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Teacher-Student Relationship and Social Comparison as Predictors of Academic Motivation among In-School Adolescents in Ibadan North-East

Aderonke Adebola Akintola

Redeemer's University, Ede, Osun State, Nigeria

email: akintolaade@run.edu.ng

Mobile Phone: +234803 387 8244/ +234805 491 6273

Abstract

This study examined the interactive influence of Teacher-Student Relationship and Social Comparison on Academic Motivation among In-School Adolescents in Ibadan North-East. A cross-sectional research design was employed with a multistage sampling technique. A purposive sampling technique was used to select the local government area because of its diverse population of in-school adolescents. A simple random sampling technique by balloting was adopted to select six co-educational secondary schools across the public and private strata, and a convenience sampling technique was utilized to select 383 respondents, 181 males (47.3%) and 202 females (52.7%). Participants responded to self-measures of the Inventory of Teacher-Student Relationships (ITSR), Social Comparison Scale-Revised (ASCS-R), and Academic Motivation Scale-High School Version (AMS-HS 28). Four hypotheses were generated and tested using hierarchical multiple regression. Results revealed teacher-student relationship ($\beta = .32, t = 6.53, p < .01$) and social comparison ($\beta = .35, t = 7.37, p < .01$) significantly predicted academic motivation. Student academic level ($\beta = -11.62, t = -6.40, p < .01$) was also a significant statistical predictor, with the variables $F(5, 377) = 23.05, p < .001$ jointly explaining 22% of the total variance in academic motivation. Based on these findings, it is recommended that the social relations of students should be one of the top priorities of school administrators.

Keywords: *Teacher-student relationship, social comparison, academic motivation*

Introduction

Academic motivation plays a huge role in determining the involvement, perseverance, and academic performance of students. Motivated adolescents tend to demonstrate a steady effort, be engaged in educational activities, and deliver positive outcomes (Lu, 2025). Adolescents are especially vulnerable to contextual and interpersonal factors that affect motivation because of their quick social, emotional, and cognitive growth. The interplay between the students and their peers and the teachers is largely relied on in determining their academic motivation in the school setting.

As demonstrated by the studies carried out all over the world, the prevalence rate of low academic motivation among teenagers is estimated between 30 and 50 percent (Soyer and Acar, 2024; Wang et al., 2024). Over time, an estimated 40% of secondary school students show signs of demotivation, particularly in competitive environments where they are unsupported (Global Education Report, 2023; Wang et al., 2024). Research has indicated that 45 percent of teenagers in Nigeria lack academic motivation. The reasons it is caused by include teacher support, inadequate learning resources, poor peer relationships, and institutional factors such as overcrowded classrooms and socioeconomic pressures (Ogunlade & Bolaji, 2024).

Teacher-Student Relationship (TSR) coined by Pianta and Nemitz (1991) refers to the dynamic bond between teachers and students, shaped by thoughts, feelings, and actions in the classroom, the quality of which has a great influence on academic motivation. The increased engagement levels are associated with warm and positive teacher-student relationships as the

students who feel that they maintain positive relationships with their teachers are more motivated to learn (Alamgir et al., 2024; Wang et al., 2024). On the other hand, tense or ineffective connections might lower students' motivation and sense of community in the classroom (O'Connor & McCartney, 2023). These effects may have direct and indirect impacts on academic emotions, which explains why teacher support is important in affecting motivation.

Social comparison has also been linked to academic motivation, where students compare their abilities among themselves against those of their peers (Lu, 2025; O'Connor & McCartney, 2023). Peer comparisons can maintain a sense of inadequacy or be an inspirational motivator based on upward and downward comparisons. Considering the widespread nature of peer influence in educational settings, it is particularly important to understand such processes. The differences in motivation are also affected by the sociodemographic variables such as gender, level of classes, type of school and school environment. Although the investigations in other countries can support that gender and grade level are associated with differences in motivational profiles, the investigations in Nigeria suggest that school style and family background influence engagement and motivation (Ogunlade & Bolaji, 2024; Soyer and Acar, 2024).

Statement of Problem

Academic motivation is the driving force behind students' engagement and persistence when it comes to learning in an academic environment, and this is found to be dwindling among Nigerian in-school adolescents. Studies have investigated various factors inherent in the drive, including separate examinations of teacher-student relationships and social comparison. To the best of the researcher's knowledge, despite growing data on these individual indicators, research has not simultaneously explored the teacher-student relationship, social comparison, and sociodemographic characteristics as determinants of academic motivation in Nigerian adolescents. To fill up this gap and also offer insights for interventions that improve motivation and academic engagement, this study examined these variables together among adolescents enrolled in school in Ibadan North-East. The research hypotheses formed are as follows:

Research Hypotheses

1. Teacher-student relationship would significantly predict academic motivation among in-school adolescents in Ibadan North-East?
2. Social comparison would significantly predict academic motivation of the in-school adolescents?
3. Socio-demographic variables (gender, class level, school type and school setting) would significantly influence academic motivation among the in-school adolescents?
4. Teacher-student relationship, social comparison, and the socio-demographic variables would significantly and jointly predict academic motivation among in-school adolescents?

Method

Research Design

A cross-sectional research design was employed because data was collected at once, and across different class levels of adolescents, to examine relationships of the research variables-teacher-student relationship, social comparison, gender, class level and school type as independent variables, and academic motivation as the dependent variable among selected in-

school adolescents from various secondary schools in Ibadan North-East. There was no manipulation of any variable.

Participants

The study was carried out in the capital city of Oyo State, Ibadan. There are eleven local government areas (LGAs) in Ibadan, six of which are semi-urban and five of which are urban. One of the urban LGAs, Ibadan North-East, was chosen as the study area because it was easily accessible and represented the urban adolescent population that was the focus of this study. The study population was made of adolescents studying in six co-educational secondary schools in Ibadan North-East, three of which were public schools and three were privately owned schools from where the sample for the study was selected. This selection of these schools was aimed to cover a range of adolescents and family backgrounds of the urban LGA. Four hundred adolescents attending in six Ibadan North-East secondary schools were selected for the study.

Sampling Techniques

This selection of the schools was through simple random sampling technique by balloting. Three of the schools were state-owned and three were privately owned. The margin of error of 5% was used to calculate the sample size by utilizing Taro Yamane (1967) calculation of a finite population of 4,795 pupils. Participants were selected using convenience sampling across all levels of classes, and proportional sampling was also applied in the distribution of questionnaires to the various schools based on the student population. At the stage of analysis, only 383 respondents, 181 males (47.3 %) and 202 females (52.7 %) had valid copies of questionnaire for analysis, and this number is the sample that represents the population.

Procedure

The local government inspector (LGI) permitted data collection in the local government. The researcher proceeded to the randomly chosen schools to meet with the school administrators, from where arrangements were made for the researcher to meet with the adolescents. Both consent and assent forms were given students who were willing to participate in the study after they had been educated on what the research was about. The informed consent contained adequate information concerning the research, the objectives of the research, the role that they play in their participation in this research, and the confidentiality of the gathered information. The willing participants were instructed to take the consent forms home to their parents or guardians whose permission was needed for the students to participate in the study. The adolescents themselves filled adolescent assent form to indicate their willingness to participate. The researcher and her assistant went back the following day for the administration of the questionnaires to the students whose parents had consented. This was the process adopted all through the data gathering. Of the 400 students who responded to the questionnaire, copies from 383 were found eligible for analysis.

Research Instrument

The questionnaire was in parts: the demographics, namely gender, class level and school type, and then the scales as detailed below:

Inventory of Teacher-Student Relationships (ITSR)

The 17-item scale, which was developed by Murray and Zvoch (2011), evaluates students' opinions of teacher-student relationships on three subscales: trust, communication alienation. The scale is in 4-point Likert format with items scored as 1= never true, 2= sometimes true,

3= often true, 4= always true. Sample items include: communication-*"My teacher can tell when something is upsetting me"* trust- *"My teacher respects my feelings,"* and alienation- *"I get upset easily at school,"*. The scale demonstrates solid psychometric properties including strong internal consistency ($\alpha > .72-.89$), with Cronbach alpha coefficients for each subscale reported as: communication: 0.89 trust: 0.84 alienation: 0.72. The ITSR showed satisfactory reliability in the current study (Cronbach's $\alpha = .75$). The alienated items which were negatively structured were reversed and a composite score was got with positive relationships indicated by greater or higher scores above the mean value, and negative connections indicated by lower scores.

Adolescent Social Comparison Scale-Revised (ASCS-R)

The scale is a 10-item scale, which was adapted from Irons and Gilbert (2005). The scale originally had 8 items. However, two culturally relevant items were added, making it a 10-item scale for the study. The scale is a bipolar, semantic differential measure (usually 10-point scale) assessing perceptions of rank, including items on feeling inferior–superior, incompetent–competent, and unlikeable–likeable. It assesses how adolescents compare socially to their classmates. *"How shy do you feel compared to your friends?"* is a sample item. The existing reliability for the scale is ($\alpha = .81$). The internal consistency of the scale in this study was moderate ($\alpha = .60$). In a composite score, upward comparisons are indicated by scores above the mean, and downward comparisons are shown by scores below it. Higher scores indicate more favorable comparisons.

Academic Motivation Scale, High School Version (AMS-HS 28)

This 28-item scale was developed by Vallerand (1989) and is based on Self-Determination Theory. It measures amotivation, extrinsic motivation (introjected, identifiable, and external regulation), and intrinsic motivation (toward accomplishment, stimulation, and knowledge). It is a 5-point Likert scale with responses as 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), 5 (strongly agree). Sample items include extrinsic motivation, *"Because I believe that a high school education will help me prepare for my chosen career,"* intrinsic motivation, *"Because I experience pleasure and satisfaction while learning new things,"* and amotivation, *"To be honest, I'm not sure; I feel like I'm wasting my time in school."* Strong content validity (Aiken's $V = .80$) and reliability (Cronbach's $\alpha = .88-.91$; test-retest $= .86$) have been proven by the scale. For the current study, the scale proved to be very reliable with $\alpha = .91$. Stronger levels of motivation in the corresponding domains are reflected in higher scores.

Data Analysis

IBM SPSS Statistics Version 25.0 was used for the entry and analysis of quantitative data. To summarize study factors and participant characteristics, descriptive statistics were calculated, hierarchical multiple regression analysis was used to test all the hypotheses.

Ethical Considerations

Ethical approval was obtained from the Ethical Committee of the Department of Psychology, Redeemer's University, Ede, Osun State. The study adhered to the Helsinki Declaration (1975). Consent was obtained from school authorities, and participants were provided voluntary informed consent to fill. Measures were implemented to ensure confidentiality, and questionnaires were anonymous, with no identifying information collected.

Results

Test of Social Demographic Variables

Table 1

Frequency Distribution showing Respondents' Socio-demographic Information

Factors	Options	Frequency	%
Gender	Male	181	47.3
	Female	202	52.7
	Total	383	100.0
Class Level	JSS	198	51.7
	SSS	185	48.3
	Total	383	100.0
School Type	Private	181	47.3
	Public	202	52.7
	Total	383	100.0

The socio demographic characteristics of the respondents were presented in Table 1 it was noted that 52.7% of the respondents were females, while 47.3% were males. The class distribution indicated that 51.7% of the respondents were junior secondary school students, while 48.3% were senior secondary school students. Lastly on the type of school, it was noted that 47.3% were in private school, while 52.7% were in public schools.

Test of Prevalence

The test establishing patterns of experience of the research variables among the study participants was conducted by first calculating the mean values from the collected data set. These were utilised as the norm and scores from the norm and above were regarded as high/ positive, while those below were seen as low/ negative. The findings were summarized in Table 4.2

Table 2

Descriptive Summary Showing the Pattern of Students' Academic Motivation, Teacher-Students Relationship, and Social Comparison

Variables	N	Mean	SD	Pattern			
				Low		High	
				<i>F</i>	%	<i>F</i>	%
Academic Motivation	383	105.03	18.49	168	43.9	215	56.1
				Poor		Adequate	
Teacher-Student Relationship	383	45.63	8.84	184	48.0	199	52.0
				Negative		Positive	
Social Comparison	383	65.71	12.97	195	50.9	188	49.1

The result shows the pattern of students' academic motivation, and it was noted that 56.1% had a high level of motivation, while a good percentage of the population of students had a low motivation level towards their academics (43.9%).

The findings on the teacher-student relationship indicated that 52% had an adequate teacher-student relationship, while 48% had a poor teacher-student relationship. This also shows great room for improvement with the teacher-student relationship within secondary schools. The test on social comparison shows an even distribution; however, the number of students with negative social comparison was high. This was in such a way that 50.9% had negative social comparison, while 49.1% had positive social comparison.

Test of Relationship

Table 3

Correlation Matrix Showing Relationships among the Variables of Study

Variables	1	2	3	4	5	6
1. Gender	1					
2. Class Level	.05	1				
3. School Type	.32**	.13*	1			
4. Social Comparison	.11*	-.25**	.04	1		
5. Teacher-Student Relationship	.15**	-.19**	.26**	.15**	1	
6. Academic Motivation	.06	-.31**	-.01	.35**	.32**	1
Mean	-	-	-	65.70	45.63	105.03
SD	-	-	-	12.97	8.85	18.49

** $p < .01$, * $p < .05$, $N = 383$

Table 3 presents the correlation analysis of the study variables and it was observed that academic motivation had a significant positive relationship with social comparison $r(381) = .35$, $p < .01$. This implied that as social comparison tilt towards positive among in-school adolescents, their academic motivation increases. The relationship between the teacher-student relationship and academic motivation was positively significant $r(381) = .32$, $p < .01$. By implication, as the teacher-student relationship seems more adequate and stronger, the academic motivation of in-school adolescents tends to also increase. It was also discovered that social comparison had a significant relationship with the teacher-student relationship $r(381) = .15$, $p < .01$ such that as social comparison tilt towards positive, the teacher-student relationship tends to be stronger.

Tests of the social demographics on academic motivations revealed that gender $r(381) = .06$, $p > .05$, and school type $r(381) = -.01$, $p > .05$ had no significant relationship with academic motivation. However, students' class had a significant relationship with academic motivation $r(381) = -.31$, $p < .01$ and this was such that as in-school adolescents rise higher in class, their academic motivation tends to decrease.

Test of Hypotheses

Table 4

Hierarchical Multiple Linear Regression Showing Predictions on Academic Motivation

Predictors	B	SEB	β	t	95% CI	R ²	Adjusted R ²	ΔR^2	F	p
Step 1						.10	.09	-	(3, 379) = 14.18**	< .001
Gender	2.43	1.90	.07	1.28	[-1.31, 6.17]					.201

Class level	-11.62	1.82	-.31	-6.40**	[-15.19, -8.05]				< .001
School type	.56	1.92	.02	.29	[-3.21, 4.32]				.772
Step 2						.18	.17	.08	(4, 378)= 20.59** < .001
Gender	1.26	1.83	.03	.69	[-2.34, 4.86]				.491
Class level	-8.88	1.80	-.24	-4.94**	[-12.41, -5.35]				< .001
School type	.19	1.83	.01	.10	[-3.42, 3.79]				.918
Social Comparison	.41	.07	.29	5.99**	[.28, .55]				< .001
Step 3						.23	.22	.05	(5, 377)= 23.05** < .001
Gender	.61	1.77	.02	.34	[-2.88, 4.10]				.732
Class level	-6.94	1.78	-.19	-3.90**	[-10.43, -3.44]				< .001
School type	-2.21	1.83	-.06	-1.21	[-5.81, 1.39]				.229
Social Comparison	.38	.07	.27	5.71**	[.25, .52]				< .001
Teacher-Student Relationship	.53	.10	.25	5.22**	[.33, .73]				< .001

Note. $N = 383$. B = unstandardized coefficient; SEB = standard error; β = standardized coefficient; CI = confidence interval. ** $p < .01$

Table 4. shows the predictions of all the variables and these were carried out in three steps. The social demographics were added to the model in step 1. Consistent with the result in Table 4.5, it was noted that gender ($\beta = .07$, $t = 1.28$, $p > .05$) and school type ($\beta = .02$, $t = .29$, $p > .05$) did not significantly predict academic motivation. However, academic class significantly predicted academic motivation ($\beta = -11.62$, $t = -6.40$, $p < .01$) with the model in step 1 indicating a statistically significant prediction $F(3, 379) = 14.18$, $p < .001$ explaining 9% variance in the total variance observed in academic motivation.

In step 2, social comparison was added to the model, and it was noted that social comparison significantly predicted academic motivation positively ($\beta = .29$, $t = 5.99$, $p < .01$). This means that academic motivation increases significantly with positive social comparison. The model in step 2 indicates a statistically significant prediction $F(4, 378) = 14.18$, $p < .001$ explaining 17% variance in the total variance observed in academic motivation (Adjusted $R^2 = .17$). This means that a significant 8% variance could be attributed to social comparison, which is the variable added in step 2 ($\Delta R^2 = .08$, $\Delta F = 35.90$, $p < .01$).

The teacher-student relationship was added to the model in step 3, and the result shows that it predicted academic motivation positively ($\beta = .25$, $t = 5.22$, $p < .01$). This means that academic motivation increases significantly with more positive teacher-student relationships. In step 3, the model indicates a statistically significant prediction $F(5, 377) = 23.05$, $p < .001$ explaining 22% variance in the total variance observed in academic motivation (Adjusted $R^2 = .22$). The result indicates that a significant 5% variance could be attributed to teacher-student relationship, which was the variable added in step 3 ($\Delta R^2 = .05$, $\Delta F = 27.20$, $p < .01$). The hypotheses of significant independent and joint predictions of the variables are thus accepted.

Discussion of Findings

The findings from hypothesis one revealed that the teacher-student relationship positively predicted academic motivation suggests students who perceive a positive relationship with

their teachers are more academically motivated than students who perceive either a negative or no relationship with their teachers. Studies by Leonard et al (2024) and Mansouri (2024) support this, showing that a perceived positive relationship from students towards their teachers encourages students academically to be better. Thus, teachers who prioritize academics and relationships with their students can increasingly motivate students to perform better in school.

Additionally, Hou and Wen (2022) identified factors that can affect the relationship between students and teachers, such as the area of the school, birth order of students, and more, which indicates the complexity of this relationship. Creating a curriculum that supports students and training programs for teachers dedicated to building connections with students, as supported by Pastore and Luder (2021), can effectively increase academic motivation, especially intrinsic motivation. Together, these studies highlight the complex interplay of social relations in academic motivation, with the current study adding value by emphasising the role of the student-teacher relationship in fostering academic motivation.

The current study, from its findings, indicates that students who engage in an upward comparison with their friends display more academic motivation than those who engage in a downward comparison. This is attested to by Fleur et al. (2023), who from their study submitted that social comparison positively predicts academic motivation. The current study findings imply that students who compare themselves to other students who are perceived as higher are motivated to “catch up” to them, which would be translated to their academics, whereas those who compare themselves to students who are “below” them may likely feel that there is no need to grow and thus are not motivated to do better. This suggests that students' relationships with their peers act as either a motivator or not in academics, further suggesting the stimulation of friendly competitions among peers in the classroom, just as observed by Liang et al. (2024) in their study of Students as Partners (SaP).

The result of the joint contribution of socio-demographic variables of class level, gender, and school type on academic motivation posited in hypothesis three revealed that gender, whether male or female, and the school type, whether public or private school, do not predict motivation. However, class level inversely predicted academic motivation such that as students move forward in class level, their motivation decreases, which is supported by Chamberlin et al. (2018), who concluded from their study that increased pressure each new level brings in academics results in students experiencing anxiety and burnout; as such, decreased motivation is expected. Asif et al. (2020) suggest the introduction of participatory activities that put students at the center of the class to motivate students by exciting them.

The results from hypothesis four reveal that gender and school type did not predict academic motivation, academic class, social comparison, and teacher-student relationship predicted academic motivation explains 9%, 8% and 5% variance, respectively, observed in the total variance observed in academic motivation. This reveals the multifaceted nature of academic motivation, and interventions should target these factors jointly to increase the academic motivation of students.

Conclusion

In conclusion, the findings from the study emphasize the complex factors that predict academic motivation among in-school adolescents in Ibadan North-East. The importance of social relationships in inspiring people is highlighted by the considerable positive prediction of teacher-student and social comparison on academic motivation. The findings suggest that teacher training programs ought to be based on promoting warm and nurturing dispositions in the classroom and the ability to develop friendly competition among students.

Also, the regression analysis and correlation tests used in the study provide a strong framework through which one can understand the complex relationships between sociodemographic factors and academic motivation among teenagers in school. The findings contribute to the literature on academic incentive strategies within the education field on top of establishing the hypothesized connections. To gain a better insight into the underlying mechanisms that predict and inform different student populations, longitudinal patterns and insights into the qualitative data could be explored in a future study. Such undertakings will go a long way in advancing evidence-based policies and initiatives that can be successfully used to support the academic journey of students in both secondary schools in Nigeria and other countries.

Limitations of the Study

The reliance of self-reported data is one of the weaknesses of this study; children might exaggerate or make up their answers, trying to impress their professors and peers. Another weakness is that the cross-sectional design of the study does not allow for any inferences based on the information. Even though the research can identify correlations among academic motivation, social comparison, and teacher-student relationships, it cannot determine causation or causal direction of these relationships. Longitudinal studies are needed to explore the effects of changes in the teacher-student relationship and the social comparison over the years on academic motivation. Moreover, the design of the study does not consider key confounding variables such as the history of family, socioeconomic status, and mental health that might influence the independent and dependent variables.

Finally, the sample size is also limited to school-going teenagers in Ibadan North-East, Nigeria, and this may not extend the findings to other groups or other geographical locations. Cultural, socioeconomic, and educational differences in most situations can influence the connection between academic motivation, social comparison, and teacher-student relationships. The future research may consider employing a more diverse sample of other locations and educational establishments to enhance the external validity of the results. Moreover, the focus of the study on adolescents attending schools omits other important groups of students who might show different trends of academic motivation and related variables, including elementary school and tertiary school students.

Recommendation

According to the results of the study, several recommendations could be offered to discuss the implications of academic motivation in adolescents attending school in terms of social comparison and also teacher-student relationships:

To deliver the curriculum that will be appealing to students and educate the teachers on how to make the learning experience welcoming and positive to encourage every student to participate, the learning institutions must focus on relationships in the classroom. To support students' well-being and educate instructors by giving them an outside viewpoint on their methods and pointing them in the direction of a more effective educational system, government regulations should support the training and employment of counsellors in schools.

Additionally, research and data gathering on academic motivation and other underlying characteristics that may predict among secondary school students should be given top priority by government policy makers. Giving priority to long-term research that will provide insightful information on the variables that influence academic motivation over time. Institutions can more efficiently direct resources and efforts toward student motivation by routinely evaluating the success of interventions and modifying tactics, considering empirical data.

Conflict of Interest

The author declares that they have no financial or personal relationships that may have inappropriately influenced the writing of this article- there is no conflict of interest.

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