Mental Health and demographic perspectives of academic performance: A study in the Kamrup district of Assam, India.

Polee Saikia
Professor
Department of Education,
Gauhati University

&

Sudeshna Nath
Research Scholar,
Department of Education,
Gauhati University

Abstract

The importance of Mental Health is ingrained in our Vedic way of life as mentioned in our ancient Hindu scriptures. It is a holistic construct which influences all the areas of our life. Amidst modernity and complex life styles, people are suffering from acute stress and far from the optimum mental stability. So the objective of the paper was to investigate whether academic performance was significantly predicted by Mental Health and certain demographic variables of undergraduate students on the basis of location (metro & rural) in the Kamrup district of Assam. For the study, a sample size of 400 (Rural=261 & Metro=139) was selected by using Proportionate Stratified Random Sampling. Data was collected by using Mental Health Battery Questionnaire developed by A.K. Singh and Alpana Sengupta (2008).

The results of regression analysis were found to be statistically significant only in the urban area (Kamrup Metro), stating that mental and demographic perspectives significantly predicted academic performance among undergraduate students, where F= 6.502, p<0.05. However, MHB, parents’ income, fathers’ educational qualification and socio-economic status of the undergraduate students residing in the urban area were found to strongly predict academic performance with a significant value of p<0.05.

Key words: Mental Health, demographic variables, academic performance, undergraduate students.
1. Introduction

Mental Health is a holistic state of mind where an individual utilizes his potentials to attain social, emotional and personal goals; and acquires the ability to move forward in the face of obstacles with tactful management strategies. Mental health is an old concept embedded in our Indian philosophical work revealed in the studies of Gautam (1999), Shamasundar (2008) and Reddy (2012). These researches provide interesting information on the ancient Indian scriptures which are found to be aligned with the ways and means to understand the complexity of the human mind. Through perseverance, man can become his own master by conquering the obstacles in his success. He can conquer fear to develop the sense of security and completeness. They emphasized on the fact that mind is the center of all energies which needs to be channelized for functioning of the senses in goal attainment. Adequate life goals need to be set for which effort was given on evaluation of our cognition and related attributes for enhancing positivity in life. Patanjali has identified four layers of the human mind – cognitive, psychological, physical and social constantly interacting with each other to create the perfect harmony and balance in life. Mental health is more or less a collective consciousness; where synchronicity between man, his self, the external world and the universe brings peace and stability in the minds of the natives. (Verma, 1979).

Sometimes research in academic performance also helps in identifying the normal, over and the under achievers as well as relevant strategies to overcome any kind of obstacles plaguing them. It stirs a controversial situation where a particular student may show varying results in different curricular or school set up. Accordingly the contributing factors like cognitive, non-cognitive and situational can be studied to guide the students in their future endeavor. While some researches were conducted to find out what individual and institutional factors could be integrated to indicate the academic success in an individual? After review on the studies of Srinivas & Venkatkrishnan (2016), it was found that a host of factors were related to family, school, psychological and physical set up.

2. Review of literature

Allhajraf & Alasfour (2014) investigated the association of undergraduate students’ demographic and academic characteristics with business students’ academic performance. The findings revealed that age, gender, high school major and high school GPA were significantly related to
academic performance, highlighting significant influence of science background on their academic performance.

Baba et al. (2018), in a study examined the relationship between demographic profile and academic performance of students in Ghana. The study revealed that both age and sex had a combined effect on the academic performance of the students.

Patel et al. (2018) carried out a comparative study among Secondary Schools Students’ in Gujarat, India. The findings evidenced significant difference in Mental Health between Urban and Rural boys of south Gujarat. The other extrinsic factors like economic sufficiency and interpersonal problem solving ability also had differential effect on their mental health.

Kaur, J. (2019) explored the correlation of academic stress and academic achievement with demographic variables like family background and school environment. The final results indicated that academic achievement was significantly and positively related to family and school environment, while academic stress showed an inverse relationship.

Alipio, M. (2020) designed a cross-sectional study and found that all the three constructs of psychological factors, expectancy value beliefs and academic performance were significantly interrelated with each other. Moreover motivation for self-awareness and growth prospered expectancy value beliefs and academic performance; academic stress negatively influenced the same variables.

Islam, S. et al. (2020) surveyed 400 first year undergraduate students from a university of Bangladesh and reported that the possible reasons for depression was found to be lack of adjustment, sleep and exercise among the vulnerable group. However gender had no significant influence on depression.

3. Objectives
To find out whether Mental Health and demographic characteristics of the undergraduate students significantly predict academic performance on the basis of location

4. Research question
Can the status of mental health and certain demographic variables emerge as strong predictors of academic performance among the undergraduate students on the basis of location?
5. Conceptual Framework of the Study
A mentally sound person is one who is conscientious and aware of personal and subjective choices which can influence his decisions. So he adopts a rational decision making behavior which does not maintain any personal and social biasness. Especially students are able to use trans-logical thinking for proper alignment of ideas and new creation to solve problems of daily academic life with a balanced mind and body. Our well balanced psyche helps us in making a connection between the conscious and the unconscious nature of the mind. It creates a positive self-image which can create anything and materialize our potential and creativity.

It is also observed that the extrinsic environment surrounding a student owes a lot to his mental build. The socio-demographic profile of students stimulates the learning situation and contributes a lot towards performance in schools. In this research context, the intention will be to explore whether an optimal mind can help a student to position his academic goals and desires, and to what extent demographic variables of students determine academic success. The findings ought to benefit the teachers, parents and the school authority to understand their students as well as to create congenial conditions for their growth.

6. Methodology

6.1. Research method
Descriptive Survey method of research has been adopted to conduct the research study. All the variables are not subjected to any sort of manipulation, while studying them as they are in the current situation.

6.2. Research Population
The research population is the total number of first semester undergraduate students studying in the different provincialized colleges of the Kamrup district of Assam, India. There are a total of 13,142 first semester undergraduate students from 35 colleges, out of which 14 colleges are located in Kamrup Metro (urban location), while the other 21 are situated in Kamrup Rural (rural location).

6.3. Sample and sampling technique
The sample size for the undergraduate students has been calculated by using the Taro Yamane’s formula with 95% confidence level (Yamane, 1973). The formula is
\[ n = \frac{N}{1+N} (e)^2 \]

Where, \( n \) is the sample size, \( N \) is the size of the population and \( e \) is the 5% allowable error. The calculated sample size of 388 was increased to 400 for better representation. A sample size of 400 undergraduate students from 18 colleges was finally decided using Stratified Sampling technique.

### Table 1: Sample distribution

<table>
<thead>
<tr>
<th>Gender</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>64</td>
<td>121</td>
</tr>
<tr>
<td>Female</td>
<td>75</td>
<td>140</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>261</td>
</tr>
</tbody>
</table>

### 6.4. Research Tool

The following tools were considered for the research study:

1. A socio-demographic datasheet to collect the demographic profile of the sampled students.
2. The Mental Health Battery (MHB) developed by A.K. Singh and Alpana Sengupta (2008) was administered to the students under study. The MHB is a 130 item questionnaire covering the six dimensions of Mental Health: Emotional Stability, Overall Adjustment, Autonomy, Security-Insecurity, Self-concept and Intelligence.

### 6.5. Data Collection Procedure

After getting an approval from the head of the colleges and informed consent of the respondents, the tools were administered to the sampled undergraduate students within the allotted class timings. Confidentiality was maintained and the collected data was categorized, tabulated and analysed.

### 6.6. Statistical Methods adopted

The data was statistically treated by using SPSS (version 21). Regression analysis was applied to draw inferences about the population.
7. Data Analysis

7.1. Urban location (Kamrup Metro)

Table 2: Predictors of academic performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>5652.518</td>
<td>7</td>
<td>807.503</td>
<td>6.502</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>16269.637</td>
<td>131</td>
<td>124.196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21922.154</td>
<td>138</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Academic performance

b. Predictors: (Constant), MHB, Type of family, Gender, Fathers education, Family size, Parents income, Mothers Education, SES

Table 2 (c) Coefficients Table

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>18.021</td>
<td>16.802</td>
<td>1.073</td>
<td>.285</td>
</tr>
<tr>
<td>Gender</td>
<td>-3.443</td>
<td>1.955</td>
<td>-.137</td>
<td>-1.762</td>
</tr>
<tr>
<td>Parent’s income</td>
<td>3.165</td>
<td>1.074</td>
<td>.307</td>
<td>2.947</td>
</tr>
<tr>
<td>Father’s education</td>
<td>4.542</td>
<td>1.351</td>
<td>.379</td>
<td>3.363</td>
</tr>
<tr>
<td>Mother’s education</td>
<td>1.955</td>
<td>1.294</td>
<td>.155</td>
<td>1.511</td>
</tr>
<tr>
<td>Family size</td>
<td>1.659</td>
<td>1.718</td>
<td>.083</td>
<td>.965</td>
</tr>
<tr>
<td>Type of family</td>
<td>.595</td>
<td>.878</td>
<td>.041</td>
<td>.681</td>
</tr>
<tr>
<td>SES</td>
<td>5.993</td>
<td>3.173</td>
<td>.265</td>
<td>1.870</td>
</tr>
<tr>
<td>MHB</td>
<td>.115</td>
<td>.067</td>
<td>.123</td>
<td>1.975</td>
</tr>
</tbody>
</table>

a. Dependent Variable: academic performance
Table 2 presented summary statistics for multiple regression analysis for the predictors of academic performance among the students of the urban colleges of Kamrup district of Assam. The results of regression analysis were found to be statistically significant, stating that mental health status, type of family, gender, fathers’ education, mothers’ education, family size, parents’ income and socio-economic status significantly predicted academic performance among undergraduate students, where $F= 6.502$, $p<0.05$.

However, mental health status of the students strongly predicted the academic performance with a significant value of 0.05 ($p=0.05$). Among demographic characteristics, Gender emerged as a strong predictor of academic performance with a significant value of 0.018 ($p<0.05$). Fathers’ education and parents’ income were statistically found to be a predictor with a significant value of 0.004 and 0.001 respectively ($p<0.05$). Moreover academic performance was found to be strongly predicted by the socio-economic status of the undergraduate students with a significant value of 0.036 ($p<0.05$).

### 7.2. Rural location (Kamrup Rural)

Table 3: Predictors of academic performance

<table>
<thead>
<tr>
<th>Table 3 (a): Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>R</strong></td>
</tr>
<tr>
<td>.231$^a$</td>
</tr>
</tbody>
</table>

**a. Predictors:** (Constant), MHB, Type of family, Gender, Fathers education, Family size, Parents income, Mothers Education, SES

**Table 3 (b): ANOVA table**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1602.631</td>
<td>8</td>
<td>200.329</td>
<td>1.783</td>
<td>0.081$^b$</td>
</tr>
<tr>
<td>Residual</td>
<td>28305.574</td>
<td>252</td>
<td>112.324</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>29908.205</td>
<td>260</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**a. Dependent Variable:** Academic performance

**b. Predictors:** (Constant), MHB, Type of family, Gender, Fathers education, Family size, Parents income, Mothers Education, SES
Table 3 (c) Coefficients Table

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>45.931</td>
<td>11.599</td>
<td>3.960</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>.700</td>
<td>.033</td>
<td>.522</td>
<td>.602</td>
</tr>
<tr>
<td>Parent’s income</td>
<td>1.124</td>
<td>.113</td>
<td>1.381</td>
<td>.168</td>
</tr>
<tr>
<td>Father’s education</td>
<td>.502</td>
<td>.050</td>
<td>.592</td>
<td>.554</td>
</tr>
<tr>
<td>Mother’s education</td>
<td>.432</td>
<td>.041</td>
<td>.488</td>
<td>.626</td>
</tr>
<tr>
<td>Family size</td>
<td>1.274</td>
<td>.093</td>
<td>1.264</td>
<td>.208</td>
</tr>
<tr>
<td>Type of family</td>
<td>.598</td>
<td>.045</td>
<td>.675</td>
<td>.500</td>
</tr>
<tr>
<td>SES</td>
<td>-.827</td>
<td>-.043</td>
<td>-.381</td>
<td>.704</td>
</tr>
<tr>
<td>MHB</td>
<td>.110</td>
<td>.111</td>
<td>1.773</td>
<td>.077</td>
</tr>
</tbody>
</table>

a. Dependent Variable: academic performance

Table 3 presented summary statistics for multiple regression analysis for the predictors of academic performance among the rural colleges of the Kamrup district of Assam. The results of regression analysis were not found to be statistically significant, stating that mental health status, type of family, gender, fathers’ education, mothers’ education, family size, parents’ income and socio-economic status did not predict academic performance among undergraduate students, where F= 1.783, p>0.05.

8. Findings and Discussion

8.1. In the Urban context

Academic performance was found to be strongly predicted by demographic characteristics like Gender, Fathers’ education, parents’ income and socio-economic status of the undergraduate urban students. In research studies conducted by Alhajraf & Alasfour (2014) and Baba et al. (2018), the findings paralleled with the current research results, where the combined role of demographic variables was pointed out.

The results have evidenced that mental wellbeing can have a direct impact on the academic performance of the students too. Students undergo stressful situations, due to the education system being very comprehensive. The educational environment of the student can be quite frustrating at times owing to academic overburden, over expectation of parents, economic situation of the family, gender stereotypical roles to be fulfilled.

8.2. In the Rural context
The mental health status and socio-demographic profile of the students studying in rural colleges had nothing significant with their academic success. In stark contrast to their urban counterparts, the demographic attributes and mental health of the rural students did not significantly predict their academic performance in schools. The research results of Gilavand et al. (2016) support the research result that there was no direct relationship between a person’s mental status and his academic achievement. Accordingly rural students showed no significant relationship of psychological resilience with examination performance.

9. Conclusion
It becomes very necessary to train the students in awareness of mental health issues like stress and frustration, which can have a direct bearing on their academic goals. For better mental health literacy, the background attributes of individual students stand important in understanding the underlying causes of imbalanced mental state. It is high time that Indians integrate the ancient knowledge on mental health with the present education system through yoga and meditation classes; which can benefit the students in the long run.

10. References


Alonazi, A. (2018). Psychological, Academic and Demographic Variables Affecting Students’ Academic Achievement Among First Year College Students in Saudi Arabia. University of the Pacific, Dissertation. [https://scholarlycommons.pacific.edu/uop_etds/3107](https://scholarlycommons.pacific.edu/uop_etds/3107)


