

## Students Academic Performance' Predictors of the Preparatory Year in Health Science Faculties, Taif University (1432- 1433 H)

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**Abstract:** This study seeks to explore the prevalence of low academic performance among preparatory year 'students at Health colleges (Medicine, Pharmacy, and Applied Medical Sciences ), and to ascertain the roles played by three sets of influences (socioeconomic factors, student ability, and school factors ).Other important factors explored through students' perception about university environment. In doing so, it uses information on preparatory year performance in first semester, 1432-1433 H (2011-2012) of the students at the Health colleges,University of Taif, through a cross section study by using well designed questionnaire. The main outcome of this study was that the gender(female), type of secondary school(governmental), type of admitted faculty(other colleges than Medicine), and score of the secondary school(high) were the most important predictors of students' high performance at the preparatory year. In addition, method of choosing the admitted college; courses difficulty; suitability of university exams; and participating in university extracurricular activities, were associated significantly with students' academic performance. We recommend that educationists, leaders and higher education managements, should respond and face the problem of male academic underperformance and give it a priority. Also, Faculty members should try to avoid providing excessive amount of material for each course as well as test students more on concepts rather than emphasize rote memorization.

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### 1. Introduction

The differential students' performance in university institutions has been and is still a source of great concern and research interest to the higher education managements, government and parents because of the importance that education has on the national development (Asikhia, 2010).Academic institutions are increasingly required to monitor their performance and the performance of their students. The observed poor performance of some students in University institutions has been partly traced to poor academic high school scores. But it is worthwhile to note that other various factors include: age on admission, gender, and socioeconomic factors as: parental educational background, family income level, social status, parents' occupation, family size, and order of the student in the family (McKenzie and Schweitzer, 2001). According to the study performed by Anderson *et al.*, 1994, students who received better scores in high school also performed better in university. Also male had better grades than females and choose to drop from school less often. However, Golding and Donaldson, 2006 showed that gender and age have no significant correlation as predictive factors for university students' performance.

In this year (1433 – 1434 H./2012-2013G), Taif University established the Preparatory Year Program

as part of its Faculties degree curricula. According to the Undergraduate Bulletin of Taif University (2012), the main aims of the preparatory-year program are: to prepare students for undergraduate study, especially with regard to the language of instruction (English language), and to provide preparatory-year students with basic skills and knowledge for their future courses. The Preparatory Year Program consists of three components: Health, Science, and Art. Health component including 4 Faculties (Medicine, Pharmacy, Dentist, and Applied Medical Sciences). The courses in these Faculties are the logical extension of work that begins in the Preparatory Year Program. The duration of the Preparatory Year Program is one year, divided into two regular semesters and a summer session, if necessary, to complete the program.

The current study examines the academic performance among preparatory year students of Health Colleges, Taif University, as a product of three sets of factors which we have chosen as recognizable variables in KSA setting. First set of factors is the student's ability, second set is his/her socioeconomic elements, and the third set having its origin in the school attended—being associated with the systems of education and patterns of transferring knowledge that are organized within schools. It was hypothesized that student's ability (measured by his/her final scores in

secondary schools, Tahseel, and Achievement scores); some socioeconomic factors (student's age, sex, residence, parents occupation, order of student in his/her family, family income, and family stability); and type of schools attended (Governmental or Private) may be significant predictors of academic performance of university students. In addition, the study included the perception of students towards university environment (course content, university book, academic advice, difficult subjects, understand from instructors, difficult exams..ect) In doing so, it uses information on preparatory year performance in 1432-1433 H, first semester, (2011-2012G.) of students at the Health colleges, University of Taif. The identification of these key predictors is important to educators since it is hoped that it will add more enhanced information in the research to improve the learning environment for the students at Health colleges, Taif University.

The objectives of study:

To determine prevalence of low academic performance (LAP) among preparatory year students, Health Colleges, Taif University.

1. To describe general characters of preparatory year students with low academic performance (LAP).
2. To examine three sets of factors: student ability, socioeconomic and school factors to identify whether these factors could distinguish differences among students based on academic performance.
3. To identify students' perception about some factors of university environment (such as course content, academic advice, university book) as their reasons for success or failure.
4. To suggest some measures for improving the students' academic performance, and consequently for improving the quality of education, in Health Colleges, Taif University.
- 5.

## 2. Methodology

The study is a cross section study in nature. At the outset of the study, letters of consent were sent to obtain approval from the High Administrators, Taif University.

The data was collected through a self-administered questionnaire constructed by the researchers and tested in a pilot study of 20 students (males and females). Corrections of some questions in student's opinion about causes of difficulties in some subjects were performed.

The questionnaire was consisted of three parts: first part of basic data (age, residence, father and mother occupation, social and economic status of the family, and order of student in his brothers and sisters. In addition, grade point average GPA: students

reported their cumulative grade point average (GPA) at first semester, 1432-1433H (2011-2012G). GPA was the indicator of academic performance (dependant variable) and was measured on a scale ranging from 0 to 4. Second part of questionnaire was included both school and student 'ability factors: type of high school (private or governmental), total high school score, Tahseel, and Achievement scores). Third part of questionnaire dealt mainly with student profile based on his/her opinion about university environment such as: the most difficult subjects, academic advice, understand from the instructors, long course contents, sharing in university activities, availability of university book, etc.). The questionnaire was distributed to students after having their verbal consent to contribute in the research. Data was collected at the beginning of the second semester, during the period of February to May 2012, within the Building of Faculty of Applied Medical sciences, Taif University.

Statistical Analysis:

All data of the questionnaire were coded and transformed into specially designed form to be suitable for computer entry process. SPSS (statistical package for social science) program version 16 for windows was used for data entry and data analysis. Summaries and descriptive statistics were generated and data was further statistically analyzed according to the objectives of the study. Appropriate statistical tests were used according to the type of data. Chi square test was used as a test of significant for qualitative data, however, if any cell in the table was had an expected value less than 5, Fisher exact test was used. Student t test and F test were used for the quantitative data. *P* values less than 0.05 was considered significant.

Academic performance was measured in this analysis by the grade point average (GPA) of First-Semester of the university year 1432 – 1433 H. (2011 – 2012G.). Students had GPA < 2.4 were consider as low academic performance (LAP), those who had GPA  $\geq 2.4 - 4$  were considered high academic performance (HAP).

Standard regression analysis was performed to see whether student's socioeconomic, and school and student's ability variables were predictive of academic performance after completing first semester in university. In addition, stepwise regression analysis was done to see which socioeconomic, student's ability or school variables better predict academic performance of university students.

## 3. Results:

Prevalence of LAP among preparatory year students, Health Colleges:

The majority of students who entered preparatory year, in Health Colleges, were in their first year of

university in 1432-1433 H(2011-2012G.), and in their final year of high school in 1431-1432 H (2010-2011G.). Students who transferred from other universities were excluded. In addition, questionnaires with missing values of variables (especially GPA of first semester, 1432-1433H ) were omitted. This left 429 students in the sample used in the statistical analyses, covering 83.3 percent of all first year (515 students) at Health colleges, Taif University.

Table 1 and Fig.1 showed that 134 students had low academic performance out of 429, which

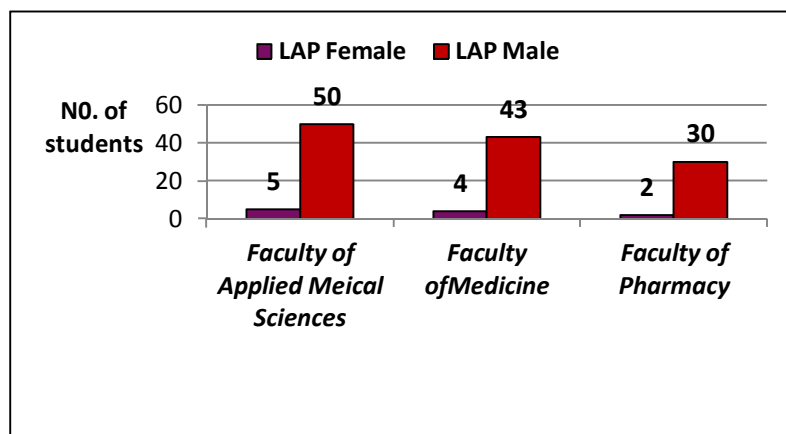
constituted 31.2 percent. Of these, 123 (52.1%) were male (from a total of 236 males students) and 11(6%) were female (from a total of 193 females). The difference was highly significant statistically (  $P=0.000$  ). It was worth noting that, the highest prevalence of LAP was in Faculty of Medicine (47/73 =64.4%) followed by Faculty of Applied Medical Sciences (55/91=60.4%), and the lowest prevalence of LAP was in Faculty of Pharmacy (32/72=44.4%)

**Table 1:** Distribution of students (429 males and female) by their academic performance groups and types of Faculties.

Type of Faculty		Students performance groups							P value of difference	
		Females(N=193)				Males(N=236)				
		LAP (<2.4)	HAP. (2.4 -4)	Total	P 1	LAP (<2.4)	HAP. (2.4 -4)	Total		P 2
Faculty of Applied Med. Sciences	N0.	5	73	78	X <sup>2</sup> test= 0.4, P1 = 0.8 NS	50	41	91	X <sup>2</sup> test=4.7, P2 = 0.09 NS	X <sup>2</sup> =112.2, P = 0.000 High Significant
	%	6.4%	93.6%	100%		54.9%	45.1%	100.0%		
Faculty of Medicine	N0.	4	60	64		43	30	73		
	%	6.3%	93.7%	100%		58.9%	41.1%	100.0%		
Faculty of Pharmacy	N0.	2	49	51		30	42	72		
	%	3.9%	96.1%	100%		41.7%	58.3%	100.0%		
Total	N0.	11	182	193	123	113	236			
	%	5.7%	94.3%	100.0%	52.1%	47.9%	100.0%			

NB1: P 1 & P 2 = Comparison between LAP and HAP students within each gender type among the three different types of Faculties.

NB2: P value of difference = comparison between female and male students academic performance among different three types of Faculties.



**Fig. 1** Students University LAP distributed by type of Faculty and gender.(1432-1433H)

General data of preparatory year students with low academic performance:

This study showed that male to female ratio among LAP students was 11:1(Table1 and Fig.1). Table 2 showed that the mean age of the LAP group was  $19.2 \pm 2.6$  years, the range was 18 – 24 years. Although LAP students were older than HAP, but the difference was not significant statistically ( $p>0.05$ ). 43.3% of LAP were living in rural areas compared

with 15.3% of those students who had HAP and were living in rural area, the difference was highly significant statistically ( $p=0.000$ ). About one third of LAP students had a retired father, 53% of them had a housewife mother, 23.9% of them were ranked in the order of 6<sup>th</sup> and more in his/her family, 1.5% of them were had disintegrated families, and 13.5% of them were coming from high economic family. Factors related to low academic performance

**Table 2:** Socioeconomic data of 429 studied students distributed by their performance groups.

Socioeconomic data		LAP		HAP		Total		P value of difference
		No.	%	No.	%	No.	%	
Age (years)	X ± SD	19.2±2.6		18.9±1.9				P=0.3 NS
Range		18 – 24		18 – 22				
Gender:	Male	123	91.8%	113	38.3%	236	55%	P=0.000
	Female	11	8.2%	182	61.7%	193	45%	
Residence:	Rural	58	43.3%	45	15.3%	103	24%	P=0.000
	Urban	72	53.7%	247	83.5%	319	74.4%	
	Migration& others	4	3%	3	1.2%	7	1.6%	
<b>Father occupation:</b>								
	Military	29	21.6%	73	24.7%	102	23.8%	P=0.93 NS
	Teacher	23	17.2%	36	12.2%	59	13.8%	
	Retired	44	32.8%	83	28.1%	127	29.6%	
	Health Profession	7	5.2%	45	15.3%	52	12.1%	
	Others*	18	13.4	40	13.6%	58	13.5%	
	No answer	13	9.8	18	6.1%	31	4.2%	
<b>Mother's occupation:</b>								
	Teacher	16	11.9%	66	22.4%	82	19.1%	P=0.001 sig.
	Housewife	71	53%	190	64.4%	261	60.8%	
	Others**	14	10.4%	9	3.1%	23	5.4%	
	No answer	33	24.7%	30	10.1%	63	14.7%	
<b>Order of student in his/her family:</b>								
	1 <sup>st</sup> – 5 <sup>th</sup>	102	76.1%	234	79.3%	336	78.3%	P=0.45 NS
	6 <sup>th</sup> and more	32	23.9%	61	20.7%	93	21.7%	
<b>Family situation:</b>								
	Stable &Normal	132	98.5%	294	99.7%	426	99.3%	P=0.2 NS
	Disintegrated family	2	1.5%	1	0.3%	3	0.7%	
<b>Family economy :</b>								
	Normal	57	42.5%	85	28.8%	142	33.1%	P=0.09 NS
	Moderate	59	44%	180	61%	239	55.7%	
	High	18	13.5%	30	10.2%	48	11.2%	
	Total	134	100%	295	100 %	429	100 %	

\*Others (in father occupation) = Engineers, Religious, Business man, Social workers, Dead.

Others\*\* ( in mother occupation) = Employee, Business woman, Retired, Dead.

Table 2 highlighted that gender, residence, and mother occupation were significantly associated with academic performance of students. On the other hand, age of students, father occupation, order of

student in his/her family, family situation, and family economic status were not associated with academic performance ( $p > 0.05$  for each).

**Table 3:** Student's ability and School factors: high school performance, achievement, capacities mean scores, and type of high school versus university performance among studied sample.

Student's ability & School factors	LAP (N=134)	HAP (N=295)	P value of diff.
	X ±SD	X ± SD	
Score of high school	93.6± 12.2	95.9±10.7	0.04
Achievement mean score	74.5±8.5	75.8±8.4	0.2 NS
Capacities mean score	69.9±8.2	73.9±10.6	0.000
Type of high school:			0.04 Sig.
Private (%)	26.7%	19.9%	
Governmental (%)	73.3%	80.1%	

Table 3 highlighted that there was significant association between score of high school, capacity mean score, and type of high school and the performance of students at the University ( $p < 0.05$  for

each). However, the picture is different in achievement rate, although HAP students had higher mean score, however, the difference was not significant statistically ( $P = 0.2$ ).

**Table 4:** Model summary of regression analysis for selected variables predicting GPA after first semester in university. (N= 429)

Dependent variable	Predictors	R	R2	Adjusted R2	SE of estimate	F	P
GPA	Gender(code 1= male, 2=female), type of secondary school (code1=private, & 2=government), Type of College(1=Medicine,2=Applied Medical Sciences,3 = Pharmacy),and secondary school score.	0.529	0.28	0.273	0.757	39.2	0.000

In Table 4, model summary of regression analysis revealed that gender, type of secondary schools, type of college, and secondary school's score, were significant predictors of GPA ( $R = .529$ ) and the model explained 28 % variance in GPA ( $R^2 = .28$ ,  $F(4, 425) = 39.2$ ,  $p < .000$ ). On the other hand, age, residence, mother occupation, capacity exam. score, Tahseel score, family income, were all not significantly predictive.

$$GPA = 0.046 + .883 \times \text{Gender} + .278 \times \text{type of secondary school} + 0.099 \times \text{type of college} + .007 \times \text{rate of secondary school.}$$

**Table 5a:** Stepwise Regression for Relative Effect of gender, secondary school type, college type, and score of high school variables in Predicting GPA after First Semester in University. (N = 429)

**Table 5b:** Coefficients of Stepwise Regression for Relative Effect of gender, secondary school type, college type, and score of high school variables in Predicting GPA after First Semester in University. (N = 429)

Model	R	R Square	Adjusted R Square	SE of estimate	R Square Change	Sig. F Change
1	.496 a	.246	.244	.77241	.246	.000
2	.513 b	.263	.260	.76435	.017	.002
3	.522 c	.272	.267	.76061	.009	.026
4	.529 d	.280	.273	.75729	.008	.034

a. Predictors: (Constant), Gender, b. Predictors: (Constant), Gender, Type of Secondary school, c. Predictors: (Constant), Gender, Type of Secondary school, Type of Faculty, d. Predictors: (Constant), Gender, Type of Secondary school, Type of Faculty, Rate of high school.

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error..	Beta		
1 Constant)	1.401	.117		11.960	.000
Gender	.888	.077	.496	11.487	.000
2 Constant)	.877	.205		4.275	.000
Gender	.904	.077	.505	11.793	.000
Type of Secondary school	.280	.090	.133	3.096	.002
3 Constant)	.674	.223		3.016	.003
Gender	.909	.076	.508	11.916	.000
Type of Secondary school	.278	.090	.131	3.087	.002
Type of Faculty	.104	.047	.095	2.232	.026
4 Constant)	.046	.369		.125	.901
Gender	.883	.077	.493	11.460	.000
Type of Secondary school	.278	.090	.132	3.105	.002
Type of Faculty	.099	.046	.091	2.137	.033
Rate of high school	.007	.003	.092	2.132	.034

a. Dependent Variable: First Semester score - 1432 1433H

Table 5 a and b highlighted the stepwise regression which was run to see which of the four variables (gender, type of secondary school, college type, or secondary school score ) better predict academic performance of university students. The most predictive variable was gender that entered in the first step and accounted for 24.6% variance in GPA ( $R^2 = .246$ ). Type of secondary school entered in the second step adding another 26.3 % to the variance ( $R^2 = .263$ ). In the third step, college type added 27.2 % to the variance ( $R^2 = 0.272$ ). In the fourth step score of high school added 28% to the variance ( $R^2 = .28$ ). On the other hand, age of student, residence, mother occupation, and Tahseel score did not enter the equation, thus, the regression equation predicting GPA of a preparatory year university student is:

The significant statistically variables in our model were gender, with female student more likely than males to show high academic performance; type of secondary school, with students coming from

government secondary schools more likely than students from private secondary schools to have high academic performance in university; type of admitted college, with students admitted to Faculty of Medicine less likely than students admitted to other colleges to have HAP; and secondary school score

with students had high secondary school score are more likely than students with low secondary school score to show high academic performance in college. Factors related to student profile based on his/her opinion about university environment:

**Table 6:** Attitude of students towards admission to faculty distributed by their performance groups

Attitude towards admission to Faculties	Academic performance students groups		Total NO. %	P value of diff.
	LAP ( $< 2.4$ ) NO. %	HAP ( $2.4 - 4$ ) NO. %		
Self desire	77 57.5%	207 70.2%	284 66.2%	P=0.01 Sig.
High school rate	42 31.3%	78 26.4%	120 28%	
Family desire	11 8.2%	5 1.7%	16 3.7%	
Affected by other's desire	4 3%	5 1.7%	9 2.1%	
Total	134 100%	295 100%	429 100%	

Table (6) showed that the majority of students were admitted to their Faculties according to their self desire (66.2%). HAP students showed higher significant percentage (70.2%) than LAP 57.5%) ( $p=0.01$ ). Approximately, one tenth (8.2%)

LAP students were admitted to their colleges according to their families' desire, compared to only 1.7% among HAP students. Few students are not affected by other's desire only 2.1%.

**Table 7:** Students opinion about subjects difficulties in university, distributed by their performance groups.

Students opinion about subjects difficulties in university	Academic performance students groups		Total NO. %	P
	LAP ( $< 2.4$ ) NO. %	HAP ( $2.4 - 4$ ) NO. %		
Yes, there are difficult subjects	103 76.9%	204 69.2%	307 71.6%	P=0.03 Sig.
No, there are not difficult subjects	31 23.1 %	91 30.8%	122 28.4%	
If yes, what are the difficult subjects :				
English Language	19 18.4%	39 19.1%	58 18.9%	P=0.8 NS
Medical biology	42 40.8%	58 28.4%	100 32.6%	
Medical physics	4 3.9%	27 13.2%	31 10%	
Biological technology	2 1.9%	8 3.9%	10 3.3%	
Any combined types of difficult subjects*	12 11.7%	34 16.7%	46 15%	
Did not answer this question	24 23.33%	38 18.7%	62 20.2%	
Subtotal	103 100%	204 100%	307 100 %	
Total	134 100%	295 100%	429 100%	

Table 7 demonstrated that majority of students mentioned that there are subjects difficulties in University (71.6%). Medical biology and English Language were the highest percentages in these difficulties (32.6% and 18.9% respectively).

Although LAP students suffer from medical biology subject more than HAP students (40.8% Vr 28.4%), however, the difference between LAP and HAP students regarding different difficult subjects was not significant statistically ( $p=0.8$ ).

**Table 8:** Students opinion about some University environmental causes of low academic performance, distributed by their performance groups.

Students opinion about some University environmental causes of LAP	Academic performance students groups		Total (n=429) NO. %	P
	LAP(n=134) ( < 2.4 ) NO. %	HAP(n=295) ( 2.4 – 4 ) NO. %		
Long course contents:				
Yes,	75 56%	157 53.2%	232 54.1%	P=0.6 NS
Encourage universal book for all subjects:				
No	111 82.8%	237 80.3%	348 81.1%	P=0.5 NS
Is unavailable book for some subjects, an obstacle?				
No	68 50.7%	171 58%	239 55.7%	P=0.1 NS
Understand from instructors.				
No	83 61.9%	159 53.9%	242 56.4%	P=0.1 NS
Is University exams suitable for students?				
Yes	88 65.7%	221 74.9%	309 72%	P=0.04Sig
No	46 34.3%	74 25.1%	120 28%	
Participation in any university activities				
Yes	26 19.4%	29 9.8%	55 12.8%	P=0.006 Sig
No	108 80.6%	266 90.2%	374 87.2%	

Table 8 highlighted that more than half of students agreed that courses content for all subjects were long ( 54.1%). 81.1% of students mentioned that there is no need for a universal book for all subjects. More than half (55.7%) of students mentioned that unavailable book for some subjects was not an obstacle. 56.4% of students mentioned that they were not understood from the instructors. Majority of students agree that university exam was suitable for them (72%). However, higher significant percentage of LAP, than HAP students, mentioned that the university exams were not suitable for them (34.3% Vr 25.1%) ( $p=0.04$ ). LAP were nearly double percentage higher than HAP students (19.4% Vr 9.8%) in participating in university activities. The difference was significant statistically ( $p=0.006$ ).

#### 4. Discussion:

This study highlighted the strikingly unexpected high prevalence of low academic performance among preparatory year students in Health Colleges, (31.2 percent) in first semester, 1432-1433H, comparing with other studies done in different Universities. (Pinyopornpanish, et al, 2004; Elisapeta, and Edna 2012 ; and Nasir, 2012). The situation is more worth, if we stratify this result by gender: 52.1% of male students were LAP compared to only 6% of female students. The difference was highly significant ( $p=0.000$ ). Even more strikingly, among male students, approximately, two thirds of male students in Faculty of Medicine were LAP (failed). The picture is similar in Faculty of Applied Medical Sciences (54.9%), and the lowest

percentage of male students LAP was in Faculty of Pharmacy (41.7%). However, the difference was not significant statistically ( $p>0.05$ ). Our result was consistent with and confirm the findings of the studies conducted by Deepak *et al.*, 2011; and Cole and Espinoza, 2008 that indicated better performance of female students in the first year of college than that of the male students. It was also similar to the study of Nasir, 2012 in Pakistan, who reported that female students tend to perform better at the university examinations than their male counterparts. The difference in the academic performance of male and female students may be attributed to their motivation for academic success (Rusillo and Arias, 2004). In addition, in our study approximately one third (28.6%) of female students were having teacher mothers compared to about one tenth (12.1%) among male students. Teacher mothers are educated mothers who of course encourage and support their children in educational issues. However, this result was contradicted with the study done in Bagladesh by Hijazi and Naqvi, 2006 who reported that there is no role of gender on academic performance among university students. This contradictory could be explained by the fact that the study done in Bagladesh was in Private colleges, but current study was in Public colleges.

The results of this study revealed that increase in age did not bring improvement in academic performance. These results were contradicted to the study of Keith *et al.*, 2006 who found positive relationship between age and academic performance.

The results of this study revealed that some socioeconomic characteristics (such as residence in urban areas, and the working of mothers as teachers) significantly associated with higher academic performance of university students. These results are in line with the study of Tuttle, 2004 who found that scores of students from urban areas were better than the students from rural areas. The students of urban areas usually have better academic facilities than the students of rural areas. In addition, they do not wasting time in transportations from far places from the university. The students with better educated and working mother as a teacher can facilitate and improve their children's academic performance by involving in their educational interests and by providing them help and support in educational issues. (Nasir, 2012). However, these results were contradicted with the study of Acharya and Joshi, 2009, who concluded that parents' education and household income are moderate to strong predictors of academic achievement. This controversy can be explained by different samples selections and members, culture, social norms, and habits of different populations.

In this study, the stepwise regression analysis model was composed from four independent significant predictors : gender (being female), type of secondary school (governmental ), type of college ( Medicine College), and high secondary school score ). The model was found to be significantly predictive for academic performance of students in preparatory year, explaining 28% variance in GPA of university students. The R square value is .28, that proves that student performance is the product of many socio economic and other factors, as four of the variables together can explain 28% of the performance of student; rest of 72% is explained by other factors not mentioned in our regression model.

The current study is unique in that it was not based only on administrative data, but it included also a student's perception toward some of the university environment factors which academic experts believe that they influence academic performance of university students at preparatory year. These university environmental factors include : (1) Method of choosing the admitted college ; (2) courses difficulty; (3) course content; (4) university book; (5) understanding from instructors; (6) suitability of university exam.; and (7) participation in university activities.

Additional results revealed some important findings that could be considered while preparing academic curricula and may help to enhance classroom teaching in Health colleges. The results of this study showed that four out of the previous seven factors were associated significantly with students'

academic performance. Method of choosing the admitted college; courses difficulty; suitability of university exam.; and participating in university extracurricular activities. Majority of students were admitted to their Faculties according to their self desire (66.2%). Approximately, one tenth (8.2%) LAP students were admitted to their colleges according to their families' desire, compared to only 1.7% among HAP students. This result may demonstrate often a negative student reaction and perception toward his admitted college, and consequently, reluctance in studying faculty courses.

More than three quarters of LAP students mentioned that there are subjects difficulties in University (76.9%), compared with 69.2% among HAP. The difference was significant statistically ( $p=0.03$ ). Medical biology and English Language were the highest percentages in these difficulties (32.6% and 18.9% respectively). This result reflected clearly the English language barrier among students. Obanya, 2004, reported that Language has been found to be a powerful element of quality of education. Furthermore, the language of instruction, especially if not the learners' first language, tends to have unlimited power to bring down performance even on other subjects. (Radimo et al, 2008)

Higher percentage of LAP, than HAP students, mentioned that the university exams were not suitable for them (34.3% Vr 25.1%). The difference was significant ( $p=0.04$ ).

Majority of students did not participate in any activities in their faculties ( 87.2%). However, LAP were nearly double percentage higher than HAP students (19.4% vr 9.8%) in participating in university extracurricular activities. The difference was significant statistically ( $p=0.006$ ). University activities included were: participating in general meetings, scientific meetings, and National day. Pinyopornpanish *et al.*, 2004 demonstrated that one actor that contributed to poor academic achievement was excessive extracurricular activities that left the student no time for their studies.

#### 4. Conclusions:

To conclude, the outcomes and findings from this research have provided important data on prevalence of LAP (31.2%), as well as factors affecting student performance in preparatory year, Health colleges, Taif University. The results have indicated that gender (female), type of secondary school (governmental), type of admitted college (other colleges than medicine), and score of secondary school (high) are keys predictors of high performance in preparatory year, Health colleges. In addition, from the students point of view, other four factors were associated significantly with students' academic



performance. Method of choosing the admitted college ; courses difficulty; suitability of university exam.; and participating in university extracurricular activities. On the other hand, the following factors were not significantly associated with academic performance of students: long courses content; available universal book for all subjects; unavailable book for some subjects; and understood from the instructors.

The identification of these key predictors is important to educators since it is hoped that it will add more enhanced information in the research to improve the learning environment for the students at Health colleges, Taif University.

#### **Limitation of study:**

Our outcomes are very short-term (grades at the end of the first semester of preparatory year) rather than longer-term indicators like final grades.

Student reported GPA used in this study, could limit the findings and may be a factor for the statistically insignificant results.

#### **Recommendations:**

Obviously additional research is required in the same scope of research of this study, and other areas. While four of significant variables together can explain 28% of the academic performance of students; rest of 72% is unexplained, suggesting other factors, not mentioned in our regression model, also play critical roles in explaining differences in students performance.

On the critical issue of gender, the educationists, leaders, and higher education managements, should respond and face the problem of male academic underperformance and give it a priority. This prioritization needs to recognize not only the importance of male academic performance to overall performance of universities, but the significant correlation between male academic performance and economic growth.

It is recommended that university policy makers should try to create awareness in parents about the importance of the family background on academic performance motivation.

Higher education managements can use results in this study, as a basis for organizing seminars or counseling sessions for students experiencing problems in their academics.

Faculty members (instructors) should try to avoid providing excessive amount of material for each course as well as test students more on concepts rather than emphasize rote memorization.

Parents are urged to provide adequate resources and the needed encouragement for the students.

High-school students in the sciences track, intending to later enroll in one of Health colleges degree, do not seem to get enough English training and therefore struggle in the preparatory year subjects. This may explain the high dropout rate ( 31.2%) at the early stages of this degree. A possible solution to this problem could be to offer extensive remedial English courses, before admission to Health colleges.

A database of preparatory year students must be developed to find the students at risk.

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