

Family Functioning and Adolescents' Academic Engagement in Secondary Schools in Ogun State, Nigeria

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Abstract

Introduction: This study investigated the influence of family functioning on academic engagement of secondary school adolescents in Ogun State, Nigeria.

Method: The study adopted a descriptive cross-sectional survey research design. A sample of 1,800 senior secondary school students was selected through the multi-stage stratified random sampling technique from an estimated population of 103,981 senior secondary school I and II students in the 2015/2016 academic year. The study adopted two instruments for data collection. Data were analysed using descriptive statistics, Pearson Product Moment Correlation, Independent t-test and Multiple Regression analysis.

Results: Findings revealed a significant influence of family functioning on students' academic engagement. Among the factors of family functioning, problem solving was found to be the most potent contributor to academic engagement, followed by general function. Affective involvement was next and this was followed, though negatively, by affective response. Behavior control was the next potent predictor although negatively too. It was also discovered that communication and roles were not good predictors of students' academic engagement.

Conclusion: Students' academic engagement specifically depends on the overall family functioning, and more distinctively on problem solving, affective response, affective involvement and behavior control dimensions of family functioning which will positively influence adolescent students' academic engagement.

Keywords: Adolescents, Family Functioning, Academic Engagement

Introduction

Research on academic engagement has recently received much attention. Academic engagement refers to students' active involvement in learning activities offered by schools [1] and participation in the learning opportunities available in their academic environments [2]. Academic engagement is a continuous, dynamic and iterative process, which helps or hinders students from engaging in further studies [3]. It can also be considered as both a process and an outcome within the educational setting [4]. Simultaneously, knowledge, skills and competences learned or achieved through academic engagement can be considered as proximal academic outcomes rather than academic engagement in studying [4].

Academic engagement experiences are characterized by positive and fulfilling encounters, which includes; vigour, dedication and absorption [2, 5]. Students that are full of vigour vigor are energetic, mentally resilient and willing to invest their efforts in their

academic work. Dedication of students on the other hand, indicates that students find their studies important, meaningful, motivating, inspiring and challenging. Absorption is a mental state in which students concentrate on and are immersed in their studies; and therefore, they feel that they become captive in their studies as time goes by [5]. Hence, educational initiatives often emphasize the socioeconomic factors at the expense of psychological factors [6, 7].

Abundance of literature exists on the relationship between academic engagement and academic success of students of all ages. Studies have consistently revealed a positive relationship between academic engagement and adolescents' academic success; and noted that students with high academic engagement obtain higher academic scores compared to those with lower academic engagement [8, 9, 10].

Multiple factors in the teaching-learning environment interact with students' academic engagement. The teaching-learning environment can be understood as social, psychological and pedagogical settings in which students' academic engagement in learning and development of attitude takes place [11]. A good teaching-learning environment can enhance students' engagement in their studies [1], while a poor teaching-learning environment can bring about undesired challenges in academic engagement [12]. Secondary school adolescents encounter various demands or supports which are linked to physical, psychological, social and organizational factors in the course of their academic pursuit [12, 13].

On one hand, these demands require physical, cognitive and emotional efforts to accomplish their academic work. On the other hand, the resources of the working environment and personal domain may serve to reduce the demands but rather support students' academic achievements and personal development [12, 13]. Excessive demands, however, may cause students to disengage from their studies thus resulting in less favorable personal development [14], while sufficient resources may enhance the chances of student's academic engagement [15].

However, individuals engaged in academic study interact with many factors in their environment, and it is the dynamics of these multiple factors that serve as a core determinant of academic engagement rather than individual factors [2]. Therefore, one meaningful research direction in students' academic engagement is the interrelationship between academic engagement and the various factors that contribute to it. Adolescents' academic engagement has been found to relate to parental involvement. A positive relationship has been found between parental involvement, especially concerning completion of their children's homework and attitude towards school and high school student's academic achievement [16, 17]. Studies have reported that parental involvement is directly related to academic success and academic engagement. This introduces family factor into students' academic engagement.

The family as a factor influencing students' school

experiences is often addressed in research studies on educational outcomes [18]. Although various literatures underline the impact of peer group on students' attitudes and behaviors. Particularly during adolescence [19, 20], a substantial number of studies on students' engagement in school have focused on adult influence [12]. Several aspects of family context have been considered, which include socio-economic and socio-cultural characteristics [22-26], family relationships [27-29], students' perceptions of family support [30, 31], and parenting practices [32-34].

Family functioning can be described as the way in which family members interact, react to and treat other family members. These include variables such as communication styles, traditions, clear roles and boundaries, degree of fusion, flexibility, adaptation and resilience [35, 36]. A family with good family functioning would mean that the family members are willing to solve problems together, show concern for each other and this will invariably result in fewer quarrels [37]. There are significant differences among the factors of problem solving, communication, affective responsiveness, affective involvement, behavior control, and general functioning by tension-type headaches. By improving all the aspects of family functioning, incidence of and severity of tension-type headaches can be reduced [38]. Also, short-term object relations couples therapy has a positive effect on family functioning of clients filing for divorce [39]. When a family experiences stress, an adverse event, a traumatic event, or a positive or negative life change, the family enters a period of adjustment. During this adjustment period, the family system as a whole must adapt and change the way in which it functions [40].

Family functioning is an important aspect of family environment that affects children's physical, social and emotional health. Events within the family and how it functions can be a key factor in building resilience and reducing the current and future risks associated with adverse events and inappropriate conditions. A stimulating and nurturing environment enables the child to learn and make progress. A family that has set rules, roles and boundaries, but is also flexible, is likely to adapt well to change [41]. Healthy functioning families strive to maintain stability and continuity with the family system while adapting to various life events. Healthy functioning can help families when faced with adverse change [41]. Families must also respect personal boundaries, and autonomy of family members.

Clarity in communication improves family functioning [41, 42]. Family functioning changes throughout the life cycle [35] because without the ability to adapt to change, families will have difficulty in transitioning through different stages.

The ability to make changes when appropriate is one of the characteristics that distinguish adolescents in functional families from dysfunctional ones [40]. Through a research, it was revealed that balanced families typically have better functioning throughout their entire life-cycle than families who are not balanced. A family must change its way of functioning frequently throughout the family's

life cycle [35]. The family's life cycle is made up of various stages which the family experiences. Throughout these various stages, families adapt their functioning to meet the needs of all family members [41]. Family functioning in terms of communication, problem solving, responsiveness, and involvement was found to be directly related to the child's psycho-social adjustment as measured by the child's attention, and emotional and behavioral regulation [43].

This study, therefore, investigated family functioning as a predictor of adolescents' academic engagement in secondary schools in Ogun State, Nigeria. Specifically, the study explored the levels of family functioning and academic engagement of adolescent students, the nature of relationship among family functioning, academic engagement and their dimensions, and the differences in academic engagement of adolescents by gender and class. It was hypothesized that family functioning would significantly influence students' academic engagement.

Method

This study adopted a descriptive cross-sectional survey research design. The dependent variable of the study was academic engagement while the independent variable was family functioning.

The population of the study consisted of all the 103,981 senior secondary school students I and II in the 2015/2016 academic year in the three senatorial districts of Ogun State, namely; Ogun East, Ogun West, and Ogun Central Senatorial districts. A sample size of 1,800 senior secondary school students was used for this study. This was selected through the multi-stage stratified random sampling technique. The first stage of selection was the selection of three local government areas from each of the three senatorial districts.

Five senior secondary schools were selected through simple random sampling technique from each of the nine selected local government areas. Forty senior secondary school students; twenty from each SS one and SS two class, were randomly selected from each of the forty-five schools. A total of 1,800 senior secondary school students participated in the study.

Demographic Data Form: Respondents were required to supply their demographic data such as gender, age, and class (SS one, SS two). However, the respondents' names were not included to protect the identity of respondents and ensure sincere completion of the measuring instruments.

Utrecht Work Engagement Scale-Student: Academic engagement was assessed using the UWES-S, a modified version of the UWES-S [5] which was adapted for use in student samples [44]. The UWES-S is a 14 item scale that is made up of three subscales, namely; vigor, dedication and absorption. The scale has a 7-point frequency rating scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach alpha coefficients of 0.68 and 0.80; 0.91 and; 0.73 and 0.75 were reported for vigor, dedication, and absorption respectively [44].

Family Assessment Device: Family functioning was measured using the Family Assessment Device (FAD) [45].

This is a self-report screening instrument that assesses family functioning based on the McMaster Model of Family Functioning (MMFF) which describes the characteristics and structural organization of families to differentiate between healthy and unhealthy patterns. The FAD consists of 60 items rated on a 4-point Likert scale, from "strongly agree" to "strongly disagree". This instrument consists of seven scales; six dimensions of family functioning identified by MMFF and a General Functioning scale. The six scales are problem solving, communication, roles, affective responsiveness, affective involvement, behavior control and general functioning.

The FAD has a high level of consistency across different types of families, acceptable levels of test-retest reliability, low correlations with social desirability, moderate correlations with other self-report measures of family functioning, and it differentiates significantly between clinician-rated healthy and unhealthy families.

The instruments were administered on the participants in their various schools while being assured of the confidentiality of information provided. Four proctors were trained to help the researchers to administer the questionnaires within a period of six weeks and the completed questionnaires were collected on the same day.

Data were analyzed using descriptive statistics to answer research questions while Multiple Regression Analysis was used to test the hypothesis. Results were tested at .05 level of significance.

Results

The data analysis was carried out using the scores obtained from the completed questionnaires. Descriptive statistics, Pearson correlation, Independent t-test and multiple regression were utilized for analysis.

Table 1 shows the descriptive statistics of the study variables with their various dimensions. Participants indicated a moderate level of family functioning (136.137 ± 17.020) along with average levels in the dimensions of communication, affective response, behavior control and general function. However, participants were high in problem solving, roles and affective involvement dimensions of family functioning.

The results of Pearson correlation coefficients in Table 2 reveal correlation indices for the relationship between vigour and absorption ($r = .592$; $p < .05$), between dedication and absorption ($r = .613$; $p < .05$) and between vigour and dedication ($r = .650$; $p < .05$). The factors and total academic engagement were highly correlated as shown between vigour and total academic engagement ($r = .851$; $p < .05$), between dedication and total academic engagement ($r = .883$; $p < .05$), and between absorption and total academic engagement ($r = .854$; $p < .05$). Similar trends were observed for the correlation among the various factors of family functioning, and between each of the factors and total score of family functioning.

According to Table 3, there are no significant gender ($t = .773$; $p > .05$) and class ($t = .617$; $p > .05$) differences in students' academic engagement. This implies that gender and class levels are not significant factors in students'

academic engagement.

Table 4 reveals a significant effect of family functioning on students' academic engagement ($R = .328$; $R^2 = .107$; $R^2_{(adj)} = .104$; $F_{(7,1792)} = 30.802$; $p < .01$). This indicated that family functioning accounted for 10.4% of the variance in students' academic engagement. The hypothesis which stated that family functioning will significantly influence students' academic engagement was accepted by this finding

Among the factors of family functioning, problem solving (coeff = .960; $t = 7.105$; $p < .05$) was the

most potent contributor to academic engagement followed by general function (coeff = .566; $t = 6.937$; $p < .05$). Affective involvement (coeff = .318; $t = 3.406$; $p < .05$) was next followed although negatively by affective response (coeff = -.323; $t = -2.755$; $p < .05$). Behavior control (coeff = -.219; $t = -2.348$; $p < .05$) was the next potent predictor although negatively too. Communication (coeff = .224; $t = 1.834$; $p > .05$) and roles (coeff = -.047; $t = -.513$; $p > .05$) were observed to be poor predictors of students' academic engagement.

Table 1. Descriptive statistics of the studies variables and their dimensions

	Min.	Max.	Range	Mean	Std. Dev.	Skewness SE = .058	Kurtosis SE = .115
Vigor	4	24	20	17.038	4.715	-0.355	-0.606
Dedication	5	30	25	23.100	5.634	-0.727	-0.146
Absorption	5	30	25	21.573	5.323	-0.461	-0.206
Academic Engagement	14	84	70	61.711	13.539	-0.603	0.099
Problem Solving	5	20	15	13.413	2.613	-0.159	0.080
Communication	6	24	18	15.319	2.875	0.053	0.341
Roles	9	32	23	21.294	3.915	-0.051	0.032
Affective Response	6	24	18	15.181	3.075	0.023	0.127
Affective Involvement	7	28	21	17.663	3.778	-0.001	-0.055
Behavior Control	9	36	27	22.082	3.912	0.266	0.455
General Function	15	48	33	31.184	4.714	0.138	0.806
Family Functioning	68	210	142	136.137	17.020	0.437	1.605

Table 2: Correlation indices, for the relationship among study variables and their dimensions

	1	2	3	4	5	6	7	8	9	10	11	12
Vigor	1	.650**	.592**	.851**	.235**	.169**	.114**	.093**	.171**	.100**	.260**	.241**
Dedication		1	.613**	.883**	.228**	.155**	.121**	.071**	.165**	.066**	.223**	.215**
Absorption			1	.854**	.185**	.110**	.108**	.079**	.137**	.098**	.208**	.197**
Academic Engagement				1	.249**	.166**	.133**	.093**	.182**	.101**	.265**	.251**
Problem Solving					1	.333**	.350**	.400**	.263**	.331**	.406**	.609**
Communication						1	.361**	.320**	.336**	.349**	.397**	.626**
Roles							1	.379**	.317**	.377**	.447**	.694**
Affective Response								1	.317**	.396**	.402**	.656**
Affective Involvement									1	.406**	.418**	.658**
Behavior Control										1	.430**	.707**
General Function											1	.773**
Family Functioning												1

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3: Independent t-test analysis of gender and class differences in students' academic engagement

Variable	Factor	No	Mean	Std. Dev.	Statistics
Gender	Male	730	61.4123	13.47379	$t = .773$; $df = 1798$; $p > .05$
	Female	1070	61.9150	13.58593	
Class	SS One	882	61.5102	13.25085	$t = .617$; $df = 1798$; $p > .05$
	SS Two	918	61.9041	13.81477	

Table 4: Model summary and coefficients of dimensions of family functioning on academic engagement of adolescents students

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	32.915	2.461		13.377	.0001
Problem Solving	.960	.135	.185	7.105	.0001
Communication	.224	.122	.047	1.834	.067
Roles	-.047	.092	-.014	-.513	.608
Affective Response	-.323	.117	-.073	-2.755	.006
Affective Involvement	.318	.093	.089	3.406	.001
Behavior Control	-.219	.093	-.063	-2.348	.019
General Function	.566	.082	.197	6.937	.0001
Model Summary	$R = .328$; $R^2 = .107$; $R^2_{(adj)} = .104$; $F_{(7,1792)} = 30.802$; $p < .01$				

a. Dependent Variable: Academic Engagement

b. Predictors: (Constant), General Function, Communication, Affective Response, Affective Involvement, Problem Solving, Roles, Behavior Control

Discussion

This study investigated the influence of family functioning on academic engagement of secondary school adolescent students. The study explored the levels of family functioning and academic engagement, and their dimensions among secondary school adolescent students. The nature of relationships among family functioning and academic engagement and their factors were also considered. Furthermore, the study also determined if significant differences existed in academic engagement of adolescent students by their gender and class levels. Finally, the influence of family functioning on academic engagement of secondary school adolescent students was determined.

This study explored the level of family functioning and academic engagement; and their dimensions among secondary school adolescent students. Results (Table 1) show that participants indicated an average level of family functioning along with average levels in the dimensions of communication, affective response, behavior control and general functioning. However, participants were high in problem solving, roles and affective involvement dimensions of family functioning. Notwithstanding, participants possessed high levels of academic engagement with its various contributing factors of vigor, dedication and absorption.

Correlation analysis (Table 2) reveals various strengths and directions of relationship among family functioning and academic engagement and their dimensions. The factors of academic engagement; vigor, dedication and absorption were positively and significantly related to each other and the total academic engagement scores. The correlation indices for the relationship among the factors ranged from 0.592 to 0.650 which were not too high for inter-dimensional relationships. However, the indices between the factors and total academic engagement were high. They actually ranged between .851 and .883. These results were expected as previous studies utilizing the Utrecht Work Engagement Scale – Student have shown similar findings [46]. In addition, the various factors of family functioning as measured by Family Assessment Device were positively and significantly related to each other as well as to the total score of family functioning. Correlation indices ranging from .263 to .447 were observed within the factors while correlation ranging between 0.609 and 0.773 were observed between the factors and the total family functioning. Previous studies [47] have shown similar results. The relationship among the factors of academic engagement, family functioning and their total scores were also significantly positive. Indices ranging from 0.066 to 0.265 were variously indicated. In essence, factors and scale totals of academic engagement and family functioning were significantly related.

Investigation of significant differences in academic engagement by gender and class level (Table 3) reveals that there were no significant gender and class differences. This implies that male and female adolescent students have similar levels of academic engagement as observed between students in SSI and SSII classes. It may

not be surprising that adolescent students have similar levels of academic engagement. Academic engagement has been described as a complex term that emphasizes students' various patterns in motivation, cognition and behavior [48-51] which may be general for students within the same environment.

Multiple regression analysis (Table 4) indicates a significant effect of family functioning on students' academic engagement, accounting for 10.4% of the variance in students' academic engagement. Hence, the hypothesis of significant influence of family functioning on students' academic engagement was accepted with the conclusion that senior secondary school students' academic engagement will depend on their family functioning. This finding is not unanticipated as results of this study reveal significant influence of family functioning on adolescent students' academic engagement. Actually, the influences of family factors on educational outcomes have been widely researched. Previous studies have shown that the family exerts significant influence on the academic performance of students. The more engagement students experience, the better they perform in their academic achievement [44, 52].

Academic engagement is distinguished from academic resilience in the sense that engagement refers to students' enthusiastic and focused participation in the classroom (i.e. paying attention, displaying interest and working hard) [53]. Results of previous studies have indicated that adolescents from families with balanced cohesion held significantly higher academic self-efficacy beliefs and school engagement levels than those from families with low cohesion [54]. Also, less conflicted and more supportive families may spend more time engaged in activities that foster a child's intellectual development, self-esteem and self-efficacy as factors that may generally promote academic engagement and performance [55].

Moreover, in greater frequency and intensity, it is likely that this form of academic pressure may result in psychosocial distress in the child which can exacerbate under-achievement [56]. Intervention programs might integrate remediation of child skills and enhancement of family resources that can facilitate learning and academic engagement [57].

Findings also show that among the factors of family functioning, problem solving was the most potent contributor to academic engagement followed by general function. Affective involvement was next, followed, though negatively, by affective response. Behavior control was the other potent predictor which affected academic engagement although negatively. Communication and roles were observed to be poor predictors of students' academic engagement. It is not surprising that the results of this study indicated significant positive influence of problem solving, affective involvement and general function on academic engagement. Communication was, however, not a significant factor in the prediction of academic engagement. Global indicators of family functioning, which take into account family problem-solving, roles, communication, affective responsiveness and involvement; and the extent to which set rules and

procedures are used to govern family life have been associated with intellectual functioning and memory in children recovering from Traumatic Brain Injury (TBI) [58].

Problem solving involves the family's ability to resolve issues to a level that maintains effective family functioning [59]. Although families deal with similar ranges of difficulties, effectively functioning families were able to solve their problems whereas ineffectively functioning families were unable to do so [60].

The fact that affective involvement has significant influence on adolescent students' academic engagement is also not surprising. Affective involvement deals with the extent to which the family shows interest in and value particular activities of individual family member [59]. Some types of involvement such as lack of involvement, over-involvement, narcissistic involvement and involvement devoid of feelings may not be edifying, as against empathic involvement and symbiotic involvement. In a way, the findings of this study may show that adolescents are receiving the type of involvement meant for academic engagement.

Communication is essential for a positive functioning of the family. It is described as the verbal exchange of information within a family [59]. However, for family communication not to be a significant predictor of adolescent students' academic engagement leaves more to be desired. In fact, it opens up a gap to be further investigated. However, it may be indicative of the type of communication that goes on within the family. Adolescents may not have been involved in the type of communication that positively impact on their engagement in academic activities.

It is, however, surprising that affective response negatively influenced academic engagement of adolescent students. Affective response is a range of affective responses of family members by looking at the family's responses to affective stimuli. The nature of response received by adolescents may not be seen as positive enough to enhance their engagement in academic work. This needs further investigation. Behavior control defines the pattern a family adopts for handling behavior in three specific areas: physically dangerous situations, situations involving meeting and expressing psycho-biological needs and drives, and situations involving socializing behavior both between family members and with people outside the family system. Behavior control was also found to be of negative influence on academic engagement. Adolescents, by the nature of their developmental stage, may not want to be unduly controlled. This might have translated to the negative effect on academic engagement as observed in this study. Roles do not significantly influence academic engagement, whereas role, as a factor of family functioning involves the repetitive patterns of behavior by which family members fulfill family functions. The extent to which role functions translate to academic engagement may need further investigation. Adolescent students may not be involved in much of family roles which include the maintenance and management of the family system. This could include decision-making functions, boundary and

membership functions, behavior control functions and household finance functions.

Conclusion

It can be concluded that family functioning significantly affects adolescent students' academic engagement, while problem solving, affective involvement and general function dimensions of family functioning positively contribute to adolescent students' academic engagement. This is while, affective response and behavior control negatively contribute to adolescent students' academic engagement.

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