



1: Assistant Professor. Department of Physiology. Jinnah Medical & Dental College. Karachi.

*=corresponding author
alinaatif75@yahoo.com.

Relationship of age and family factors with academic performance outcome of students getting higher education.

Alina Atif^{1,*}

Abstract:

Introduction: Acquiring higher education has changed its dynamics since the beginning of this century. Covid-19 has added its transformation of remote learning, another dimension of distance learning. At this stage a number of factors seem to be responsible for continued higher education minimizing the chances of drop outs. At the same time several factors have their impact on performance outcome. In this study we have tried to find the impact of these factors on performance outcome of the students getting higher education.

Objectives: To assess the relationship of age and family factors on academic performance output of students getting higher education.

Methodology: This cross-sectional study was conducted between January 4 – April 2, 2021. During this period 216 students; of either gender; getting higher education in institutes recognized by higher education commission were selected through cluster sampling. Students were approached through personal contact, email or WhatsApp.

Results: The study shows that gender, age and income status have a positive association with CGPA while degree enrolled in, source of income, marital status and no of children shows a negative relationship with CGPA. Results also shows that age, degree enrolled in, marital status and income have significant relationship ($p < 0.05$) with CGPA; while gender, no of children, and source of income have insignificant association ($p > 0.05$)

Conclusion: Gender, Age and Income Status have a positive association with good CGPA

Keywords: Academic performance, Higher Education, HEC recognized institutes

Introduction:

According to Merriam Webster dictionary, education beyond the secondary level especially education provided by a college or university is called higher education. Degrees like bachelors, masters, Phil, PhD or any undergraduate and above professional programs are all included in higher education. The prime purpose of getting a higher education is to proceed with a career that inspires the individuals. Many times, the career associated interest motivates the person to get higher

education.¹ Higher education offers economic prosperity to an individual leading to job and life satisfaction or for other advanced opportunities.²

Pakistan is among those countries that have a low outcome of higher education. According to the statistics, every year Pakistan produces 445,000 university graduates and 80,000 computer science graduates.³ The studies reported that two decades before male percentage as university graduates was higher as compared to females, however in recent years female uni-

versity graduates increased by 15%.⁴ Males believe that friendships and networking have a prime role in life changes. Furthermore, the defective examination system hurts both males and females.⁵ Therefore, there is a gender disparity in the enrollment and outcome of higher education in Pakistan.

The main benefit of education is its economic prosperity. It also increases awareness and understanding; enable to solve challenges and increases self-respect of the individual leading to a positive change in attitude and behavior. In many countries of the world, obtaining higher education is independent of age, while depends on the logic regarding want to obtain a degree or high-level education.⁶

In Pakistan, this is generally noticed that education is relatively dependent on age, particularly when willing to obtain higher education from government universities. The gap in education for whatsoever reasons reduces the admission opportunity despite providing valid/genuine reason of the gap. While in case of private universities, at the time of admission, age of the candidate is of least concern.⁷ Career growth in employment is dependent on the level of higher education instead of skills and experience.⁸

Generally older people outperform in course comparing to younger mates. The reason can be the level of interest in that particular subject as well as the cognitive outcomes.⁹ Voyles et al found that there is relationship between age of students and their academic success. The score of mathematics was higher for older students irrespective of the gender of the student.¹⁰ In another study the authors found that there is a significant relationship between age of the student and their academic performance.¹¹ In a study from China, authors found that family factors affect the academic performance of students in terms of grades and scores. Parental support was found to be an important factor.¹² Depending on the socioeconomic status of the individual, a sizeable percentage of adult males are funding their higher education to enhance their professional growth.¹³ Published literature showed association of different family factors and education; family factors not only affect academic performance of students in terms of grades and scores but also make person valuable for the society.^{14, 15}

It has been found that in school education, younger students face more challenges than older students. However, this situation is reversed in higher education. The

reason can be brain rhythm maturation without giving a gap in education along with the level of remembering the previous experiences. Additionally, level of responsibilities with social pressures on the students influence variability in learning eventually influencing the academic results of the students in higher education.¹⁶ This problem is more common with a male community who pursue higher education in evening programs through self-funding. Such difficulties are found less in the adult female students, may be since most of them do not share the family burden.¹⁷

Literature Review:

Higher Education Commission (HEC) responsible for higher education in Pakistan has been decentralized and authority delegated to the provincial governments.¹⁸

Higher education is considered a capital investment for the economic and social development of oneself and the country. It serves as a tool for empowerment. It is due to higher education that a parallel women work force is emerging¹⁹ whose performance in view of their age and familial factors are also turning in their favor. Furthermore, the flow of education enables the individual to maintain the knowledge as a remembrance. In Pakistan, book reading or upgrading of knowledge is scarcely prevalent. Advance knowledge is facilitated through higher education. It is found that the employed workforce is turning more towards upgradation of their knowledge and qualification.²⁰ The outcome of their performance in terms of grade is related to time available for the study. Sometime students study only just to pass the exam and get the degree. This mostly happens due to non-availability of time for study and a lack of intention for knowledge enrichment. This condition eventually influences academic performance.²¹

In Pakistan, financial support for higher education is almost nil. This increases the stress among students to complete education on time while managing their familial responsibilities. The cognitive stress thus created affects the academic performance outcome.²²

Familial factors are major reasons for performance outcome of students. The low income, high unemployment rate, financial burden of the family are few to talk about.²³ For female students such problems are aggravated due to their marriage and number of children. The age gap, responsibilities, less previous knowledge, and other challenges result in variation in academic results.

²⁴ Drop out and resumption after some times are also

reported. This indeed play a role in the performance outcome. Under such situation the mindset and the priorities are changed affecting the grades.²⁵ In our culture in lower and lower middle-class families, brothers share the family burden with their father. This also include the marriage of their sisters which involve quite good amount of money. These kinds of stress further affect the students' academic performance and resultant outcome.^{26,27} In many cases relative age gap of the classmates may not directly affect the performance outcome, other factors may contribute in this regard.²⁸

Objective:

To assess the relationship of age and family factors on academic performance output of students getting higher education.

Methodology:

This cross sectional study was conducted for a period of three months from January 4 – April 2, 2021. Regular students of HEC (Higher Education Commission) recognized higher education centers; these includes public, semi-private and private universities and institutes. Regular students were selected through cluster sampling, while private students were excluded. Selected students were contacted through personal contact, email or WhatsApp.

Results:

Results shows that demographic factors shows high variance in the CGPA of the students.

Demographic profile is shown in table. While o analyze coefficient of different independent variables with respect to Cumulative Grade Point Average (CGPA) regression analysis was performed. The independent variable includes gender, age, degree enrolled in, source of income, overall income status, marital and children status. Gender and age distribution is shown in table no 1.

Table No 1: Gender distribution

GENDER		
	Frequency	Percent
MALE	156	72.2
FEMALE	60	27.8
Total	216	100

Table No 2: Age, Marital status, Income status and source of income distribution

AGE (YEARS)		
LESS THAN 20	11	5.1%
20-29	67	31%
30-39	94	43.5%
40-49	28	13%
50 AND ABOVE	16	7.4%
Total	216	100%
MARITAL STATUS		
UMARRIED	47	21.8%
MARRIED	151	69.9%
DIVORCED / SEPARATED	18	8.3%
Total	216	100%
INCOME STATUS		
FATHER SUPPORTS	11	5.1%
<50,000	106	49.1%
RS. 50000 - 99000	63	29.2%
RS. 100000-149000	21	9.7%
RS.150000 - 199000	9	4.2%
RS.200000-249000	6	2.8%
Total	216	100%
SOURCE OF INCOME		
NO PERSONAL INCOME	11	5.1%
PART TIME JOB	29	13.4%
FULL TIME JOB	154	71.3%
SELF EMPLOYED	22	10.2%
Total	216	100%

Table No 3: Showing no of Children

NO OF CHILDREN		
	Frequency	Percent
NONE	67	31
2 OR LESS	118	54.6
3 TO 4	31	14.4
Total	216	100

The degree enrolled in and Cumulative Grade Point Average (CGPA) is shown in table no 4

Table No 4: Showing Degree enrolled in and CGPA

DEGREE ENROLLED IN		
	Frequency	Percent
MA/MSC/MCOM	16	7.4
MBA	132	61.1
ACCA /ICMA	45	20.8
CA	7	3.2
M.PHIL	11	5.1
PHD	5	2.3
Total	216	100
CGPA (OUT OF 4)		
	Frequency	Percent
LESS THAN 2.5	11	5.1
2.5-2.99	74	34.3
3-3.49	97	44.9
3.50 and Above	34	15.7
Total	216	100

To identify relationship between predictor and independent, Regression analysis was performed and results are shown in table no 5 while coefficient of different variables is shown in table no 6.

Table No 5: REGRESSION ANALYSIS: MODEL SUMMARY				
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.899 ^a	0.808	0.801	0.33633	0.443
Predictors: (Constant), NO OF CHILDREN , GENDER , MARITAL STATUS , SOURCE OF INCOME , AGE, DEGREE ENROLLED IN , INCOME STATUS				
b. Dependent Variable: CGPA (OUT OF 4)				

Model Summary: The values of R (.899), R² (.808) and adjusted R² (.801) show the strength of the data. It shows that the predictor variables support the dependent variable up to 89.9%, 80.8%, 80.1% respectively. The Durbin Watson value (0.443) indicates that there is a strong positive relationship between the predictor (independent) variables and dependent variable. Sig. (P) value 0.00 shows that model is good fit. Model of good fit means that dependent and independent variables have a relationship.

Table No 6: REGRESSION ANALYSIS: COEFFICIENTS							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper
(Constant)	1.158	0.19		6.107	0	0.784	1.532
GENDER	0.175	0.119	0.104	1.471	0.143	-0.06	0.411
AGE	0.681	0.058	0.868	11.648	0	0.565	0.796
DEGREE ENROLLED IN	-0.227	0.072	-0.308	-3.165	0.002	-0.369	-0.086
SOURCE OF INCOME	-0.002	0.064	-0.001	-0.025	0.98	-0.127	0.124
INCOME STATUS	0.146	0.071	0.204	2.068	0.04	0.007	0.286
MARITAL STATUS	-0.186	0.06	-0.132	-3.114	0.002	-0.304	-0.068
NO OF CHILDREN	-0.036	0.053	-0.031	-0.676	0.5	-0.14	0.069
Dependent Variable: CGPA (OUT OF 4)							

Model Equation: CGPA (out of 4) = C + C1 (Gender) + C2 (Age) - 0.002 (Degree Enrolled In) + C4 (Source of Income) + C5 (Income Status) + C6 (Marital Status) + C7 (No of Children) + e
 CGPA (out of 4) = 1.158 + 0.175 (Gender) + 0.681 (Age) - 0.227 (Degree Enrolled In) - 0.002 (Source of Income) + 0.146 (Income Status) - 0.186 (Marital Status) - 0.036 (No of Children). The model results show that the constant value 1.158 represent that if we keep all independent variables constant then CGPA will increase by 1.158 GPA time of the respondents. Beta value of Gender, Age and Income Status shows that there is a positive association with CGPA while Degree Enrolled In, Source of Income, Marital status and No of children shows a negative relationship with CGPA. Results also shows that Age, Degree Enrolled In, Marital status and Income have significant relationship with CGPA as sig. values less than 0.05 while Gender, No of children, and source of income have non-significant association as sig. value greater than 0.05. Results shows demographic factors explain high variance in the CGPA of the students.

Discussion:

According to our finding age has a positive influence on academic performance. This finding supports the finding of some other authors as well [11]. However, the level of motivation is not directly related to age. Income have significant relationship with good CGPA. However Gobena [29] is of the opinion that the relationship between family income and academic achievement is not statistically significant. Our findings show that marital status has a negative influence on academic performance. Some authors [30] are of the opinion that marital status does not affect the academic performance of adult male students. However, they added that a high level of satisfaction in married life does affect academic performance positively. The authors also found that number of children does affect the academic achievements of the students negatively [30]. Some other authors [31] reported that marital status has a negative effect on CGPA of adult students gaining higher education. Another study [32] found that marital status has a positive influence on students' academic achievements.

Conclusion:

The study shows that Gender, Age and Income Status have a positive association with good CGPA. Degree Enrolled In, Source of Income, Marital status and No of children shows a negative relationship with good CGPA. Results also shows that Age, Degree Enrolled In, Marital status and Income have significant relationship with good CGPA as sig. (P) value is less than 0.05 while Gender, No of children, and source of income have non significant association with good CGPA as the sig. (P) value is greater than 0.05.

References:

1. Fisher R, Perényi Á, Birdthistle N. The positive relationship between flipped and blended learning and student engagement, performance and satisfaction. *Active Learning in Higher Education*. 2018;1469787418801702.
2. Rehman R, Zafar A, Mohib A, Hussain M, Ali R. Self-reported academic performance in relation to health behaviours among Bahria University students. *JPMA. The Journal of the Pakistan Medical Association*. 2018;68(2):195.
3. Farrukh M, Lee JW, Shahzad IA. Intrapreneurial behavior in higher education institutes of Pakistan. *Journal of Applied Research in Higher Education*. 2019 Apr 8.
4. Junejo I, Memon AK, Mohammad J. Current Practices in Higher Education Institutes Pakistan and Gap Reduction between Industry and Academia: A Systematic Literature Review Approach. *Asian Journal of Contemporary Education*. 2018;2(2):173-81.
5. Saima Murtaza Pandhiani, Dr Sumera Umrani. A Post Structural Inquiry into Female ESL Learners' Gender Identities at a Public University in Pakistan. *Journal of grassroot*. 2019; 53 (1),
6. Ali MS, Jalal H. Higher Education as a Predictor of Employment: The World of Work Perspective. *Bulletin of Education and Research*. 2018 Aug;40(2):79-90.
7. Sabeen Z, Arshad F. Social undermining in academia: experiences and effects. *Journal of Applied Research in Higher Education*. 2019 Oct 14.
8. Hodge B, Wright B, Bennett P. The role of grit in determining engagement and academic outcomes for university students. *Research in Higher Education*. 2018 Jun;59(4):448-60.
9. Iorga M, Dondas C, Zugun-Eloae C. Depressed as freshmen, stressed as seniors: The relationship between depression, perceived stress and academic results among medical students. *Behavioral Sciences*. 2018 Aug;8(8):70.
10. Voyles MJ, Student academic success as related to student age and gender, 2011, A Dissertation Submitted to the Faculty of the University of Tennessee at Chattanooga In Partial Fulfillment of the Requirements for the Doctor of Education Degree in Learning and Leadership.
11. Momanyi JM, Too J and Simiyu C, Effect of Students' Age on Academic Motivation and Academic Performance among High School Students in Kenya, *Asian Journal of Education and e-Learning*; 2015: 03 (05).
12. Mehmood S, Chong L, Hussain M. Females higher education in Pakistan: an analysis of Socio-Economic and cultural challenges. *Advances in Social Sciences Research Journal*. 2018 Jun 27;5(6).
13. Li, Z., Qiu, Z. How does family background affect children's educational achievement? Evidence from Contemporary China. *J. Chin. Sociol.* 5, 13 (2018). <https://doi.org/10.1186/s40711-018-0083-8>
14. Shah SA, Balasingam U, Dhanapal S. Legal Education in Pakistan: An Overview. *IJUM Law Journal*. 2018;26(2):401.
15. Khan H, Jumani NB, Gul N. Implementation of 21st Century Skills in Higher Education of Pakistan. *Global Regional Review*. 2019;4(3):223-33.
16. Khushbakht Suhail. Re-Defining and Re-Designing Public Education in Pakistan: The Case of Critical Thinking. Chapter 16. pp 291-315. "Educational Reform and International Baccalaureate in the Asia-Pacific" IGI Global. Release Date: February, 2021|Copyright: © 2021 |Pages: 414. DOI: 10.4018/978-1-7998-5107-3 ISBN13:

- 9781799851073|ISBN10: 1799851079|EISBN13: 9781799851080|ISBN13 Softcover: 9781799855477
17. Batada IA, Duang-Ek-Anong S, Achwarin NA. Development of Extended Enterprise Resource Planning Module for Higher Education of Pakistan: A Case Study of Higher Education. *International Journal of Simulation--Systems, Science & Technology*. 2020 Jan 1;21(1).
 18. Shehzadi S, Mohamad B, Lynn-Sze JC. Brand Image of Higher Education in Pakistan. In *SMMTC Postgraduate Symposium 2018* 2018 Mar 18 (p. 192).
 19. Haider K, Kerio GA, Kazimi AB. Higher Education in Pakistan and Malaysia: A Comparative Analysis of their Education Policies in the Modern Era of Technology. *Global Educational Studies Review*. 2020;3:103-13
 20. Saqib ZA, Zhang Q, Ou J, Saqib KA, Majeed S, Razzaq A. Education for sustainable development in Pakistani higher education institutions: an exploratory study of students' and teachers' perceptions. *International Journal of Sustainability in Higher Education*. 2020 Aug 31.
 21. Ahmed Z, Asim M, Pellitteri J. Emotional intelligence predicts academic achievement in Pakistani management students. *The International Journal of Management Education*. 2019 Jul 1;17(2):286-93.
 22. Tabassum R, Akhter N. Effect of Demographic Factors on Academic Performance of University Students. *Journal of Research & Reflections in Education (JRRE)*. 2020 Jul 1;14(1).
 23. Sadiku G. Factors that influence the level of the academic performance of the students. *Journal of Social Studies Education Research*. 2019 Sep 23;10(3):17-38.
 24. Alturki S, Hulpuş I, Stuckenschmidt H. Predicting academic outcomes: A survey from 2007 till 2018. *Technology, Knowledge and Learning*. 2020 Sep 28:1-33.
 25. Ejaz B, Muazzam A, Anjum A, Pollock G, Nawaz R. Measuring the scale and scope of social anxiety among students in Pakistani higher education institutions: An alternative social anxiety scale. *Sustainability*. 2020 Jan;12(6):2164.
 26. Torlak NG, Kuzey C. Leadership, job satisfaction and performance links in private education institutes of Pakistan. *International Journal of Productivity and Performance Management*. 2019 Feb 11.
 27. Soomro MA, Siming IA, Shah SH, Rajper MA, Naz S, Channa MA. An Investigation of Anxiety Factors during English Oral Presentation Skills of Engineering Undergraduates in Pakistan. *International Journal of English Linguistics*. 2019;9(3):1
 28. Shoaib M, Hazir U. Female and Male Students' Educational Performance in Tertiary Education in the Punjab Pakistan. *Pakistan journal of Social Issues*. 2019;10:83-100.
 29. Gobena Gemechu Abera, Family Socio-economic Status Effect on Students' Academic Achievement at College of Education and Behavioral Sciences, Haramaya University, Eastern Ethiopia. *Journal of Teacher Education and Educators* Volume 7, Number 3, 2018, 207-222.
 30. Darwish Ehab , Alkhars Abdulwahab Ahmed, Alkhar Fatemah Murtadha, Effects of marriage on the academic performance of undergraduate male students at the King Faisal University. *International Journal of Medicine in Developing Countries*, 2021;5(2):001–005. DOI 10.24911/IJMDC.51-1606463859
 31. Beard, Selena & Langlais, Michael. (2018). Saying "I Do" in College: Examining Marital Status and Academic Performance. *International Journal of Psychological Studies*. 10. 34. 10.5539/ijps.v10n4p34. https://www.researchgate.net/publication/328614223_Saying_I_Do_in_College_Examining_Marital_Status_and_Academic_Performance
 32. Yess James P. The influence of marriage on community college student achievements in specific program of study. *Research in Higher Education*. Vol 14 (2), 1981. <https://www.jstor.org/stable/40195351>