The Interactive Influence of Gender on Self-Efficacy, Emotional Intelligence and Achievement Motivation as Predictors of Impulsive behavior among Secondary School Students’in Nigeria

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Abstract
This study investigated the moderating influence of gender on self-efficacy, emotional intelligence, and achievement motivation on impulsive behaviour among students in senior secondary schools. 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 statistical tool.  
The result revealed the predict secondary school students’ impulsive behaviour based on gender. For male students (R = .522; R^2 = .272; Adj. R^2 = .272; F (4,271) = 28.076; p <.05), it was observed that all the predictor variables accounted for 27.2% variability of students’ impulsive behaviour; while 10.1% was observed for female students’ impulsive behaviour (R = .327; R^2 = .107; Adj. R^2 = .101; F (4,271) = 13.343; p <.05). The most potent predictor of secondary school female students’ impulsive behaviour among the predictor variables of the study is achievement motivation (β = .130; t = 2.132; p < .05), followed by emotional intelligence (β= .071; t = 1.779; p <.05), and lastly by self-efficacy (β= .039; t = 1.063; p <.05). For the male students’ impulsive behaviour, the most potent predictor is emotional intelligence (β = .200; t = 5.135; p < .05), followed by self-efficacy...
(β = .151; t = 3.768; p < .05), and achievement motivation (β = .039; t = 1.063; p < .05) was the last potent factor.

Based on the findings, it was recommended among others that appropriate intervention strategies must be designed by the school through the help of school counselor to enhance emotional intelligence, self-efficacy, and academic motivation factors related to students’ behaviours and attitudes.

**Keywords:** Emotional Intelligence, Self-Efficacy, Academic Motivation, Gender

**Introduction**

American Psychiatric Association, 2000 defines impulsivity as the failure to resist an impulse, drive or temptation to perform an act that is harmful to the person or to others. From a biopsychosocial perspective, and in an attempt to combine the characterological, cognitive and behavioral aspects, Moeller, Barratt, Dougherty, Schmitz and Swann (2001) pointed out that a general definition of impulsivity should include the following aspects: 1) decreased sensitivity to negative consequences; 2) rapid, unplanned reactions to stimuli before complete processing of information; and 3) lack of regard for long-term consequences. In the context of psychopathology, impulsivity has been defined in three different ways: (1) swift action without forethought or conscious judgment, (2) behavior without adequate thought, and (3) the tendency to act with less forethought than most individuals of equal ability and knowledge. Thus, impulsivity has been identified as a hallmark of some learning disabilities such as Attention Deficit and Hyperactive Disorder (ADHD) (Barkley, 1997) in relation to depression and anxiety (López, Serrano and Delgado, 2005) and cluster B personality disorders, such as antisocial and borderline.

Jackson and 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.

The period of adolescence is particularly important given its instrumental role in the development of habits and competencies that will affect young people’s wellbeing and resilience throughout their lives. Adolescence is also a vulnerable time in which emotions and risk-taking tendencies are amplified (Dahl, 2004; Rutter, 2001; World Bank, 2006).

One factor that this research suggests might be important in the development of externalizing behavior problems is a sense of self-efficacy for control of emotionally-driven behaviors. The current study examined the relationship between self-reports of predictive self-efficacy and emotional intelligence and achievement motivation in controlling problems that arise as a result of impulsive behavior among children with high levels of externalizing problems in secondary schools.

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 and 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 (Winstanley, Eagle & Robbins, 2006).

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).

Emotional Intelligence has its root in the concept of “social intelligence” that was first identified by Thorndike in 1920. Thorndike defined social intelligence as the ability to understand and manage men and women, boys and girls to act wisely in human relations. Gardner, (1993) included social intelligence as one of the seven intelligence domains in his theory of multiple intelligences. According to Gardner, social intelligence comprised a person’s interpersonal and intrapersonal intelligences. Intrapersonal intelligence relates to one’s intelligence in dealing with oneself, and is the ability to “symbolize complex and highly differentiated sets of feelings.” In contrast, interpersonal intelligence relates to one’s intelligence in dealing with others and is the ability to “notice and make distinctions among other individuals and, in particular, among their moods, temperaments, motivations and intentions.

Emotional Intelligence (EI) was first defined in the early 1990s by Salvo and Mayers as “a type of social intelligence that involves the ability to monitor one's own and others' feeling and emotions, to discriminate among them, and to use this information to guide one's thinking and actions. (Mayer & Salovey, 1993) expanded their definition to include “the verbal and non-verbal appraisal and expression of emotion, the regulation of emotion in the self and others, and the utilization of emotional content in problem-solving.” Conversely, general intelligence has been defined as a person's overall capacity for adaptation through effective cognition and information processing. (Roberts Et al, 2001) In simpler terms, 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. This study focused investigation on 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 determining 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 researchers 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)

1. 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 & Ogunyemi (2010), Mabekoje (2010), Ayodele & Iro-Idoro (2012); Adenuga & Ayodele (2012).

2. 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 (Breauh &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; Ayodele, Aladenusi, & Akinlana, 2014).

**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 gender 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 effect of gender on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students’ impulsive behaviour

<table>
<thead>
<tr>
<th>Gender</th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>SE</th>
<th>R² Change</th>
<th>F Change</th>
<th>d.f 1</th>
<th>d.f 2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>.327</td>
<td>.107</td>
<td>.101</td>
<td>15.591</td>
<td>.107</td>
<td>17.419</td>
<td>4</td>
<td>271</td>
<td>.061</td>
</tr>
</tbody>
</table>

a. Predictions: (Constant), Self-efficacy, emotional intelligence, achievement motivation
b. Dependent Variable: Students’ impulsive behaviour

The results in Table one indicated that when all the predictor variables (self-efficacy, emotional intelligence and achievement motivation) entered into the regression model at once, they combined to predict secondary school students’ impulsive behaviour based on gender. For male students (R = .522; R² = .272; Adj. R² = .272; F (4,271) = 28.076; p <.05), it was observed that all the predictor variables accounted for 27.2% variability of students’ impulsive behaviour; while 10.1% was observed for female students’ impulsive behaviour (R = .327; R² = .107; Adj. R² = .101; F (4,271) = 13.343; p <.05). Therefore, the question of whether or not there is a significant moderating effect of gender 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 male students are more prone to impulsive behaviour compared to their female counterparts.

**Research Question 2:** Would there be a significant moderating influence of gender 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 secondary school students’ impulsive behaviour based on gender

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t-ratio</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta (β)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>19.500</td>
<td>5.111</td>
<td>.3976**</td>
<td>.000</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.081</td>
<td>.019</td>
<td>.039</td>
<td>1.063*</td>
</tr>
<tr>
<td>Emotional intelligence</td>
<td>.098</td>
<td>.022</td>
<td>.071</td>
<td>1.779*</td>
</tr>
<tr>
<td>Achievement motivation</td>
<td>.100</td>
<td>.031</td>
<td>.130</td>
<td>2.132*</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>25.005</td>
<td>7.222</td>
<td>7.419**</td>
<td>.007</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.113</td>
<td>.025</td>
<td>.151</td>
<td>3.768**</td>
</tr>
<tr>
<td>Emotional intelligence</td>
<td>.144</td>
<td>.041</td>
<td>.200</td>
<td>5.135**</td>
</tr>
<tr>
<td>Achievement motivation</td>
<td>.107</td>
<td>.029</td>
<td>.124</td>
<td>2.389*</td>
</tr>
</tbody>
</table>

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

The results in Table 2 revealed the strength of causation of the predictor variables on the criterion variable. The most potent predictor of secondary school female students’ impulsive behaviour among the predictor variables of the study is achievement motivation ($β = .130; t = 2.132; p < .05$), followed by emotional intelligence ($β = .071; t = 1.779; p < .05$), and lastly by self-efficacy ($β = .039; t = 1.063; p < .05$). For the male students’ impulsive behaviour, the most potent predictor is emotional intelligence ($β = .200; t = 5.135; p < .05$), followed by self-efficacy ($β = .151; t = 3.768; p < .05$), and achievement motivation ($β = .039; t = 1.063; p < .05$) was the last potent factor. The question of no moderating influence of gender 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 male and female students’ impulsive behaviour in secondary school.

**Discussion**

The first question stated that “Would there be a significant moderating influence of gender on the joint 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 gender on the joint contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students’ impulsive behaviour was rejected by this finding. All the predictor variables accounted for 27.2% and 10.1% variability of male and female students’ impulsive behaviour respectively. This implies that male students are more prone to impulsive behaviour compared to their female counterparts. The finding contradicts the previous findings of Abosede (2007), Adeyemo (1999) and Salami (1999) that claimed that gender does not consistently have direct impact on outcome variables such as behavioural change. The finding is also a confirmation of the assertion of Adenuga & Ayodele (2010); Burk & Laursen (2008); Lichtenste (2000) in Azeez (2008); and Azeez (2007) that gender is a factor in social behaviour.
The second question stated no significant moderating influence of gender on the relative contribution of self-efficacy, emotional intelligence and achievement motivation on secondary school students’ impulsive behaviour. The outcome of this result shows that self-efficacy, emotional intelligence and achievement motivation influence male and female secondary school students’ impulsive behaviour differently. 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 what will propel impulsive behaviour in male students might not really be the same for female students. The outcome of this finding support the previous works of McMurran, Egan, Blair and Richardson (2001); Mcmurran, & Gilchrist, E. (2007) that impulsivity may act as an obstacle in acquiring or utilizing adequate social problem solving skills especially in combination with other deficits such as poor verbal ability or low intelligence.

The finding that emotional intelligence will predict students’ behaviours and attitudes (intrinsic motivation, self-discipline and respect for lecturers) was supported by data from this study. Findings from this study reinforce prior evidence linking emotional intelligence with students’ behaviours and attitudes (Tagliavia, Tripton, Giannetti & Mattei, 2006; Wong, Wong & Chau, 2001) 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.

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 gender.

References


