Beyond GPA: Investigating the Relationship between Self-Perceived Academic Performance, Subjective Happiness, and Life Satisfaction among College Students

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Abstract—Considering previous research, self-perceived academic performance is not much focused on. This research gives a new perspective by shedding light on how people, themselves see their performance in academics. Research on academic performance to date has either looked at its correlation with subjective happiness or life satisfaction. This study focuses on self-perceived academic performance from a holistic approach to subjective well-being as it looks at how academic performance, subjective happiness, and life satisfaction are interrelated and whether or not subjective happiness and life satisfaction can affect self-perceived academic performance. It also focuses on whether or not there are significant differences between males and females across all three factors. A purposive sample of 160 college students (80 males and 80 females) completed three scales, the Academic Performance Scale (APS), the Subjective Happiness Scale (SHS), and the Satisfaction with Life Scale (SWLS). There was a strong positive correlation between self-perceived academic performance and life satisfaction and between subjective happiness and life satisfaction. There was a medium positive correlation between self-perceived academic performance and subjective happiness. The study also showed that life satisfaction can significantly predict self-perceived academic performance. No differences were found between males and females across all three variables. The results show that there are significant associations between all three variables. However, when the three variables were compared concerning gender, there were no significant differences.

***Index Terms*—Academic Performance, Subjective Happiness, Life Satisfaction, College Students**

I. INTRODUCTION

Academic performance refers to the achievement and success of students in their educational pursuits [1]. It refers to a student's level of achievement in their studies and is typically measured by grades or test scores [2]. According to Farb and Matjasko (2012), there are a few major factors that add to the definition. They can be Grade Point Average, standardized test scores, and educational aspirations and attainment. It can also be defined by academic attitudes. Academic performance, although well-researched, only has been defined by outcomes like test scores and not by self-perceptions. This research focuses on self-perceived academic performance. It is a dynamic element that changes with time with changes in internal and external variables.

Subjective happiness refers to an individual's personal perception and evaluation of their own happiness levels, providing a direct measure of their well-being and contentment. It is also a crucial aspect of societal capital within societies, indicating the likelihood of success and growth in communities rich in social capital [3]. Objective happiness is more externally measurable and can be influenced by factors such as social status, economic standing, and global indicators of wellbeing, as discussed in different research papers [4] [5]. Therefore, while subjective happiness is more individualistic and internal, objective happiness is often influenced by external factors and societal comparisons.

Life satisfaction is an important aspect of subjective well-being, that represents an individual's cognitive evaluation of their overall quality of life. It is widely associated with health status and social well-being. It is influenced by various factors such as socio-demographic characteristics, physical and mental well-being, social support, and satisfaction in important life domains like family, friends, and career [6].

Research on academic performance to date has focused either on subjective happiness levels or on overall life satisfaction but never on both together. This investigation looks at academic performance as it relates to both, subjective happiness and overall life satisfaction. This study reaches out to address this research gap. The implications of this study can be studied further as academic performance can be studied with various other variables. Two main aspects of subjective well-being are momentary happiness and life satisfaction [7]. There is ongoing research on subjective well-being as it is of growing interest. This study includes both of these aspects and investigates their relationship. This study contributes to the understanding of the relationship between three variables which are, self-perceived academic performance, subjective happiness, and overall life satisfaction.

II. REVIEW OF LITERATURE

Chattu et al (2020) investigated the differences in subjective well-being based on gender, type of school, and academic performance. The study also determines factors such as sociodemographic variables, including students' academic performance that can predict subjective well-being. They used the Satisfaction with Life Scale (SWLS) to measure life satisfaction, the Scale of Positive and Negative Experience (SPANE) consisting of six positive and negative emotions, and the Flourishing Scale (FS) which measured self-perceived success. The study was conducted among medicine, dentistry, and other health professions students. It was found that subjective well-being plays an important role in academic performance with a greater subjective well-being correlating with higher academic performance. Among the areas of subjective well-being, only the Scale of Positive and Negative Experience (SPANE) showed a significant correlation with academic performance, emphasizing and highlighting positive and negative emotions in student success. Based on the type of school and academic performance among students, there were significant differences that were reported in the Satisfaction with Life Scale (SWLS) and Flourishing Scale (FS) [8].

Bortes, C., Ragnarsson, S., Strandh, M. *et al.* (2021) studied the relationship between subjective well-being and academic achievement in adolescents during mid to late adolescence, specifically in the school year 9 (age 15) and school years 11-12 (ages 17-18) in Sweden. The study examined how the two variables of subjective well-being and academic achievement influence each other over time, using data from 723 adolescents, particularly emphasizing on gender differences in these associations. Gender variations were observed, and there were no significant associations found between boys. However, a bidirectional relationship was identified for girls. Higher subjective well-being in girls predicted better academic achievements later, but higher academic achievements led to lower well-being in upper secondary school [9].

Rathakrishnan et al (2022) determined the relationship between academic stress and life satisfaction among university students in Sabah, Malaysia. The sample size was 400 and the data was collected using the Perception of Academic Stress Scale (PAS) and the Satisfaction with Life Scale. The PAS has four subscales which are, performance stress, perception of workload, and examinations, academic self-perception and, time constraints. The results say that performance stress is negatively correlated with life satisfaction, and academic self-perception is positively correlated with life satisfaction. The study also conveys that the perception of workload, and examinations, and time constraints have no relationship with life satisfaction [10].

Perveen, S., Ikram, H., & Nisa, Q. U. (2021) investigated the relationship between life satisfaction, self-esteem, and academic performance of university students. A sample of 575 students was taken from three different public universities in Punjab (Pakistan). They used a scale developed by Rosenberg to measure self-esteem, a scale developed by Gilligan and Huebner to measure life satisfaction, and developed a scale to measure academic performance. Results showed that there is a significant positive relationship between academic performance, self-esteem, and life satisfaction of university students.

Karwetzky, C., Michaelsen, M. M., Werdecker, L., & Esch, T. (2022) examined the relationship between life satisfaction and momentary happiness. They focused on how these variables correlate across people of different ages and interpreted the data in the light of a neurological model of motivation systems. Among other findings, they found that momentary happiness and life satisfaction correlate strongly but the relationship decreases with age [7].

Kaur, J., Singh, T. G., Raghav, V., Arora, S., Chowdhary, M., & Singh, S. (2022) measured the perceived happiness level and life satisfaction levels, two components of subjective well-being in recovered drug addicts. They considered 96 samples of age 19 years and above who were drug-free for a minimum of 2 years. Results showed high levels of happiness and life satisfaction in the recovered drug addicts.

III. NEED FOR STUDY

This research is crucial to understanding the holistic student experience. Usually, grades define a student's academic performance. This study looks at how students feel or perceive their performance and whether or not it affects their overall well-being. It can also be used to optimize educational approaches for well-being. Educational practices can be developed to address cognitive development and emotional well-being. It can also identify risk factors for mental health in case of low levels of subjective well-being.

IV. METHODOLOGY

Aim

To investigate the relationship between self-perceived academic performance, subjective happiness, and overall life satisfaction among college students and to see if there are any gender differences.

Objectives

1. To assess the relationship between self-perceived academic performance and subjective happiness among college students.
2. To investigate the association between college students' self-perceived academic performance and overall life satisfaction.
3. To explore the correlation between subjective happiness and overall life satisfaction among college students.
4. To evaluate the differences in self-perceived academic performance, subjective happiness, and life satisfaction between males and females.

Hypotheses

1. H_0: There is no relationship between self-perceived academic performance and subjective happiness.
2. H_0: There is no relationship between self-perceived academic performance and overall life satisfaction.
3. H_0: There is no relationship between subjective happiness and overall life satisfaction.
4. H_0: There are no significant differences between males and females concerning self-perceived academic performance, subjective happiness, and life satisfaction.

Research Design

This research is a quantitative study with a correlational research design. It mainly investigates the relationship between three variables.

Sample And Sampling Procedure

A sample of 160 college students (80 males and 80 females) aged between 18-25 was taken from Bengaluru. The purposive sampling method was used which is a type of non-probability sampling technique. People who were capable of reading, writing, and understanding English were chosen. Their participation was voluntary.

Tools Used

1. **Demographic Data Sheet:** This sheet was prepared by the researcher to collect the responder's personal data such as name, age, and gender.
2. **Academic Performance Scale (Carson Birchmeier, Emily Grattan, Sarah Hornbacher, and Christopher McGregory):**

Description:

The Academic Performance Scale (APS) is a 5-point Likert scale consisting of 8 items. The scale is regarding study habits, class participation, effort, and problem-solving.

Procedure:

The subjects were asked to read each statement and indicate their preference on a 5-point Likert scale. They could choose one of the following responses: strongly agree, agree, neutral, disagree, strongly disagree.

Scoring:

The 8 items are scored as follows:

5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly Disagree

Scores are calculated by adding points for each response. Higher scores indicate higher academic performance.

Reliability and Validity:

An internal consistency of .89 and a test-retest reliability of .89 were shown for the total score. The Academic Performance Scale promises to be a useful tool for researchers interested in students' performance.

3. **Subjective Happiness Scale (Lyubomirsky, S., and Lepper, H. S.):**

Description:

The Subjective Happiness Scale is a 4-item scale of global happiness. Two items ask respondents to characterize themselves using both absolute ratings and ratings relative to peers. In comparison, the other two items offer brief descriptions of happy and unhappy individuals and ask respondents the extent to which each categorization describes them. The response format is a 7-point Likert scale and has descriptions only for items 1 and 7.

Procedure:

The respondents were asked to read each question and indicate their preference on a scale of 1-7.

Scoring:

The mean is computed across all 4 items. Item #4 is reverse scored.

Reliability and Validity:

It has been discovered that the SHS's excellent internal consistency is consistent across samples. Good to outstanding reliability has been demonstrated by test-retest and self-peer correlations, and construct validation studies of discriminant and convergent validity have validated the use of this scale to assess subjective happiness.

4. **Satisfaction With Life Scale (Diener, E., Emmons, R. A., Larsen, R. J., and Griffin, S.)**

Description:

The Satisfaction with Life Scale is a 5-item scale that measures the global cognitive judgment of a person's life satisfaction. However, it does not measure the positive or negative effects.

Procedure:

The subjects were asked to read each question and indicate their preferences on a 7-point Likert scale. They had to choose one response among strongly agree, agree, slightly agree, neither agree nor disagree, slightly disagree, disagree, and strongly disagree.

Scoring:

The points for each of the responses are summed. The higher the score, the higher is the life satisfaction. The points assigned to each of the responses are given below:

7 - Strongly agree, 6 - Agree, 5 - Slightly agree, 4 - Neither agree nor disagree, 3 - Slightly disagree, 2 - Disagree, 1 - Strongly disagree

Reliability and Validity:

With good test-retest reliability, discriminant validity, convergent validity, and internal consistency, the scale has been translated into thirty different languages. The scale is best used in non-clinical samples.

V. STATISTICAL ANALYSIS

The collected data were analyzed using the Statistical Package for Social Sciences (version 26). Independent sample 't' test, Multiple Regression analysis, and Pearson product-moment correlation analyses were used for the data analysis.

Results

Table 1

Frequencies for the current sample of individuals on each demographic variable (N = 160)

Variable	Frequency	Valid Percentage
Gender		
Male	80	50.00
Female	80	50.00
Education Level		
Undergraduate	139	86.87
Postgraduate	21	13.13

From the table shown above, there were a total of 160 participants, out of which 80 (50%) were males and 80 (50%) were females. Of these 160 participants, 139 (86.87%) were undergraduate students and 21 (13.13%) were postgraduate students.

Table 2

Descriptive Statistics and Correlations for Study Variables

Variable	*n*	*M*	*SD*	*1*	*2*	*3*
1. Academic Performance	160	5.85	1.16	—		
2. Subjective Happiness	160	0.63	.19	.40**	—	
3. Life Satisfaction	160	3.36	.92	.60**	.58**	—

*Note. M=Mean, SD=Standard Deviation, **p < .01.*

A Pearson correlation coefficient was performed to evaluate the relationship between academic performance and subjective happiness, academic performance and life satisfaction, and subjective happiness and life satisfaction. There was a significant positive correlation between academic performance and subjective happiness. R= ([158]) = [.40], p = [<.001].

There was a strong significant positive correlation between academic performance and subjective happiness. R= ([158]) = [.60], p = [<.001] and between subjective happiness and life satisfaction. R= ([158]) = [.58], p = [<.001]. Hence, the first, second, and third null hypotheses were rejected.

Table 3

Multiple Linear Regression Predicting Academic Performance

Variable	*B*	*SE*	*95% CI*	*β*	*p*
Constant	3.19	.23	[2.60, 3.79]	-	<.001
Subjective Happiness	.46	.47	[-.45, 1.38]	.08	.31
Life Satisfaction	.70	.01	[.50, .90]	.56	< .001

Note. R^2 = .37, F (2, 157) = 45.13, p<.001

An analysis of standard residuals was carried out and it showed that the data contained no outliers (*Std. Residual Min* = -2.40, *Std. Residual Max* = 3.14).

Tests to see if the data met the assumptions of collinearity indicated that multicollinearity was not a concern (Subjective Happiness, *Tolerance* = .66, *VIF* = 1.50; Life Satisfaction, *Tolerance* =.66, *VIF* =1.50).

The data met the assumption of independent errors (*Durbin-Watson value* =2.26)

The histogram of standardized residuals showed that the data contained approximately normally distributed errors, as did the normal P-P plot of standardized residuals, which showed points that weren't completely on the line, but close.

The scatterplot of standardized residuals showed that the data met the assumptions of homogeneity of variance and linearity.

A multiple regression was conducted to see if Subjective Happiness and Life Satisfaction levels predicted a college student's self-perceived Academic Performance.

The mean for academic performance (N=160) was 5.85 and the standard deviation was 1.16. For subjective happiness (N=160), the mean was .63 and the standard deviation was .19. And finally for life satisfaction, the mean was 3.36 and the standard deviation was .92.

Using the enter method it was found that subjective happiness and life satisfaction level explain a significant amount of the variance in the academic performance of a student ($F(2, 157) = 45.13$, $p < .05$, $R^2 = .37$, $R^2_{Adjusted} = .36$).

The analysis shows that subjective happiness did not significantly predict the academic performance of the student ($\beta = .08$, $t(159) = 1.00$, *ns*) however, life satisfaction did significantly predict the academic performance of the student ($\beta = .56$, $t(159)=7.12$, $p < .05$).

Table 4

Independent samples t-test results of the variables

Variables	Male		Female		*t*(158)	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*			
Academic Performance	5.93	1.33	5.76	.96	.95	.35	.15
Subjective Happiness	.66	.22	.61	.16	1.66	.09	.26
Life Satisfaction	3.38	1.04	3.35	.80	.20	.85	.03

An independent samples t-test was performed to compare academic performance, subjective happiness, and life satisfaction between males and females.

There was not a significant difference in academic performance between males (M = 5.93, SD = 1.33) and females (M = 5.76, SD = .96); $t(158)$ = .95, p = .35.

There was not a significant difference in subjective happiness between males (M = .66, SD =.22) and females (M = .61, SD = .16); $t(158)$ = 1.66, p = .09.

There was not a significant difference in life satisfaction between males (M = 3.38, SD = 1.04) and females (M = 3.35, SD = .80); $t(158)$ = .20, p = .85.

Therefore, the null hypothesis stating that there are no significant differences between males and females concerning academic performance, subjective happiness, and life satisfaction is accepted.

VI. DISCUSSION

The research objectives were to assess the relationship between self-perceived academic performance and subjective happiness among college students, to investigate the association between college students' self-perceived academic performance and overall life satisfaction, to explore the correlation between subjective happiness and overall life satisfaction among college students, and finally, to evaluate the differences in self-perceived academic performance, subjective happiness, and life satisfaction between males and females.

Table 1 shows the frequencies for the current sample of individuals on each demographic variable (N = 160). The sample consisted of 80 males and 80 females aged 18-25. The students were mainly from Bengaluru and the purposive sampling method was used. There were 139 undergraduate students and 21 postgraduate students in the sample.

Table 2 shows the descriptive statistics and correlations between the study variables. The results show that there is a significant positive relationship between academic performance and subjective happiness, between subjective happiness and life satisfaction, and between academic performance and life satisfaction. This shows that people who are happier and more satisfied with their lives tend to perform better academically. When there are fewer circumstances causing trouble to individuals, they can focus on academics and perform well. Therefore, the first three null hypotheses were rejected.

Table 3 shows the multiple regression analysis results. From these results, we can say that although there is a correlation between academic performance and subjective happiness, subjective happiness does not predict the student's academic performance significantly. However, life satisfaction does. The results also explain 37% of the data. An increase in life satisfaction can also increase academic performance but an increase in subjective happiness may not necessarily do so.

Table 4 shows the independent samples t-test results which indicate that there are no significant differences in academic performance, subjective happiness, and life satisfaction between males and females. Further research on a different population using methodologies can provide explanations for this. Therefore, the fourth null hypothesis was accepted.

The levels of self-perceived academic scores, subjective happiness scores, and life satisfaction scores majorly range from moderate to high in the considered sample.

VII. IMPLICATIONS

Before this study, very little was known about the explanatory contribution of self-perceived academic performance to student well-being. The report says confidence in a student's ability to succeed academically can play an important role in how happy and satisfied they are with life.

The results suggest student success depends on more than grades and includes students' social-emotional health. This means that educational practices should cater to both the cognitive development and emotional wellness of their students.

The positive correlations between the variables suggest that interventions targeting student happiness and quality of life may have benefits as they could raise students' self-perceived academic performance.

VIII. CONCLUSION

There is a significant positive correlation across all the variables i.e. academic performance, subjective happiness, and life satisfaction. Life satisfaction significantly predicts academic performance but subjective happiness doesn't. Additionally, there are no differences between males and females across all three variables.

IX. RECOMMENDATIONS FOR FUTURE RESEARCH

Although no gender differences were found in the present study, examining some other demographic variables (age, ethnicity, or socioeconomic background) may bring out how these factors combine differentially.

A longitudinal study could be conducted examining the same variables, but interchanging the predictor and response variables.

X. LIMITATIONS

i) The study is confined to college students between the age group of 18-25.
ii) Since the sampling method was purposive, no particular culture was considered.
iii) This research was conducted on students of a particular geographical area and excluded students of other regions.
iv) The sample size was limited to 160 samples, of which 60 were males and 60 were females.

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