

**POST GRADUATE SELECTION CRITERIA OF SPEECH AND HEARING PROGRAMMES IN INDIA: QUO VADIS?**

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**ABSTRACT**

*A critical question is whether selection criteria for formal entry into professional courses have the power to prognosticate their later academic performance. This study examined the predictive validity of College Entrance Exam marks (CEEM) and Graduate marks (GM) vis- a- vis the academic performance during the Post Graduate Program (PGP). It covers a sample of 322 students who entered PGP in Audiology and Speech-Language Pathology (SLP) at a national institute in India between the years 2012-2018. Inter-correlations indicated that CEEM (29 %) are the less correlated and predictive of PGP academic performance than GM (56 %). The lower Predictive Validity (PV) of CEEM is probably attributable to non-cognitive factors involved in their later academic performance. Policy implications and further research are highlighted.*

**INTRODUCTION**

Researchers have shown interest in determining the relationship between the academic achievements of students in high school and pre-university programs to their later college-level performance. Wherever in countries, there is a scheme or system of clearance through College Entrance Examinations (CEE) before a student is allowed to embark upon a Post Graduate Program (PGP), questions are raised on the need for such exercises. CEE for PGP has become the order of the day across several nations including India. They are meant to serve as gatekeepers for admission into many professional courses like medicine, pharmacy, agriculture, dentistry, engineering, architecture, management, legal studies, and others (Davey, De Lian & Higgins, 2007; Valli & Johnson, 2007; Koenig, Sireci & Wiley, 1998).

When demand outstrips supply with applicants than available seats the need for CEE is justified. They are presumed to minimize resource wastage, optimize human capital, check the persistence and calm of the candidate, or bring uniformity into a selection system that is fraught with wide disparities. It is expected to bring standardization, objectivity, transparency in the admission process, give equal opportunities to students, reduce bias in selection, and select only the deserving. The need is felt even more in a country like India because of several inequities. There are different examination boards with varying content or rigor of curriculum that is also perpetually changing. There are reservations about cost, stress or burden of CEE on students. It is argued that CEE promotes political centralism, item bias and has dubious Predictive Validity (PV) (Ross & Wang, 2010; Wang, 2010; Kockar & Gencoz, 2004; Feng, 1999; Berberoglu, 1996).

The conceptual framework and theoretical basis for the use of College Entrance Examination Marks(CEEM) as criteria for admission in PGP and as a predictor of later success in the chosen program have been offered by many investigators as based on the notion of equity. It is deemed as an attempt to provide a level playing field between the aspirants and contenders. This has become the basis for the evolution of CEE (Baron & Wolf, 1996; Messick, 1989).

## **REVIEW OF LITERATURE**

Some formal CEEs that have been under the scanner, especially for their predictive validity are Scholastic Aptitude Test (SAT), International English Language Testing System (IELTS), Test of English as Foreign Language (TOEFL), Graduate Management Admission Test (GMAT) and Graduate Record Examination (GRE). A consensus is that the PV of high school grades by their own for further academic or vocational training success ( $r=0.41$ ) and performance in university examinations ( $r=0.46$ ) is limited (Schuler, Funke & Baron-Boldt, 1990) than an added scheme of CEE which are a shade better ( $r=0.43$  and  $0.52$ ) for graduate pupils (Dooley & Oliver, 2002; Light, Xu & Mossop, 1987; Mauger & Kolmodin, 1975).

The PV of the highly competitive nationwide CEE alone for public medical school students in Iran and combination with their high school CGPA was examined for 2126 students in the year 2013. Pearson correlation and regression analyses were used to assess the relationships between the selection criteria and academic performance. Results showed that the Comprehensive Basic Sciences Exam (CBSE) scores showed  $r=0.473$ ; (2) Comprehensive Pre-Internship Exam (CPE)

scores showed that  $r=0.326$ ; and (3) medical school CGPA showed the least  $r=0.225$  in terms of the power of their prediction for the achieved scores in their later academic performance. The authors recommended better care, caution, and criteria for identifying the best applicants to become ‘good doctors’ in the country (Farrokh-Khajeh-Pasha et al., 2012).

In an attempt to determine the PV of the CEE-SAT scores in the prediction of grades earned by a randomly chosen sample of 142 women as fresh entrants into mathematics at Longwood College in August 1973, there was a 0.48 correlation between entrance scores and their later earned grades (Gusset, 1974). In a study designed to examine whether coaching affects the PV and fairness of SAT, between two randomly allocated groups of coached and uncoached students, the scores increased by about 25% of a standard deviation on the psychometric test for coached students. However, it did not affect PV. Rather, it created a bias against the uncoached examinees in predicting their performance (Allalouf & Ben-Shakhar, 1998).

Similar attempts have been made to use admissions exam to predict student success in Associate Degree in Nursing Programs (ADNP; Gallagher, Bomba & Crane, 2001). In a related study, an effort was made to assess the degree to which CEEM and preparatory class average score predict success in college academic performance. Results showed that both these indices emerged as valid predictors of first-year college marks and jointly accounted for 33.70 percent of the variation in college performance (Robi, 2014).

Although CEEM determine the future of millions of young people and is becoming increasingly relevant for Western university education, there is little evidence-based information about what should be their structure and content, fairness for higher education, or socio-cultural dimensions. The high cost of academic preparation and the continual shortage of trained helping professionals also plague the domain of Speech, Language and Hearing (SLH) in India. This makes the selection process for these specialists critical.

## **STATEMENT OF THE PROBLEM**

The helping profession of SLH works to prevent, assess, diagnose and treat individuals affected by communication disorders. Speech disorders occur when a person has difficulty in producing speech fluently (as in stuttering), pronunciation, or voice and resonance. Language disorders happen when one has trouble in understanding others (receptive) or in sharing thoughts, ideas or

feelings (expressive) with others. Many times, treatments for swallowing disorders or difficulties are also added to the list of services provided by SLH professionals. Further, they also provide diagnostic and interventional help for persons with deafness or hard of hearing. These professionals typically work in research, education, and health care settings.

Training for SLH professionals takes place at different levels beginning from certificate to post-doctoral level programs at various accredited national level institutions all over the world including India. There is usually a stringent selection and admission process to these academic programs. Ideally, it must be assured whether the admission criteria that are used are valid, whether they are the best-fit indicators of success, and whether they help eliminate those with the poorest chance of success (Gayle & Jones, 1973). However, till date, no attempt has been made concerning the PV of selection criteria and process for their PGP *vis-a-vis* the later academic performance of students enrolled for specialization in the helping profession of SLH in the country.

The generic aim of this study, therefore, is to ascertain the degree or extent to which CEEM and GM predict success in academic performance at the PGP. Further, it may be worthwhile to explore whether associated personal and socio-demographic correlates like gender or subject area of specialization influence the PG level academic performance as an outcome variable.

## **RESEARCH QUESTIONS**

There are unanswered questions on how much CEEM predict success in their course work. Some studies have shown high school average scores, and entrance test scores are the most important predictors of college performance (Burton & Ramist, 2001). Others have noted that a combination of high school CGPA and CEEM yield somewhat better prediction than each taken alone (Noble & Sawyer, 2002). The specific research questions are:

1. Is there a relationship between GM, CEEM, and PG level performance scores as reflected by their CGPA?
2. Do the CEEM and GM collectively have a significant contribution to the prediction of PG academic scores as reflected by their CGPA?
3. Which is the most important PV for PG academic scores as reflected by their CGPA? GM or CEEM?

## **SIGNIFICANCE OF THE STUDY**

Research in this area has stressed the use of CEEM as criteria for admission in PGP and as a predictor of later success in the chosen program of study. The findings of this study are likely to guide admission personnel and decision makers in identifying whether UG scores or CEEM are accurate predictors of later academic performance of students pursuing PGP in SLH in the country. Further, the results of this study can help PG program mentors and student counselors to assist transition issues of students between graduation and their PGP. It can also facilitate in reviewing the testing policy as well as the quality of CEE. It may be possible that, apart from GM and CEEM, other non-cognitive factors like home supports, teacher variables, college culture, and campus climate, peer influences, nutrition, extra-curricular activities, study skills or learning strategies, individual interest, confidence, self-motivation, and self-appraisal may also play a role in later student performance. Besides, there is a debate in the literature about which standardized procedure, whether CEEM, GM or any other yardstick should be used while making admission decisions (Anghelache, 2016). Thus, the findings of this study may have a contribution to the existing debate, adding knowledge about which predictor is more significant or accurate in forecasting later student academic performance.

## **OPERATIONAL DEFINITIONS**

- (i) **Academic performance** refers to how well a student shows in academic knowledge and skills which is reflected as a student's CGPA.
- (ii) **Correlation coefficients** are statistical measures of the linear relationship between two variables. They range from -1.00 to +1.00 with a zero in between indicating no relationship. During validation exercises, these values serve as predictor and criterion, outcome, test score, or dependent variable.
- (iii) **CEEM** reflect the results of a test used to assess a student's readiness for admission into PGP in SLH.
- (iv) **Predictive validity** refers to the extent to which a predictor such as CEE score will estimate or forecast the outcome variable, such as, academic knowledge, skills or performance in the student.

## **METHOD**

This study uses a retrospective cross-sectional historical analysis of secondary data on six batches of PG students pursuing their programs of study at a national level institution dedicated to the field of SLH in the country. The variables included in this enquiry were predictor (or independent) variable in the form of CEEM, gender, feeder college, and type of PGP (Audiology or SLP) while their academic performance was measured as CGPA was taken as criterion measure (or dependent variable). To answer the main research questions, linear regression analysis was employed.

### **Population & Sample**

The investigating agency, established in 1966, is an autonomous institute fully funded by the Ministry of Health and Family Welfare, Government of India. Its major objectives are to impart professional training, render clinical services, conduct research and educate the public on issues related to SLH and communication disorders. As part of its initiative to undertake professional training, among other programs, the institute runs 2-years PGP in 'Audiology' and another in 'SLP.' The CEEM is based on B.Sc. (Sp. & Hg.)/BASLP syllabus. It is conducted every year for the selection of candidates. Admission is made only by the marks obtained in the CEE conducted by the Institute for this purpose. The number of Questions to be answered is 100 within 90 minutes. There is negative marking calculated @ -0.25 marks per wrong answer. The cutoff percentage of CEEM makes the candidate eligible for admission into the PGP.

### **Procedure**

Permission was obtained from the competent authorities in the institute whose data records had to be accessed from their academic section for the study. Ethical considerations on maintaining the anonymity, privacy, and confidentiality of the students whose academic records were perused and strictly followed.

Data analysis covered the use of descriptive statistics like mean and measures of dispersion (standard deviation). This was followed by an analysis of relationships among variables. The Mann-Whitney U test was used as non-parametric alternative to compare differences between two independent groups when the dependent variable is not normally distributed as in this study. Using Pearson Product Moment Method, correlation coefficients were computed to ascertain the relationships among the variables. In addition, linear regression analysis was carried out to see the contribution of PV for variations, if any, in the criterion measure. Following the regression analysis, stepwise regression analysis was used to identify and select the predictor

variable that best explains the variation in the criterion variable. This analysis was carried out using SPSS Version-20. An alpha value of 0.05 was chosen to test the significance of the contribution of each predictor variable and the linear combination of the independent variables to the dependent variable.

## RESULTS

The first research question was to do with ascertaining whether there is relationship between GM, CEEM, and PG level performance scores as reflected by their CGPA? The mean, range or standard deviation and findings on a test of normality were run through the sample about key study variable of CEEM about demographic variables. The Shapiro-Wilk Test for Normality was used to examine the continuous variable of CEE scores. Assuming a null hypothesis that the data is normally distributed, the probability < W value listed in the output is the p-value (< 0.05). If the p-value is greater than 0.05, then the null hypothesis is not rejected. As shown in table 1, only in the case of SLP, the calculated W value is significant (p: 0.04). Therefore, it is assumed that, by and large, the sample distribution is normally distributed. Additionally, skewness and kurtosis values were also used to determine normality. As required, the values are close to zero. Another technique of considering normal distribution is to consider the extremes or outlines in the range. By all counts, the sample in this study appears to be distributed normally (Table 1; Figure 1).

A similar exercise to ascertain normality was undertaken by examining the variable of GM of the sample in this study (Table 2; Figure 2). Results show a similar trend except that girl candidates (over-represented in these academic programs) have marginally high GM (N: 241; Mean: 65.42; SD: 5.04) than the boys (N: 83; Mean: 63.49; SD: 5.65). Similarly, based on the feeder colleges as a variable, the feeder colleges other than the host institution had a higher GM (N: 141; Mean: 66.42; SD: 5.42) than the candidates from the host institution (N: 183; Mean: 63.77; SD: 4.85) and the differences were statistically insignificant (p: > 0.05). However, the discipline of specialization (Audiology or SLP) did not show any significant difference (p: > 0.05).

At the third level (Table 3; Figure 3), the analysis was attempted to examine the variable of CGPA in this sample. Results show that girls (N: 240; Mean: 7.10; SD: 0.45) have higher CGPA than boys (N: 83; Mean: 6.70; SD: 0.40) just as those pursuing SLP specialization (N: 159; Mean: 7.22; SD: 0.42) score higher CGPA than students opting for Audiology (N: 164; Mean: 6.78; SD: 0.41). However, there are no differences for CGPA scores between the groups about their feeder colleges (p: > 0.05).

To summarise this sub-section, it is seen that:

- (i) Boys outperform the girls during CEE, although their CGPA scores in the PG examinations and GM slide lower than the girls;
- (ii) Students opting for Audiology perform better in CEE, although their CGPA in PG examinations slide lower than the students pursuing SLP;
- (iii) At the time of CEE, students from the host institution appear to outperform those from other than the host institution. Their CGPA also seem to be higher than students whose feeder college is other than the host institution.

The second research question is: Do the CEEM and GM collectively have a significant contribution to the prediction of PG academic scores as reflected by their CGPA? To answer this question, an inter-correlation matrix was prepared based on the semester-wise performance of students *vis-a-vis* their CGPA in PGP, CEEM, and GM respectively for both streams of Audiology and SLP combined (Table 4). Results show a strong uphill or positive linear correlation (Range: +0.80 to 0.50) for CGPA (\*), less for GM (+), and least for CEEM (°) over the four semesters. These trends are depicted as scatter diagrams (Fig.4).

The third research question is: Which is most important predictor variable for academic scores achieved by students at PG level as reflected in their CGPA: CEEM or GM?

A 2 x 2 inter-correlation table between CEEM and GM for the academic performance of the sample in terms of their CGPA (Table 5) shows that marks obtained during graduation (GM; R=0.561; N: 323) is higher than the values obtained at college entrance examination (CEEM; R=0.355; N: 323). Further, the correlation coefficient values are the least between GM and CEEM (R=0.287; N: 324).

In terms of the studied socio-demographic variable (Table 6), it is seen that high correlations exist between GM and CGPA for girls (R=0.606; N: 240), students opting for SLP (R=0.648; N: 159), and those who have completed their UG program from the host institution (R=0.697; N: 183). The correlations between CEEM and academic performance as reflected by their CGPAs emerge as low or moderate across all socio-demographic variables like gender, the area of specialization as well as feeder-college respectively.

Eventually, a simple linear regression coefficient and percentage of variance (Table 7) worked out between GM and CGPA is a meager 0.10 % ( $\beta = 0.561$ ) which is marginally higher than the same metrics between CEEM and CGPA which is 0.02 % ( $\beta = 0.355$ ). All this means that nearly 90 percent of the variance found in the response variable (academic performance of

students as reflected by their CGPA) cannot be explained by the predictor variable (CEEM in this instance). The F-statistic is large given the size of the data.

## DISCUSSION

Olani (2008) reported that preparatory school average score, university CEEM and aptitude scores are statistically significant predictors of first-semester CGPA of the students at Adama University. The three variables combined to account for 17 percent of the variance in their academic performance scores. The study concluded that two-thirds of variance remained unexplained. In this study nine-tenth of the variance is unexplained. Then, this brings the question to the fore as to what other factors may explain the variance in the phenomenon or relation between CEEM and academic performance as reflected by CGPA. The answer can be found in a variety of often ignored factors.

Other aspects that immediately surface for consideration can be achievement motivation, study habits, and other personal-social factors were attributed to explain the large variance. There are a variety of other personal facets that must be also considered, such as, academic self-efficacy, organization and attention to study, time utilization, classroom communication, student involvement with college life, stress and emotional components to play an important role in predicting student success as has been empirically demonstrated (Aydin, 2017). Other non-cognitive factors that are commonly implicated for academic performance are: home supports, teacher variables, college culture and campus climate, peer influences, nutrition, extra-curricular activities, study skills or learning strategies, study habits, examination-taking skills, personality variables, individual interest, aptitude, confidence, self-motivation, and self-appraisal (Sommerfeld, 2011; Pickering, Calliotte, & McAuliffe, 1992)

The lower correlations and regression coefficients of CEEM than the UG marks to academic achievements in PG as reflected by the CGPA can be attributed to these several unacknowledged factors influencing students' academic performance. Probably, the form, intent, and contents in the CEE for admission are entirely different from what is at the end of each semester as well as final examinations of the PGP. The CEE is a one-shot three-hour objective type test based on +2 level science and math subjects. The semester-wise six-monthly examinations are a mixture of few objective and more essay-type examination questions related to an entirely different and specialized subject matter. A semester-format of examination has been favored by students and teachers than the annual pattern of examination (Yousaf & Hashim,

2012).The scoring is computer-aided OMR method used for the CEE. In the university-mediated semester-wise and final examinations, faculty evaluate anonymous answer scripts of examinees,which they have taught those respective subjects throughout the semester. Familiarity with the content of the subjects and examinees can predispose positive bias and awarding of inflated marks than in case of the computer-aided corrections wherein there is also negative half-mark in place for every incorrect answer. Students have a more favorable attitude and expectedly score higher on multiple-choice objective type examinations as in CEE than in an essay-type examination at the end of an annual or semester scheme. The nature and degree of motivation for taking the CEE (to secure admission into a prestigious PGP) at the end of graduation are entirely different as compared to taking piece-meal semester-wise spaced examinations and class tests to secure a CGPA in the PGP (Zeidner, 1987;Hakstian, 1971).

The SLH helping profession is both a theory-driven academic program as well as a clinical, applied practitioner course with internship practices, casework, field visits, competency-based exercises, and skill-driven activity. Therefore, unlike other academic programs, entry-criteria should consider not only knowledge-based, pre-technical or cognitive capabilities of the candidates who seek admission as reflected on GM and CEEM; it should also cover their soft skills, emotional-social skills, self-management and people skills, their stress regulation, negotiation,and networking skills, etc. At present, there appears to be no mechanism in place that addresses these dimensions of pre or post-admission training for students in the field of SLP in the country (Volz et al., 1978).

## **CONCLUSION**

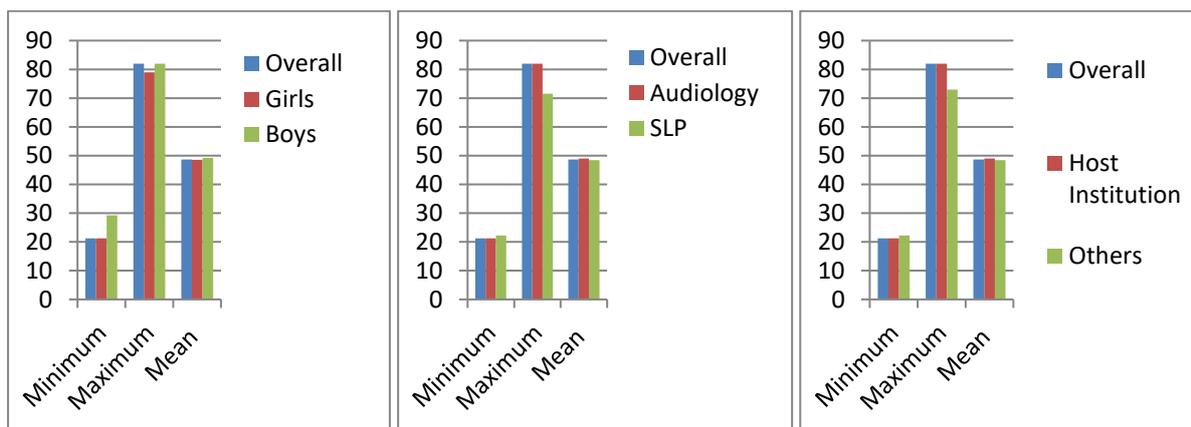
In sum, results of this study show that boys opting for Audiology and those from the host institution outperform during CEE, although their CGPA and scores in UG examinations slide lower than the girls, or those from other feeder colleges. Inter-correlations on semester-wise performance between or among the sub-groups indicate that CEEM are the least correlated followed by better correlations for GM for CGPA across all semesters. The comparison of standardized regression coefficients reveals that GM turns out to be better predictors (56%) for CGPA than the CEEM (29%). Finally, it is recommended that the lower PV of CEEM is probably attributable to the several unidentified non-cognitive factors involved in their later academic performance. Policy implications of these findings necessitate a re-think on whether entrance examinations alone are sufficient to choose prospective students into SLP programs.

Rather, other assessments covering their personality, aptitude, attitudes, interests, or make-up for the choice of entry into service sectors must also be taken into account. An agenda for further research along these lines is highlighted.

**Table 1: Distribution of Common Entrance Exam Marks in relation to Demographic Variables**

Entrance Exam Scores	N	Minimum	Maximum	Mean	S.D.	Shapiro-Wilk Test of Normality		Skewness (S.E)	Kurtosis (S.E)	Probability
						Statistic	Sig.			
<b>Gender</b>										
Girls	241	21.25	79.00	48.55	11.33	.995	.673	-.016 (.157)	-.395 (.312)	t: 0.4464; df: 322;
Boys	83	29.25	82.00	49.18	10.35	.917	.148	.452 (.264)	.523 (.523)	SED: 1.411; p: 0.656; ns
<b>Discipline</b>										
Audiology	165	21.25	82.00	49.02	11.15	.987	.148	.364 (.189)	.108 (.376)	t: 0.5030; df: 322;
SLP	159	22.25	71.50	48.40	11.03	.982	<b>.039</b>	-.239 (.192)	-.585 (.039)	SED: 1.233; p: 0.615; ns
<b>Feeder College</b>										
Host institution	183	21.25	82.00	48.95	11.91	.993	.586	.201 (.180)	-.311 (.357)	t: 0.4426; df: 322;
Others	141	22.25	73.00	48.40	9.92	.990	.435	-.258 (.204)	-.259 (.406)	SED: 1.243; p: 0.658; ns

ns: not significant



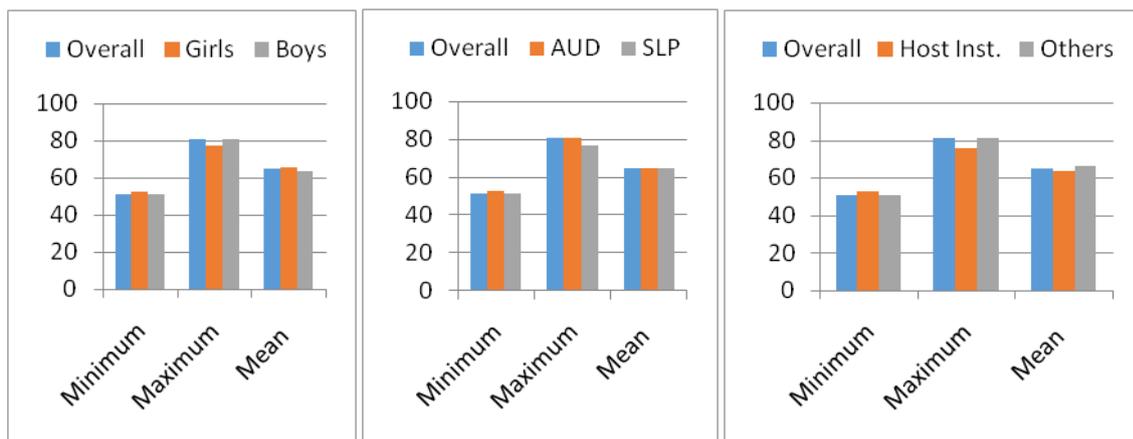
**Fig. 1: Graphic Representation of Common Entrance Exam Marks w.r.t. Demographic Variables**

**Table 2**

**Distribution of Graduate Marks with respect to Demographic Variables**

GM	N	Minimum	Maximum	Mean	SD.	Shapiro-Wilk		Skewness (SE)	Kurtosis (SE)	Probability
						Test of Normality Statistic	Sig.			
<b>Gender</b>										
Girls	241	52.74	77.00	65.42	5.04	.987	<b>.026</b>	.178 (.157)	-.567 (.312)	t: 2.915; df: 322; SED: 0.66; p: 0.004; hs;
Boys	83	51.00	81.00	63.49	5.65	.983	.355	.422 (.264)	.172 (.523)	
<b>Discipline</b>										
AUD	165	52.74	81.00	64.89	5.23	.993	.594	.163 (.189)	-.219 (.376)	t: 0.1206; df: 322; SED: 0.58; p: 0.904; ns;
SLP	159	51.00	77.00	64.96	5.22	.982	<b>.039</b>	.231 (.192)	-.512 (.383)	
<b>Feeder College</b>										
Host Institution	183	52.74	76.00	63.77	4.85	.987	.102	.222 (.180)	-.519 (.357)	t: 4.6319; df: 322; SED: 0.57; p: 0.001; hs;
Others	141	51.00	81.00	66.42	5.42	.993	.759	.030 (.204)	-.236 (.406)	

hs: highly significant; ns: not significant

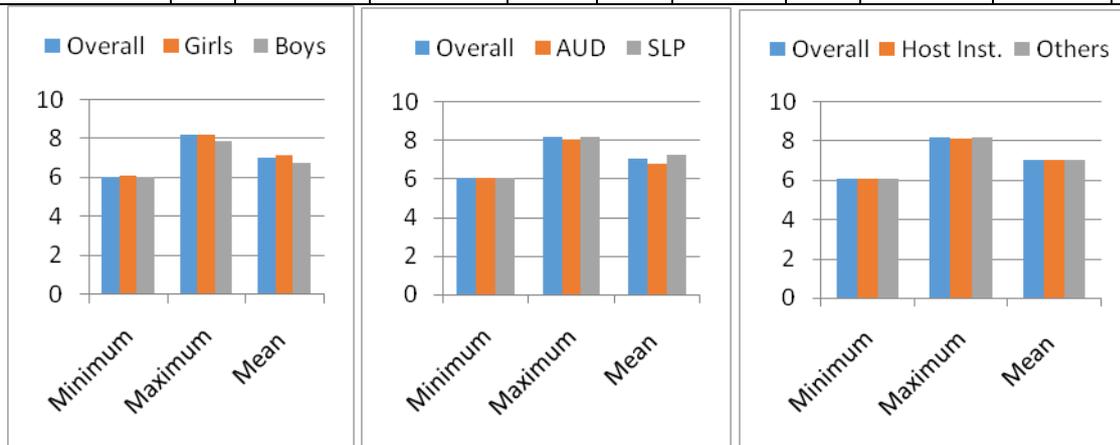


**Fig. 2: Graphic Representation of Graduate Marks w.r.t. Demographic Variables**

**Table 3**

**Distribution of CGPA with respect to Demographic Variables**

CGPA	N	Minimum	Maximum	Mean	SD	Shapiro-Wilk		Skewness (SE)	Kurtosis (SE)	Probability
						Test of Normality Statistic	Sig.			
<b>Gender</b>										
Girls	240	6.06	8.17	7.10	0.45	.992	.207	.123 (.157)	-.346 (.313)	t: 7.1756; df: 321; SED: 0.056; p: 0.001; hs;
Boys	83	6.02	7.85	6.70	0.40	.956	.007	.749 (.264)	.458 (.523)	
<b>Discipline</b>										
Audiology	164	6.02	8.01	6.78	0.41	.973	.003	.558 (.190)	.107 (.377)	t: 9.5274; df: 321; SED: 0.046; p: 0.001; hs;
SLP	159	6.04	8.17	7.22	0.42	.993	.580	.051 (.192)	-.235 (.383)	
<b>Feeder College</b>										
Host Institution	183	6.02	8.09	7.01	0.47	.988	.137	.157 (.180)	-.438 (.357)	t: 0.4628; df: 321; SED: 0.043; p: 0.6438; ns;
Others	140	6.04	8.17	6.99	0.23	.981	.052	.328 (.205)	-.442 (.407)	

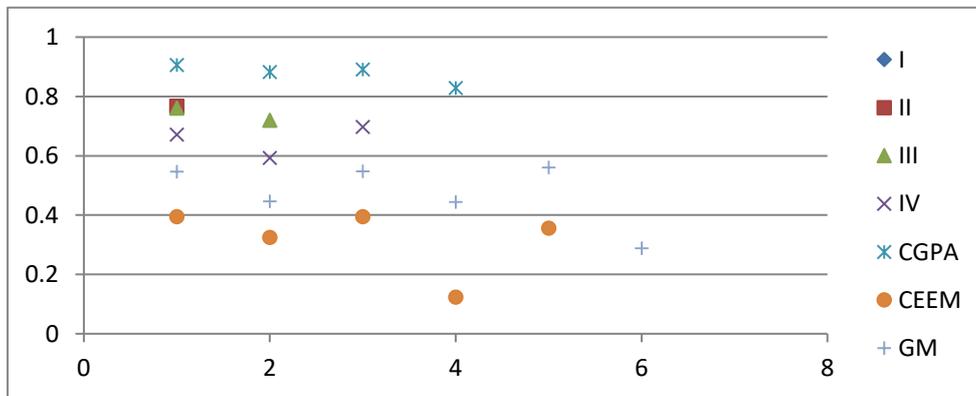


**Fig. 3: Graphic Representation of CGPA with respect to Demographic Variables**

**Table 4**  
**Inter-Correlation Matrix on Semester-wise Performance by**  
**CGPA, CEEM & GM for M.Sc. Audiology & SLP Combined**

Semesters	N	I	II	III	IV	CGPA	CEEM	GM
<b>I</b>	322	-						
<b>II</b>	309	0.767*	-					
<b>III</b>	322	0.761*	0.720*	-				
<b>IV</b>	322	0.672*	0.593*	0.697*	-			
<b>CGPA</b>	322	0.906*	0.882*	0.891*	0.829*	-		
<b>CEEM</b>	323	0.395*	0.325*	0.395*	0.124*	0.356*	-	
<b>GM</b>	323	0.547*	0.447*	0.548*	0.445*	0.561*	0.288*	-

(\*p: <0.01)



**Fig. 4: Scatter Plot of Semester wise performance w.r.t. CGPA, CEEM and GM**

**Table 5**  
**Inter-Correlations between CGPA, GM& CEEM**

Variables	CEEM	GM
CGPA	0.355* (N: 323)	0.561* (N: 323)
CEEM	-	0.287* (N: 324)

\*\* p<0.001

**Table 6**  
**Inter-Correlations in terms of Socio-demographic Variables**

VARIABLES	CGPA	GM	CEEM
Gender	Boys	0.388** (N: 83)	0.387** (N: 83)
	Girls	0.606** (N: 240)	0.394** (N: 240)
Area of Specialization	Audiology	0.617** (N: 164)	0.434** (N: 164)
	SLP	0.648** (N:159)	0.402** (N: 159)
Feeder College	UG from Host Institution	0.697** (N: 183)	0.397** (N: 183)
	UG from other than Host Institution	0.463** (N: 140)	0.295** (N: 140)

\*\*  $p < 0.001$

**Table 7**  
**Regression coefficients and percentage of variance in CGPA**

Simple Linear Regression	Predictors	Standardized Coefficients (Beta)	t	Sig	R <sup>2</sup>	R <sup>2</sup> Change	F	Sig
	GM	0.561	12.156	0.000	0.315	0.10%	147.780	0.000
	CEEM	0.355	6.812	0.000	0.126	0.02%	46.402	0.000

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