

# THE INTERACTIVE INFLUENCE OF CLASS ON SELF-EFFICACY, EMOTIONAL INTELLIGENCE AND ACHIEVEMENT MOTIVATION AS PREDICTORS OF IMPULSIVE BEHAVIOUR AMONG SECONDARY SCHOOL STUDENTS' IN NIGERIA

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## ABSTRACT

This study investigated the interactive influence of class on self-efficacy, emotional intelligence and achievement motivation as predictors of impulsive behaviour among secondary school students in Nigeria. This study employed the descriptive research design of ex-post facto type. Three hundred participants selected through the multi-stage stratified random sampling technique, were used for the study. Four main instruments were used in collecting data, they are: General Self-efficacy Scale (GSES), Emotional Intelligence Scale (EIS), Academic Achievement Motivation Scale (AAMS), and Impulsive Behaviour Scale (IBS). The data collected were analyzed using Pearson Product Moment Correlation Coefficient and Multiple Regression Analysis. The results indicated that all the predictor variables (self-efficacy, emotional intelligence and achievement motivation) significantly combined to predict students' impulsive behaviour based on class (Senior and Junior Classes). Also, results revealed that all the predictor variables were good predictors of students' impulsive behaviour. Also, all the predictor variables accounted for 10.8% variability of the senior students' impulsive behaviour ( $R = .223$ ;  $R^2 = .171$ ;  $Adj. R^2 = .108$ ;  $F_{(5,401)} = 9.524$ ;  $p < .05$ ). The results revealed the strength of causation of the predictor variables on the criterion variable. The most potent predictor of students' impulsive behaviour based on class among the predictor variables of the study is emotional intelligence (JSS:  $\beta = .301$ ;  $t = 4.071$ ;  $p < .05$ ; SSS:  $\beta = .174$ ;  $t = 3.019$ ;  $p < .05$ ). Self-efficacy was the next potent factor (JSS:  $\beta = .209$ ;  $t = 2.888$ ;  $p < .05$ ; SSS:  $\beta = .131$ ;  $t = 2.371$ ;  $p < .05$ ), lastly by achievement motivation (JSS:  $\beta = .155$ ;  $t = 1.972$ ;  $p < .05$ ; SSS:  $\beta = .112$ ;  $t = 2.017$ ;  $p < .05$ ). Based on the findings, it was recommended among others that the psychologist, social workers and those who are interested in the wellbeing of the students should take into consideration the class of a student's before using the independent variables before assisting the impulsive students.

**Keywords:** Emotional Intelligence, Self-Efficacy, Academic Motivation, class, impulsive behavior.

## INTRODUCTION

Impulsive behaviours can manifest at any stage of human's life, but adolescent stage is a particular period when volatility and impulsiveness is of the increase. Interestingly, not all teenagers are equally caught up in the tumult of the stormy teens with all the risk taking and apparent dysfunctional and self-destructive behaviour. Not all teens smoke, drink, and use drugs. Not all teen girls get pregnant, and not all teen boys set out on a life of violent criminal behaviour. Jackson & Wester, (1997) described impulsivity as an "obscure and difficult construct despite the efforts of some scientists. A comparison of studies looking at the factor structure (or components) of impulsivity shows two main components: first, there

is a tendency to go for the immediate reward without thoughtful (or any) consideration of long term effect, and second, there is a strong motivation or urge to act. Franken, Strien, Nijs & Muris (2007) present three similar factors as comprising the trait: a) reward-discounting or cognitive impulsiveness (the making of quick cognitive decisions), b) motor-impulsiveness or rapid-response (acting without thinking), and c) non-planning impulsiveness which is shown by poor consideration of the future. In a study designed to examine the factor structure of impulsivity using multiple measures, Whiteside & Lynam (2001) reported four factors: a) low perseverance, b) sensation seeking, c) lack of planning, and d) urgency – the propensity to act rashly following negative effect.

Among researchers there is little consensus about a definition of impulsivity (Winstanley, Eagle & Robbins, 2006) and others have suggested just throwing the term out because of its lack of clarity (Cyders & Smith, 2008). There is consensus that impulsivity is a multidimensional construct. The consequence of this is that research on impulsivity may focus on different factors of the trait (Melanko, Leraas, Collins, Fields & Reynolds 2009; Vassileva, Gonzalez, Bechara, There & Martin, 2007; Whiteside & Lynam, 2001). Moreover, one or more of the trait factors may be related to different clinical outcomes; for example; it is hypothesized that different subtypes of ADHD may be linked to specific dimensions of the impulsivity trait (Melanko, Leraas, Collins, Fields & Reynolds 2009; Vassileva, Gonzalez, Bechara, There & Martin, 2007; Whiteside & Lynam, 2001)

Impulsivity is believed to stem from different neurological bases (Lieberman, 2007; Steinberg, 2008). The neural structures involved in impulsivity are activated under conditions that promote automatic, implicit or non-conscious processing of information (Lieberman, 2007). The neural structures involved in impulsivity also tend to be the phylogenetically older subcortical regions (Lieberman, 2007). As such, the structures involved in impulsivity are the amygdala, basal ganglia, lateral temporal cortex, ventromedial prefrontal cortex and dorsal anterior cingulate cortex (Lieberman, 2007). In contrast, self-control is reflected in higher cognitive processes that are experienced as intentional and effortful including implementation of goals and plans and inhibition (Cabeza & Nyberg, 2000). The structures involved in self-control are the anterior cingulate cortex, lateral prefrontal cortex, posterior parietal cortex and the hippocampus and surrounding medial temporal lobe region (Lieberman, 2007).

Impulsivity and self-control operate simultaneously and interact to influence behavior (Chen & Vazsonyi, 2011). Impulsivity has been demonstrated to be less strongly related to substance use and other problem behavior when individuals reported higher rather than lower levels of self-control (Chen & Vazsonyi, 2011). The trait-level perspective assumes that risk-taking behavior occurs in the absence of self-control (Bickel et al., 2007). Assuming that individuals with high levels of self-control will always choose to not engage in risk-taking behavior, risk-taking behavior results when the influence of self-control is undermined by impulsivity (Bickel et al., 2007)

Self-efficacy refers to an individual's belief in their personal capability to accomplish a job or a specific set of tasks (Bandura, 1997). Self-efficacy is a useful concept for explaining human behaviour as research reveals that it plays an influential role in determining an individual's choice, level of effort, and perseverance (Chen et al., 2004). Simply stated, individuals with high self-efficacy for a certain task are more likely to pursue and then persist in that task than those individuals who possess low self-efficacy (Bandura, 1997).

More precisely, it is the self-evaluation of the degree of control that one, as the agent, has over the means in the attainment of goal. Bandura (1997) also postulated that self-efficacy

belief operate through cognitive, motivational, and affective intervening processes. Perceived self-efficacy and cognitive simulation affect each other bi-directionally. Self-efficacy can affect thought patterns that are self-aiding or self-hindering. People with higher self-efficacy set higher goals and have firmer goal commitment. They are also more likely to focus their attention and direct their effort to the situations, especially when they face obstacles. They also tend to attribute failure to effort. In contrast, a person with low self-efficacy distracts attention from the task and ruminates on their deficiencies. They are more likely to attribute failure to ability. In addition, self-efficacy affects people's motivation and choice. Positive evaluation of self-efficacy motivates people to engage in activities that foster the growth of personal competence. A strong sense of efficacy to survive failures and deal with uncertain difficulty of a task stimulates skill and knowledge acquisition. On the contrary, people with low self-efficacy are more likely to doubt their capabilities and give up, hindering the opportunities of growth (Bandura 1997).

Emotional intelligence might be defined as the set of skills people use to read, understand, and react effectively to emotional signals sent by others and oneself. (Mayer & Salovey, 1993) These are skills such as empathy, problem-solving, optimism, and self-awareness which allow people to reflect, react to, and understand various environmental situations.

Salovey, Hsee & Mayer, (1993) categorized emotional intelligence into three aspects: (a) the accurate appraisal and expression of emotion (in self and other people); (b) the adaptive regulation of emotions (in self and other people); and (c) the utilization of emotions to plan, create and motivate action. Mayer & Salovey (1997) said emotional intelligence comprises four levels of abilities that range from basic psychological processes to more complex processes integrating emotion and cognition. The model is developmental in that skill at the first level is required to possess the skills of the next levels. The first level, emotional perception, includes skills that allow an individual to perceive, appraise, and express emotions. These abilities include identifying one's own and others emotions, expressing one's own emotions, and discriminating the expressions of emotion in others. The second level, emotional integration/facilitation, involves facilitating emotions and prioritizing thinking. Emotions enter the cognitive system, are recognized and labeled, and subsequently alter thought. The cognitive system can then view things from different perspectives (Mayer, Salovey & Caruso, 2000)

The third level is emotional understanding and reasoning. At this level, emotional signals are understood along with their implications. These implications, such as feeling or meaning, are then considered. The fourth level, emotional management, involves an openness to emotions that allows personal and intellectual growth. This level of emotional intelligence is more complex with skills that allow individuals to selectively engage in or detach from emotions and monitor and manage emotions in themselves and others (Mayer et al., 2000) Much of the recent popular work suggests that emotional intelligence is highly predictive of an individual's general functioning and functioning within specific domains, such as career performance (Goleman, (1995).

This study focused investigation on interactive nature of classes on the predictive influence of self-efficacy, emotional intelligence, achievement motivation on impulsive behaviour among students in senior secondary schools

## METHODOLOGY

This study adopted a descriptive survey design of *ex-post-facto* type. This survey design was preferred since the researcher cannot control the conditions experienced by the participants. This is so, because the researcher is only interested in interactive nature of classes on the influence of the independent variables (self-efficacy, emotional intelligence and achievement motivation) on the dependent variable (secondary school students' impulsive behaviour).

### Population

The target population for this study comprised of all the students in public secondary schools in Ikorodu Local Government Area of Lagos State. There are 56 secondary schools in the local government area comprising of 28 Junior and Senior Secondary Schools respectively

### Sample Technique

The sample was selected using multi-stage sampling technique. First, the local government was stratified into 4 educational administrative zones. Secondly, from each of the educational administrative zones, 3 co-educational secondary schools were randomly selected through balloting method in which all the names of all the secondary schools in the selected local government areas were written based on the strata (educational administrative zone) on separate sheet of paper of equal size. These sheets were folded and put into four (4) plastic bowls. After thorough reshuffling, and without looking into the plastic bowls, the researcher picked up three (3) slips each from each of the 4 bowls to get out the twelve (12) participating schools for the study. Third, from each of the 12 participating secondary schools, 25 students each were randomly selected from JS3 and SS3 classes. In all, 300 students participated in this study.

### Instrumentation

Four major instruments were used for this study. These were used for obtaining information concerning the variables of the study, which are self-efficacy, emotional intelligence, achievement motivation and students' impulsive behaviour. Demographic variables measures were taken to determine the participants' gender, class, and age.

The instruments used to collect data for this study include:

- General Self-efficacy Scale (GSES)
- Emotional Intelligence Scale (EIS)
- Academic Achievement Motivation Scale (AAMS)
- Impulsive Behaviour Scale (IBS)

### General Self-efficacy Scale (GSES)

Self-efficacy was measured using the General Self-efficacy Scale developed by Schwarzer and Jerusalem (1995). The scale is a 10-item scale that assesses self-efficacy based on personality disposition. Examples of items of the scale include "It is easy for me to stick to my aims and accomplish my goals" and "If I am in trouble, I can usually think of a solution." The scale was measured on a 4-point Likert scaling model with options ranging from 1= Not at all true, to 4 = Exactly true. The original version of this scale which has been used in numerous research projects yielded internal consistencies ranging between  $\alpha = .75$  and  $.90$  (Schwarzer & Jerusalem, 1995). The scale is parsimonious, reliable and culture fair. It has also proven valid in terms of convergent and discriminant validity. For example, it correlates positively with self-esteem and optimism and negatively with anxiety, depression and physical symptoms. Higher scores on the self-efficacy scale indicate high self-efficacy.

In Nigeria, the instrument has also been used by Adeyemo and Ogunyemi (2010) and Mabekoje (2010).

### **Achievement Motivation Scale (AAMS)**

Achievement Motivation is measured by the Ray Achievement Motivation scale was developed. The scale would appear to be unlike previous scales in that it was developed on general population rather than student samples. Schmalt & Sokolowski (2000) discuss the quality of the different techniques to measure the achievement motive and conclude that all available instruments work reliably. TAT and the grid technique have comparable and widely diversified validity ranges that are related to respondent and operant behaviour. Questionnaires used to diagnose motives seem to be specialized to predict respondent behaviour and conscious experiences (Spangler, 1992). Measuring the achievement motive and the (Breugh & Colihan, 1994; Kleinbeck & Fuhrmann, 2000). These components of achievement motivation measured by the mentioned questionnaires affect the motivation to translate goals into action and as a consequence performance outcome. The items are rated on a scale, ranging from one (does not correspond at all) to seven (corresponds exactly). A high score on the scale indicates high endorsement of academic motivation. AMS has been used among Nigerian subjects and reported valid and not culturally biased (Ayodele, 2008; Ebonhor, 2012)

### **Impulsive Behaviour Scale (IBS)**

Barratt's Impulsiveness *Scale* (BIS) was used to measure impulsive behaviour. It is a 20-item scale measured on a 4-point likert form. The responses range from rarely never (1) to almost always (4). The extensive use of the BIS is reflected in the more than 500 citations of the 11th revision reported in the literature (Stanford et al., 2009). The BIS has been used in multiple neuropsychiatric populations and Scores on the BIS and neuropsychological tests have also been shown to be more predictive of Borderline Personality disorder and Bulimia Nervosa (Black et al., 2009; Kemps & Wilsdon, 2010). Interestingly, BIS scores were able to add unique predictive variance to psychological tests in the prediction of borderline personality disorders and problem gambling. The reliability index of the questionnaire was a value of .81 Cronbach's Alpha.

### **Procedure**

The respondents were informed that the data collected would be used for research purpose. Out of 300 instruments that were distributed, the researcher was able to collect 281 out of which 275 were adequately filled for data analysis.

### **Method of Data Analysis**

The hypotheses generated to guide the study were tested by the use of Multiple Regression Analysis (to explain the contribution, joint and relative of the independent variables) to the dependent variable at the 0.5 level of significance.

### **Results**

**Research Question One:** Would there be a significant moderating influence of class on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour?



**Table 1: Model Summary of the multiple regression analysis of the moderating influence of class on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on students' impulsive behaviour**

Model	R	R <sup>2</sup>	Adj. R <sup>2</sup>	SE	Change Statistics				
					R <sup>2</sup> Change	F Change	d f 1	d f 2	Sig. F Change
Cadre									
JSS	.223	.049	.049	8.122	.049	9.524	4	271	.116
SSS	.413	.171	.108	13.041	.108	6.483	4	271	.098

a. Predictions: (Constant), Self-efficacy, emotional intelligence, achievement motivation

b. Dependent Variable: Students' impulsive behaviour

The results in Table 1 indicated that all the predictor variables (self-efficacy, emotional intelligence and achievement motivation) significantly combined to predict students' impulsive behaviour based on class (Senior and Junior Classes). As shown on the Table 4.6 above, it was observed that all the predictor variables accounted for 4.9% variability of the junior students' impulsive behaviour ( $R = .223$ ;  $R^2 = .049$ ;  $\text{Adj. } R^2 = .049$ ;  $F_{(5,401)} = 9.524$ ;  $p < .05$ ). Also, all the predictor variables accounted for 10.8% variability of the senior students' impulsive behaviour ( $R = .223$ ;  $R^2 = .171$ ;  $\text{Adj. } R^2 = .108$ ;  $F_{(5,401)} = 9.524$ ;  $p < .05$ ).

Therefore, the question which stated no significant moderating influence of class on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour was rejected by this finding. This implies that self-efficacy; emotional intelligence and achievement motivation influenced the senior students' impulsive behaviour more compared to the students in junior classes.

**Research Question Two:** Would there be a significant moderating influence of class on the relative contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour?

**Table 2: Beta coefficients and t Ratio for relative contributions of self-efficacy, emotional intelligence and achievement motivation to the prediction of students' impulsive behaviour based on class**

		Unstandardized Coefficients		Standardized Coefficients	t-ratio	Sig.
		B	Std. Error	Beta ( $\beta$ )		
JSS	(Constant)	28.233	5.611		10.504*	.000
	Self-efficacy	.169	.037	.209	2.888*	.063
	Emotional intelligence	.211	.051	.301	4.071**	.027
	Achievement motivation	.128	.029	.155	1.972*	.019
SSS	(Constant)	19.651	6.505		6.697*	.013
	Self-efficacy	.125	.025	.131	2.371*	.009
	Emotional intelligence	.143	.033	.174	3.019**	.031
	Achievement motivation	.117	.019	.112	2.017*	.017

\* Significant at 0.01 level; \*\*Significant at 0.05 level

a. Dependent Variable: Students' impulsive behaviour

The results in Table 2, revealed the strength of causation of the predictor variables on the criterion variable. The most potent predictor of students' impulsive behaviour based on class among the predictor variables of the study is emotional intelligence (JSS:  $\beta = .301$ ;  $t = 4.071$ ;

$p < .05$ ; SSS:  $\beta = .174$ ;  $t = 3.019$ ;  $p < .05$ ). Self-efficacy was the next potent factor (JSS:  $\beta = .209$ ;  $t = 2.888$ ;  $p < .05$ ; SSS:  $\beta = .131$ ;  $t = 2.371$ ;  $p < .05$ ), lastly by achievement motivation (JSS:  $\beta = .155$ ;  $t = 1.972$ ;  $p < .05$ ; SSS:  $\beta = .112$ ;  $t = 2.017$ ;  $p < .05$ ). The question of no significant moderating influence of class on the relative contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour was not sustained by this finding. This implies that there was a relative contribution of self-efficacy, emotional intelligence and achievement motivation to the prediction of students' impulsive behaviour based on class with emotional intelligence as the most potent predictor

## DISCUSSION

The first questions which stated no significant moderating influence of class on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour. The results revealed a significant moderating effect of class on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour. The implication of this finding might be as a result of age differences between JSS students and SSS students. In spite of the moderating influence of class, all the predictors (self-efficacy, emotional intelligence and achievement motivation) combined to influence secondary school students' impulsive behaviour. These findings support the work of previous researchers who found that both cognitive and affective variables influenced students' achievement, behaviours and attitudes (Field, 2001; Khramtsova et al. 2007; Lyubomirsky, 2001; Salami, 2004; Wong, Wong & Chau, 2001). Students who had high self-efficacy, high emotional intelligence and who were happy were motivated to participate in relevant academic activities and developed positive attitudes that led to success in college.

The second question stated that "Would there be a significant moderating influence of class on the relative contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour?" The question of whether or not there is a significant moderating effect of class on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students' impulsive behaviour was rejected by this finding. However, it was revealed that among the three predictor variables female students were more influenced by achievement motivation, while their male counterparts were more influenced by emotional intelligence. It could then be deduced that emotional intelligence was the most potent predictor followed by self-efficacy and lastly by achievement motivation.

Findings from this study reinforce prior evidence linking emotional intelligence with students' behaviours and attitudes (Tagliavia, Tripton, Giannetti & Mattei, 2006; Salami & Ogundokun, 2009) by showing the salutary effects of emotional intelligence on students' attitudes. Students who had high emotional intelligence i.e. could perceive and understand their own emotions and emotions of others and could manage their emotional behaviour performed well in their academic work and developed more positive attitude toward learning. That self-efficacy predicted students' academic behaviours and attitudes corroborates the work of prior researchers who found that self-efficacy was a predictor of students' academic achievement, behaviour, study habits and attitude toward learning (Yalcinalp, 2005, Faulkner & Reeves, 2009; Schwarzer & Fuchs, 2009; Salami & Ogundokun, 2009). Students with high self-efficacy were likely to interpret academic problems as opportunities to succeed and were thus

eager to gain the skills necessary to go on to the next level to solve any academic problem that might come their way.

## CONCLUSION

This study demonstrates the importance of self-efficacy, emotional intelligence and achievement motivation as predictors of impulsive behaviour among secondary school students, as well as considering the moderating effect of class on both the independent and criterion variables. Based on the findings of this study, the following recommendations are made:

This study has shed light on the need to provide an environment that can be a strong source of support for developing adolescents, providing close relationships, good communication, and modeling positive behaviour. Therefore, the school psychologists who are the primary mental health professionals in a school should be tasked with both evaluating students and providing interventions to help remediate behavioral and/or emotional symptoms.

Results from this study have implications for counselling practice and assessment. That emotional intelligence, self-efficacy and achievement motivation predicted students' behaviours and attitudes- intrinsic motivation, self-discipline and respect for lecturers demands that counselling psychologists and lecturers should focus on teaching emotional intelligence as a strategy to develop academic behaviours and attitudes of students in tertiary educational institutions. When students are educated to be emotionally and socially intelligent, their general performance can be improved, while impulsivity could be tamed.

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