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Expert Opinion Article

PSYCHO-SOCIAL INFLUENCES OF ADOLESCENCE ON ACADEMIC PERFORMANCE OF FYUG STUDENTS

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Abstract:
In the adolescence of a student rapid change in growth and development occurs in a person and happens to put influence on the psychology and the social behavior of a student. Are there any differences in the academic performances of boys and girls exist and whether the change in psychosocial aspects of a student influence the academic performance of student was studied in this paper. In the study, a questionnaire was prepared for the data collection from among the FYUG students of Swami Vivekananda College, Chandkhira, Assam. For the analysis of the data software tools MS-Excel and SPSS are used. KMO-Barlett test was done to find the correlation between the factors. Factor analysis for the suitability test of the factors was done followed by multiple regression analysis on SPSS and for finding the results in percentage, MS-Excel was used. It was found in the study that the boys and girl students have significant differences in their academic performances. The study also suggests that the psychosocial factors have significant influence on the academic achievement of students. So, by addressing the issues related to the psychosocial aspects, the academic performances of a student can be improved.

Keywords: Psychosocial Behavior, Adolescence, Academic Performance.

Introduction:

The adolescent years, typically spanning from ages 10 to 19, serve as a bridge between childhood and adulthood. It is a time of significant change in cognitive, emotional, and social aspects of a person. While teenagers develop both physically and mentally especially stronger reasoning skills and the capacity for abstract thinking, they also experience heightened emotions and increased sensitivity to family peer and social acceptance. Academic achievement during this period is therefore shaped by more than just cognitive ability. It reflects a complex interaction of physical traits, psychological traits and social phenomena. This article examines the major psycho-social factors that influence academic performance in adolescence.

Understanding Adolescent Development:

Physical Changes:

During this phase of life adults do generally experience major changes in their physicality in terms of their appearances those made them significantly distinct from other gender. This is the age where the child understands more about their physical anatomy and physical attributes as a boy or girl or neutral gender.

Psychological Changes:

Adolescents undergo important psychological developments, including the formation of identity, growth in self-awareness, and improvements in emotional regulation. As cognitive abilities expand, young people become capable of critical thinking and hypothetical reasoning. However, emotional maturity does not always develop at the same pace, which can affect focus, decision-making, and academic engagement.

Social Changes:

At the same time, adolescents begin to rely more on peers and seek independence from parents. According to developmental theories, this stage centers on identity formation, where young people explore who they are and where they belong. Social acceptance becomes highly important, and this need for belonging can strongly influence behavior, attitudes toward school, and academic motivation.
Thus the major psycho-social factors affecting academic performance are: Self-Esteem and Academic Self-Concept, Motivation, Peer Influence, Family Environment, Emotional and Mental Health. Hence, the influence of these factors upon the academic achievement of the students will be studied in this research paper.

Review of the related literature:

Sinha et. al (2020) in their research paper Challenges Of Public Educational Institution Management by the head of the institutions in Assam observed various challenges faced by the head of the institutions of various public educational institution. In their study they used the interview method to collect various data and information related to their study. They found that the head of the institutions sometimes find it tough to manage students, teachers, staffs, public, administration and many other challenges on daily basis.

Sinha et. al (2019) in their study An Evaluation of the Necessity and Significance of Human Values in Higher Education explored that there is a significant neccessity of human values and ethics in higher education. The studied about various aspects of higher education where students become more competetive and due the current demands of academia their human values depletes. So, the study suggests some suitable means to acquire those values especially through the Indian knowledge system.

Sinha et. al (2023) in their study Roadmap for Implementing NEP 2020 in Assam: Addressing Curriculum and Inclusivity Challenges studied about the various challenges and practical implications while implementing NEP 2020 in India. They also provide very suitable implications for the allround devvelopement of the student and the system of education in India.

Sinha S. & Singh A.K. (2024) in their study critical thinking among graduates and post graduates of Barak Valley, Assam studied about the respective population and found that there is no significant difference in the critical thinking of both the parties.

Sinha & Sinha (2023) in their study psychosocial behavior of teachers of public schools in Assam studied about the psychological and social aspects of a teacher and their accountability and also the sense of responsibility towards their job. They found there is a significant lagging of sense of accountability and responsibility among the teachers in the studied area of Assam.

Significance of the Study:

This study is significantly important because of the following reasons:

(i) The study is significant because the adults studied are college students and if the teacher and the administrator understand the issues related to the adolescence and about the students then it would be of great help for both the parties to get benefited and provide the best for the students.

(ii) The study is significant for the policy makers to come forward with suitable policies for the adults for their health, education and all-round development.

(iii) This study is important for families that have adult members with them as this study would make them understand their children and siblings in a better way.

Limitations of the study:

The study is limited to only the psychological aspects of adolescents and the academic achievements of the FYUG students at Swami Vivekananda College, Chandkhira, under Assam University, Silchar, Assam. It is also noted that the said college is in a rural Tea garden area having national border with Tripura at 15 Kms away and international border with Bangladesh at 20 Kms.

Objectives of the study:

(i) To study the difference in the academic achievement among boys and girls of FYUG students.

(ii) To study the influence of adolescents on the academic achievements of the FYUG students.

Hypotheses of the study:

(i) There is no significant difference in the academic achievement among boys and girls of FYUG students.

(ii) There is no significant influence of adolescents on the academic achievements of the FYUG students.

Methodology of the study:

Interview method is used for the data collection of the study. A questionnaire for this purpose is developed for the collection of primary data from the college students. The questionnaire has three aspects: basic information about the students, their thinking on various psychological aspects and their recent academic performances. For administering the questionnaire Google Form is used and given to the students and told them how to fill this up. For the interpretation of the collected data software applications: MS-office and SPSS are used. For the study a questionnaire of total 31 questions are prepared and of these only 9 questions are related to their basic information and 22 are about their adolescent behavior and academic achievement. The data was collected on online mode through Google forms and the data was imported to excel file for data analysis and interpretation. The interpretation of the data was done in percentage method.

Data analysis and interpretation:

The collected data was converted to numerical figures to fit in for analysis. A total of 338 responses were collected from the FYUG students at Swami Vivekananda College, Chandkhira Assam. Out of this

59.6% students are above 20 years, and 40.4% students are below or equal to 20 years. 37.5% students are male and 62.5% are females. In the study 62.8% of students are from 2nd semester, 12.7% are from 4th semester and 23.9% are from 6th semester. All students belong to Arts stream. 51% students are from joint families and 49% are from nuclear families. Fathers studied, 1.5% post graduate or above level, 6.2% graduate level, 16.2% higher secondary level, 25.1% secondary level and 51% primary level. For mothers it is, 0.6% post graduate or above level, 2.4% graduate level, 9.1% higher secondary level, 31.9% secondary level and 56% primary level. Only 2.4% of students secured more than 80% or above in the current academic results, 28% scored between 60-80%, 32.7% between 50-60% and lastly 36.9% below 50% marks.

From the above data it is easily assessable that though the percentage of students of 2nd semester are more than the cumulative percentage of 4th and 6th semester students, the age of the respondent students are more than 20 years are more in numbers i.e. 59.6%. Again, as the studied data is collected from a single college and its location is in rural area, so the students belonging from joint family is slightly more than that of nuclear family i.e. 51%. In education, fathers are ahead of mothers for the post graduate or above level, graduate level and higher secondary level respectively with 0.9%, 3.8% and 16% more percentages. Hence obviously in the primary level mothers are ahead of fathers with 5% more percentage. These figures of education level of mothers clearly indicate that the mothers are lagging behind of fathers in terms of education.

Influence of adolescents on the academic achievements of the FYUG students:

Exploratory factor analysis (EFA) is an often-used multivariate technique of research studies, especially pertaining to social and behavioral science (Eysenck 1969; Cattel 1973). This technique is applicable, when there is a systematic interdependence among the set of observed and latent variables and the research is interrelated in finding out something more fundamental or latent which creates the communality. In the case study psychological aspects of adolescents' effects on the academic achievements of the FYUG students at the Swami Vivekananda College, Chandkhira, under Assam University, Silchar, Assam. The study intendend to highlight the psychological behavior, psychological factors, and social factors of the FYUG students at Swami Vivekananda College.

A total of 338 responses were collected from the FYUG students at Swami Vivekananda College, Chandkhira Assam. Out of this 59.6% of students are above 20 years, and 40.4% students are below or equal to 20 years. 37.5% students are male and 62.5% are females. In the study 62.8% of students are from 2nd semester, 12.7% are from 4th semester and 23.9% are from 6th semester.

In this study, the initial step is to compute a correlation matrix of 22 items of psychological aspects of adolescents' effects on the academic achievements of the FYUG students. In the initial step, the correlation matrix of these items satisfied their significant level, which is greater than 0.000. The second reliability of the factor analysis depends on the size of the sample i.e. not less than 100 individuals per analysis (Gorsuch, 1983). In this study, the sample size is 338.

Table 1: shows the results of "KMO and Bartlett's test". KMO value is more than the recommended value of 0.6 (Kim and Muller, 1978), which determines that the sample is adequate to perform the factor analysis. The significance value is 0.000, which shows that the correlation matrix is not an identity matrix. Hence, the data fulfills the initial diagnostics of the exploratory factor analysis.

Table 1: KMO and Barlett's test of sphericity and Measure of Sampling Adequacy

Table: 1 KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.764
Bartlett's Test of Sphericity	Approx. Chi-Square	1384.731
	Df	231
	Sig.	.000

Sources: Computed from Field Survey

The KMO value obtained was **0.764** and recommended threshold good value for sampling is between 0.70 and 0.79. Thus, there correlations existed between variables and the dataset is suitable for factor analysis.

Table 2: Variance Extracted "Exploratory Factor Analysis" (EFA)

Total Variance Explained			
Factor	Initial Eigenvalues	Extraction Sums of Squared Loadings	Rotation Sums of Squared Loadings

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.018	18.265	18.265	3.411	15.506	15.506	2.658	12.080	12.080
2	2.322	10.556	28.821	1.728	7.854	23.360	1.874	8.518	20.598
3	1.550	7.046	35.867	.938	4.264	27.624	1.145	5.207	25.804
4	1.310	5.953	41.820	.745	3.389	31.013	.790	3.591	29.395
5	1.248	5.673	47.493	.668	3.036	34.049	.747	3.397	32.792
6	1.080	4.910	52.403	.484	2.199	36.248	.705	3.207	35.999
7	1.020	4.635	57.037	.398	1.808	38.056	.453	2.057	38.056
8	.947	4.304	61.342						
9	.906	4.119	65.461						
10	.812	3.693	69.154						
11	.750	3.409	72.562						
12	.741	3.370	75.932						
13	.693	3.149	79.081						
14	.644	2.929	82.010						
15	.588	2.673	84.684						
16	.573	2.604	87.288						
17	.539	2.451	89.739						
18	.532	2.417	92.157						
19	.487	2.216	94.372						
20	.441	2.006	96.379						
21	.418	1.901	98.280						
22	.378	1.720	100.000						
Extraction Method: Principal Axis Factoring.									

Sources: Computed from Field Survey

It is found from Table 2 that seven factors were extracted with eigenvalues greater than one, indicating their statistical significance in explaining the underlying data structure. Initially, these seven factors accounted for 57.04% of the total variance. After extraction, the cumulative variance explained stood at 38.06%, showing the proportion of variance retained by the common factors. Following rotation, the variance was more evenly distributed across the factors, improving interpretability. The first rotated factor explained 12.08% of the variance, followed by the second (8.52%) and third (5.21%). The remaining factors contributed to smaller but meaningful portions, ranging between 2.05% and 3.59%. Overall, the rotated solution retained 38.06% cumulative variance, suggesting a moderately strong factor structure suitable for further analysis such as scale development or regression modeling.

H1: There is no significant difference in the academic achievement among boys and girls of FYUG students:

Out of the collected data 37.57% are boys and 62.42% are girls. For the male students with respect to their current academic results, out of the total boys 33.85% secured less than or equals to 50%, 32.28% secured between 50-60%, 33.85% secured 60-80%. For the female students it is 14.61% secured less than or equals to 50%, 33.17% secured between 50-60%, 23.69% secured 60-80%. From these results it was seen that girl students are lagging behind in the less than or equals to 50% category with 19.24%, ahead of the boys in the 50-60% category with 0.89% and in 60% or above category girls are again lagging behind the boys with 10.16% gap.

So, likewise mothers and fathers, male and female students also follow the similar trend in the level of education and current academic performances with fathers leading mothers and male students ahead of female students. But the greater number of female students in this rural Bangladesh international border and tea garden area-based institution is progressive for the education in India.

H2: There is no significant influence of adolescents on the academic achievements of the FYUG students:

Bartlett's Test of Sphericity was conducted on the surveyed set of data, and it indicates statistically significant (χ^2 = 1384.731, df = 231, p < .001) and there are meaningful relationships among the variables. Therefore, the null hypothesis that the variables are uncorrelated is rejected.

Table: 3 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.514[a]	.264	.257	2.86600	.264	39.941	3	334	.000	1.770

a. Predictors: (Constant), Psychological Behavior, Psychological Factor, Social Factor

b. Dependent Variable: Academic Performance

Source: Primary Data

A multiple regression analysis was conducted to examine the extent to which psychological behavior, psychological factors, and social factors predict academic performance. The results indicate that the overall model was statistically significant, $F(3, 334) = 39.941$, $p < .001$. The multiple correlation coefficient was $R = .514$, indicating a moderate positive relationship between the independent variables (Psycho_Behaviour, Psy_Factor, and Social_Factor) and academic performance. The coefficient of determination ($R^2 = .264$) shows that approximately 26.4% of the variance in academic performance is explained by the three predictor variables. The Adjusted $R^2 = .257$ indicates that, after adjusting for the number of predictors in the model, about 25.7% of the variance in academic performance is accounted for by the model. This suggests a reasonable explanatory power in social science research. The standard error of the estimate (2.86600) indicates the average deviation of the observed values from the regression line. Furthermore, the Durbin–Watson statistic (1.770) falls within the acceptable range of 1.5 to 2.5, indicating that there is no serious autocorrelation problem in the residuals and that the assumption of independent errors is met. Thus, the findings of the analysis suggest that psychological behavior, psychological factors, and social factors significantly predict academic performance, explaining approximately one-quarter of its variance.

Table: 4 ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	984.212	3	328.071	39.941	.000[b]
	Residual	2743.469	334	8.214		
	Total	3727.680	337			

a. Dependent Variable: Academic Performance

b. Predictors: (Constant), Psychological Behavior, Psychological Factor, Social Factor

Source: Primary Data

Again, on further analysis of Variance (ANOVA) was conducted to evaluate the overall significance of the multiple regression model in predicting academic performance from psychological behavior, psychological factors, and social factors. The results indicate that the regression model is statistically significant, $F(3, 334) = 39.941$, $p < .001$. This demonstrates that the set of independent variables collectively predicts academic performance significantly better than a model with no predictors. The regression sum of squares was 984.212, while the residual sum of squares was 2743.469, yielding a total sum of squares of 3727.680. The mean square for regression was 328.071, and the mean square for residual was 8.214, resulting in the significant F-value reported above. Since the significance value is less than 0.05, the null hypothesis that the model has no predictive value is rejected. This indicates that psychological behavior, psychological factors, and social factors jointly have a statistically significant effect on academic performance. Thus, the results obtained by ANOVA confirm that the regression model provides a good fit to the data and is appropriate for explaining variations in academic performance.

Table: 5 Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.520	1.207		5.402	.000
	Psychological _Factor	.102	.048	.107	2.128	.034
	Social Factor	.205	.052	.223	3.955	.000
	Psychological Behavior	.281	.052	.306	5.369	.000
a. Dependent Variable: Academic Performance						

Source: Primary Data

The coefficients table presents the individual contribution of each predictor variable to academic performance. The results indicate that all three independent variables psychological factors, social factors, and psychological behavior significantly predict academic performance. The constant (β = 6.520, p < .001) represents the expected value of academic performance when all predictor variables are held constant at zero.

Among the predictors:

Psychological Factors (B = 0.102, β = 0.107, t = 2.128, p = .034) significantly predict academic performance. This indicates that a one-unit increase in psychological factors leads to a 0.102 increase in academic performance, holding other variables constant. However, its standardized beta value suggests it has the weakest contribution among the three predictors.

Social Factors (B = 0.205, β = 0.223, t = 3.955, p < .001) also significantly predict academic performance. A one-unit increase in social factors results in a 0.205 increase in academic performance. The standardized beta indicates a moderate contribution.

Psychological Behaviour (B = 0.281, β = 0.306, t = 5.369, p < .001) is the strongest predictor of academic performance. The results show that a one-unit increase in psychological behaviour leads to a 0.281 increase in academic performance. Its standardized beta coefficient (β = 0.306) is the highest among the predictors, indicating the greatest relative influence.

Based on the unstandardized coefficients, the regression equation is:

Academic Performance = 6.520 + 0.102 X {Psychological Factor} + 0.205 X {Social Factor} + 0.281 X {Psychological Behavior}

Conclusion:

In the study it was found that the psychological behavior, social factors, and psychological factors of FYUG students at the Swami Vivekananda college have significant positive effects on academic performance. Among them, psychological behavior is the most influential predictor, followed by social factors, while psychological factors have the least, though still significant, contribution. Factors related to self-esteem, motivation, peer influence, family environment and emotional well-being also thus have direct influence on academic performance. Also, there is a significant but narrow difference in the achievements of both boys and girls. Thus, by addressing both psychological and social issues related to students' better performance could be generated from them academically.

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