significant predictor of CGPA (β = 0.225, $p < .001$), which confirms its predictability and criticality for the CGPA of all college students, including preservice teachers of students with LD.

6.1 Limitations

Although this study poses critical findings, it has several limitations. The first limitation concerns not having all demographic variables, such as HSGPA, age, and socioeconomic status (SES). The only demographic information accessed was gender. The second possible limitation concerns not including all special education teachers from other specializations (e.g., autism, intellectual disabilities, and behavioral and emotional disturbance). Third, the researcher did not have access to the university-related demographics (e.g., size, rank) or teacher education programs (e.g., curriculum, resources). Therefore, as stated

previously, the study predictors (GAT, SAAT, and gender) only explained 21.6% of the variance in CGPA. Having data of all the aforementioned variables would have enabled the researcher to build a robust regression model that would have revealed more insightful findings and implications.

6.2 Implications and Recommendations

This study poses some future directions, implications, and recommendations for policy, practice, and future research. First, future research may consider incorporating other variables or predictors into the regression model in order to accurately predict CGPA of the study participants. These variables include, but are not limited to, university-related demographics (e.g., size, rank, public vs. private), teacher education program-related data (e.g., curriculum, resources) and participants' demographics (e.g., HSGPA, SES, age). Second, future researchers are recommended to specifically dive into the special education curriculums, especially when it comes to syllabus, courses' descriptions, materials (e.g., digital resources, books), instructional practices, and courses' expectations. Investigating the correlation between such teacher education programs' curriculums and CGPA can accurately offer insightful and robust findings. Third, future research may qualitatively explore the institutional and departmental factors that may predict students' CGPA. This may occur through interviewing students and faculty members to derive intuitive outcomes that complement the quantitative findings.

Fourth, learning about the CGPA of preservice teachers throughout the years can help special education departments in multiple ways. They can develop and improve their curriculum, current standards, and practices. They also can search for innovative methods when teaching their students, which can enhance the overall CGPA of those students. Fifth, the findings of this study may help the NCA at ETEC to develop their college admission tests (GAT, SAAT) in order to accurately measure students' abilities, knowledge, and achievement. When it comes to SAAT specifically, it is a mandatory exam that weighs 40% of the composite score that enables university applicants to join higher education institutions (Alhurishi et al., 2021; Vista & Alkhadim, 2022). This test measures students' accumulated knowledge throughout their high school journey (Education and Training Evaluation Commission, 2026b, 2026c), but students commonly perform lower in SAAT compared to their GAT or HSGPA (Alzahrani, 2026). This ultimately should encourage policymakers and educational stakeholders specifically to investigate such issues and may find solutions that could enhance students' performance in such exams. Finally, it would be advisable for special education departments at Saudi universities to reflect on their current theoretical and practical frameworks in order to provide students with in-depth experience that not only enables them to attain a higher CGPA but also become highly qualified professionals who can support students with disabilities in inclusive settings.

7. References

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8. Acknowledgements

The researcher is grateful to the Research Center for Evaluation, Assessment, & Accreditation as well as the National Center for Assessment (NCA) at the Education and Training Evaluation Commission for their assistance, support, and collaboration.

9. Author Declaration

The author declares that this manuscript is an original work; it has neither been published previously nor currently under consideration for publication elsewhere. The research was carried out without any financial or commercial ties that might be interpreted as a potential conflict of interest.