



Influence Of Cognitive Flexibility, Emotional Intelligence And Online Wellbeing Of Higher Secondary Students Upon Academic Achievement

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ABSTRACT

The present study aimed to study the “Influence of Cognitive Flexibility, Emotional Intelligence and Online Wellbeing of Higher secondary students upon Academic achievement”. Objective of the study is to study the influence of independent variables, such as Cognitive flexibility, Emotional Intelligence and Online well-being the of higher secondary students upon the dependent variable Academic achievement. Normative survey method was adopted for the present study. The present was conducted in Puducherry Union Territory, India. A sample of 807 higher secondary students studying in XII standard in Puducherry Region by adopting random sampling technique was included in this study. Cognitive Flexibility Scale constructed and validated by the investigators (Santhi. S & Dr. S. Veena, 2023). Emotional Intelligence Scale Standardized by N.S. Schutte et al. (1998), revalidated by the investigators. (2023). Online Wellbeing Scale constructed and validated by the investigators (Santhi. S & Dr. S. Veena, 2023). Academic Achievement marks of the higher secondary students were used as the research instrument. Multiple regression analysis was used for interpretation of the collected data to arrive at meaningful conclusion. Findings of the study revealed that 50.4% of the total variance in Academic achievement score is contributed by independent variables such as Cognitive flexibility, Emotional Intelligence and Online wellbeing. A linear combination of all independent variables taken together contribute towards the dependent variable and significantly predicts the Academic achievement of higher secondary school students. The independent variables, such as Cognitive flexibility, Emotional Intelligence and Online well-being do influence the dependent variable Academic achievement.

Keywords: Cognitive flexibility, Emotional Intelligence, Online well-being, Academic achievement.

Introduction

Cognitive flexibility is a thought series and capability to reoriented thinking stream associating with changing of faced conditions’ stimulators. On the other hand, Tan (2005) formulated cognitive flexibility as individual cognitive resilience, accordance ability, and comprehending new ideas for variable circumstances and different perceptions from several resources. Shah (2003) added it is the individual capacity to rapidly inducing ideas and adjust mental conditions toward recent and emerged stimulators. Since every complication has various solutions, in which flexible individual is constructing new mental representations or amending previous representation.

Emotion may be described as “a natural instinctive state of mind that derives from our current and past experiences and situations” (Faltas, 2017). The feelings and things that a person experience affect their emotions. On the other hand, EI is ability (Faltas, 2017). It is having the awareness, and skill, in order to know, recognize, and understand feelings, moods, and emotions and use them in an adaptive way (Faltas, 2017). Nature bestowed humans with emotions. Emotions are significant predictors of anyone's success. Now Emotional Intelligence is an established phenomenon is under eye of researcher and psychologist. A person's overall wellbeing is determined by the physical and emotional experiences we have on a daily basis. As

technology continues to be such a huge part of human lives, from the way they represent, it too has an impact on human wellbeing. This is often referred to as 'Digital Wellbeing' or 'Online Wellbeing'

Academic achievement is the measurement of student achievement across various academic subjects. It is important for the successful development of higher secondary students to face the challenges in the society. In this technologically equipped digital world it is important to improve the academic achievement of higher secondary students. Hence, this study aimed to find the contributing factors of Academic achievement of higher secondary students.

Need and Significance of the study

Prior research with higher secondary students has demonstrated that increased cognitive flexibility relates to lower levels of anxiety, higher levels of motivation (Timarova & Salaets, 2011), positive perceptions of group work (Myers et al., 2009), bilingualism (Teubner-Rhodes et al., 2016). These findings, together with those that indicate that cognitive flexibility impacts learning, language development (Deak, 2004; Jacques & Zelazo, 2005), and math skills (Bull & Scerif, 2001), suggest there could be a link between cognitive flexibility and achievement in academic settings. Nature bestowed humans with emotions. Emotions are significant predictors of anyone's success. Now Emotional Intelligence is an established phenomenon is under eye of researcher and psychologist. There are some factors that can cause a student either to have high or low performance. Among that dysfunction personality is part of the composition of the formation of emotional intelligence which is the reason for students' low grade performance. The student that has dysfunctional characteristic such as lack of confidence, possess low self- esteem, lack of self-control and have a high anxiety are said to have a low emotional intelligence, and this will affect their academic performance. Emotional Intelligence has been found to correlate with enhanced life satisfaction and self-esteem. As technology becomes more and more integral to everything human do today, it can sometimes distract from the things that matter most to them. As the higher secondary students are inseparably using digital gadgets for both learning and personal reasons, they are facing lot of critical experiences. Hence their online wellbeing will be disturbed which results in physical, emotional and mental illness. Based on these discussions, the investigator perceived the problem for the present study and intended to study the relative influence of Cognitive flexibility, Emotional intelligence and Online wellbeing on the Academic achievement of higher secondary students in Puducherry Region.

Statement of the problem

The topic chosen for the present study is entitled as, "Influence of Cognitive Flexibility, Emotional Intelligence and Online Wellbeing of Higher secondary students upon Academic achievement".

Review of Literature

Emad Mohamad Al-Zoubi (2020), had studied about Cognitive Flexibility among Higher Education Students, The study aimed to inspect the quality of life (QOL) and its relation with cognitive flexibility among higher education students according to gender, accumulative average, and academic year. The results found that there is a positive statistically significant relationship between QOL (overall scale) and cognitive flexibility (overall scale), there is a positive statistically significant relationship between adaptive cognitive flexibility and QOL (quality of health, social and family life, education and learning, emotional life, mental health, and time management).

Ravi Kant (2019) had studied about Emotional Intelligence. This survey based study used data from 200 students of Central University of South Bihar, Gaya, India. Results indicated that all university's students were having high level of emotional intelligence. Result indicates that all students of School of Education have emotional Intelligence of high level except in comparison of students of School of Law & Governance. Male and female students are significantly differed from each other on Emotional Intelligence on overall sample.

Carolyn Mac Cann et.al. (2020) had explored that Schools and universities devote considerable time and resources to developing students' social and emotional skills, such as emotional intelligence (EI). The association is significantly stronger for ability EI Relative importance analysis suggests that EI is the third most important predictor for all three streams, after intelligence and conscientiousness. Moderators of the effect differed across the three EI streams. From the research of **Petrides et al (2004)** they looked at the relationship between trait emotional intelligence, Academic achievement and cognitive, they discovered that emotional intelligence moderated the relationship between Academic achievement and cognitive ability.

Parker et al (2004) in their studied concluded that different variable of emotional intelligence used as predictors of academic success. They found that highly successful students scored higher than unsuccessful group on three subsets of emotional intelligence. Also, in a study carried out by **Rode et al. (2007)**, they predicted that emotional intelligence was related to Academic achievement for two reasons. Firstly, Academic achievement involves a great deal of uncertainty. Secondly, majority of academic work is self-directed, requiring high levels of self-management. Thus, students that possess high emotional intelligence would perform better academically. Svetlana (2007), suggests the need to incorporate emotional intelligence training into secondary education curricula, due to a significant relationship between emotional intelligence and academic achievement. A study examined the role of cognitive flexibility in psychological well-being. The study

looked into whether cognitive Data was collected via the Self- Confidence Scale, Flourishing Scale and Cognitive Flexibility Scale. The results of our multiple regression analysis revealed that self-confidence and cognitive flexibility statistically predict psychological well-being. Self-confidence and cognitive flexibility were found to explain 38% of the variance in psychological well-being. Furthermore, cognitive flexibility served as a mediator in the relationship between self-confidence and psychological well-being.

Method of study

Normative survey method was adopted for the present study.

a) Area of the study: The present was conducted in Puducherry Union Territory, India.

b) Sample and sampling Technique: The present study includes a sample of 807 higher secondary students studying in XII standard in Puducherry Region by adopting random sampling technique.

c) Tools used: Cognitive Flexibility Scale –constructed and validated by the investigators (Santhi. S & Dr. S. Veena, 2022). Emotional Intelligence Scale - Standardized by N.S. Schutte et al. (1998), revalidated by the investigators. (2022). Online Wellbeing Scale - constructed and validated by the investigators (Santhi. S & Dr. S. Veena, 2022). Academic Achievement –Marks obtained from school records.

d) Statistical Techniques: Multiple regression analysis was used for interpretation of the collected data to arrive at meaningful conclusions.

Objective of the study

1) To study the influence of independent variables, such as Cognitive flexibility, Emotional Intelligence and Online well-being of higher secondary students upon the dependent variable Academic achievement

Hypothesis

1) The independent variables, such as Cognitive flexibility, Emotional Intelligence and Online well-being do not influence the dependent variable Academic achievement of higher secondary students.

Variables of the study

- Dependent Variable - Academic Achievement
- Independent Variable - i. Cognitive Flexibility
- ii. Emotional Intelligence
- iii. Online Wellbeing

Definitions of the Terms

a) Cognitive Flexibility: Cognitive flexibility is a person's ability to coincide with cognitive information preparing and processing strategies in emerged and unexpected conditions in the environment.

b) Emotional Intelligence: Emotional Intelligence is having the awareness, and skill, in order to know, recognize, and understand feelings, moods, and emotions and use them in an adaptive way.

c) Online Wellbeing: Online wellbeing is being aware of how being online can impact the emotional and physical health.

d) Academic Achievement: Academic achievement is the measurement of student achievement across various academic subjects of higher secondary students.

Analysis and Interpretation

Multiple correlation coefficient R is a measure of the strength of the association between the independent variable and the dependent variable. Multiple regression is one of the statistical processes which are used to estimate the relationship between a dependent variable and more than one independent variables.

One of the important objectives of the study is to determine the relative influence of independent variables such as Cognitive flexibility, Emotional Intelligence and Online well-being on the dependent variable Academic achievement of higher secondary school students. Therefore, to identify the predictors of the dependent variable Academic achievement, multiple regression analysis was conducted, and the results are presented in the following tables:

Hypothesis: The independent variables, such as Cognitive flexibility, Emotional Intelligence, Online well-being do not influence the dependent variable Academic achievement of higher secondary school students.

Table 1: Model summary of categorical regression analysis contribution of independent variables to the dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714 ^a	.510	.504	7.902

a. Predictors: (Constant), Cognitive flexibility, Emotional Intelligence, Online wellbeing,

b. Dependent Variable: Academic Achievement

The above table shows that the R squared value, is 0.510 which indicates that 50.4% of the total variance in Academic achievement score is contributed by independent variables such as Cognitive flexibility, Emotional Intelligence and Online wellbeing.

Table 2: The categorical regression ANOVA of independent and demographic Academic achievement of higher secondary school students.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	51825.377	9	5758.375	92.211	<.001 ^b
Residual	49833.616	798	62.448		
Total	101658.993	807			
a. Dependent Variable: Academic achievement					
b. Predictors: (Constant), Cognitive flexibility, Emotional Intelligence, Online wellbeing					

From Table, the 'F' value is found to be 92.211, which is significant at the 0.01 level. This indicates that a linear combination of all independent variables taken together predicts the Academic achievement of higher secondary school students. It suggests that Cognitive flexibility, Emotional Intelligence, Online wellbeing of higher secondary students all make a significant contribution in Academic achievement of higher secondary students. Hence it is inferred that a linear combination of all independent variables taken in this study predicts the Academic achievement of higher secondary students.

Hence, framed hypothesis is rejected, and it is concluded that the independent variables, such as Cognitive flexibility, Emotional Intelligence, Online well-being, influence the dependent variable Academic achievement.

Table 3: The categorical regression coefficients for independent variables on higher secondary students' Academic achievement.

Model1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	level
	B	Std. Error	Beta			
(Constant)	16.368	4.468		3.664	<.001	
Cognitive flexibility (X ₁)	1.356	.685	.049	1.980	<.008	S
Emotional Intelligence(X ₂)	.391	.018	.640	21.802	<.001	S
Online wellbeing (X ₃)	4.271	.553	.201	7.719	<.001	S

a. Dependent Variable: Academic achievement

Table shows the calculated 't' values for the independent variables such as Cognitive flexibility (t=3.664), Emotional Intelligence (t=21.802) and Online wellbeing (t=7.719) are significantly contributed to the dependent variable.

Regression equation for Academic Achievement

Results in the table are used to form regression equations. The results under the column "B co-efficient" are unstandardised and those of column "β co-efficient" are standardized. Using the categorical 'b' coefficients (standardized coefficients) given in the above table, the following regression equation is obtained to predict the contribution of the independent variables over the dependent variable academic achievement. The regression equations are formed and they are given below:

$$Y_1 = 1.356 (X_1) + .391 (X_2) + 4.271 (X_3) + 16.368$$

Where Y is the predicted Academic achievement and X₁, X₂ and X₃ are the independent variables contributing to the dependent variable.

The regression equation (Y₁) was framed from the above table in the raw score form. Using the regression equation (Y₁), Academic achievement of the higher secondary students can be predicted.

Hence, the framed hypothesis is rejected and concluded that there is a significant contribution of the independent variables of the study towards Academic achievement of the higher secondary students.

Findings of the study

1. It is evident that 50.4% of the total variance in Academic achievement score is contributed by independent variables such as Cognitive flexibility, Emotional Intelligence and Online wellbeing.
2. A linear combination of all independent variables taken together contribute towards the dependent variable and significantly predicts the Academic achievement of higher secondary school students.
3. The independent variables, such as Cognitive flexibility, Emotional Intelligence and Online well-being do influence the dependent variable Academic achievement.
4. There is a significant contribution of the independent variables Cognitive flexibility, Emotional Intelligence and Online well-being towards Academic achievement of the higher secondary students.
5. Among the independent variables of the study Emotional Intelligence is the most significant predictor of Academic achievement of higher secondary students followed by Online wellbeing and Cognitive flexibility.

Conclusion

Influence of Cognitive Flexibility, Emotional Intelligence and Online Wellbeing of Higher secondary students upon Academic achievement was focused in this study. It is to be noted that the independent variables significantly contributed to the academic achievement of higher secondary students. Since it is the period of adolescence for the higher secondary students Emotional Intelligence stands as the most significant predictor of academic achievement. Hence it is recommended to the stakeholders and parents to concentrate and give due importance to the Emotional aspects of higher secondary students. And also schools should promote Emotional Intelligence awareness among school students. Simultaneously, Cognitive flexibility and Online wellbeing of higher secondary students also taken care by the concerned school authorities to improve the Academic achievement of higher secondary students which is proved in this research.

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