SOCIAL GOAL ORIENTATION AS PREDICTOR OF SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT IN MATHEMATICS IN ANAMBRA STATE NIGERIA

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ABSTRACT

Students' social goal orientation is a strong indicator and facilitator of effective learning. The study aimed to explore the students' social goal orientation as a predictor of academic achievement in mathematics in Anambra State Nigeria. Four research questions and three null hypotheses were formulated for the study. The study adopted a predictive correlational design. The population comprised 21,204 SS II students from which a sample of 1500 was drawn using the multi-stage procedure to select the sample. A standardized research instrument such as; Social Goal Orientation Questionnaire (SGOQ) was used for data collection. Students' mathematics achievement scores from the state-wide promotion examination were used to represent mathematics achievement. Cronbach's alpha was used to determine the reliability of the items in the instruments. Reliability indices were .82, for social affiliation, .79, for social approval, .68, for social concern, .87, for social responsibility, and .69 for social status. Standard multiple regression was used to analyze the collected data. Research question 1 was answered using multiple regression. Research question 2 was answered using unstandardized β. Research question 3 was answered using adjusted R^2. Research question 4 was answered using standardized β. The null hypothesis 1 was tested using F-test for the regression model. The null hypothesis 2 was tested using a t-test for adjusted R^2. The null hypothesis 3 was tested using a t-test for β at a .05 level of significance. Findings from the study indicated that social status goal orientation is the most predictor of students' academic achievement when compared with the other dimensions of social goal orientation. Also, the analysis of variance indicated that the regression equation was statistically significant $F(5, 1492) = 2.279$, $p < .05$. This implies that at least one of the independent variables significantly predicted academic achievement in mathematics. Based on these findings, it was recommended that, despite the advances in social goal orientation research, further research is still needed to clarify the significance of this adaptive motivational construct in human development and also map out its' nomological network that could lead to acceptable academic outcomes among the Nigerian students.

Keywords: Social Goal Orientation and Academic Achievement.

1.0 INTRODUCTION

In the domain of goal orientation, social goal orientation as an integral part of goal orientation has been proposed as a salient construct that could influence relevant educational outcomes (Urdan & Maehr, 1995). For example, a student may try hard (or not try hard) in school not only for academic reasons but also for social reasons such as to be with friends, to gain the approval of parents, to increase his/her social status, or to help his/her friends with schoolwork. As a result of the paucity of studies that examined the significant impact of social goal orientation in Nigerian educational research, the salient of social goal orientation has been neglected. Therefore, examining the link and influence that social goal orientation could have on students' academic achievement is needed as a panacea to abysmal academic achievement among students.

Investigating students' social goal orientation at the secondary school level will unveil the social aspect of motivation that influences students' academic behavior. Interestingly, examining students' social goal orientation might be even more important in educational psychology research in Nigeria specifically in Anambra State. This will provide an interpretation that will serve as a guide to understanding the different social reasons that motivate and direct students to achieve academically. Therefore, the rationale behind the present study is to examine the assumption that social goal orientation could predict students' academic achievement in mathematics. A general weakness of previous research on social goal orientation is that they focused on only one or two types of social goal orientation such as social approval and social status goal orientation (e.g, Leondari & Gonida, 2007) and failed to take into account the multifaceted nature of social goal orientation. Thus, in this study, the researchers explored the impact of different types of social goal orientation on students' academic achievement in mathematics in Anambra State.

This study differs from other studies as it attempts to analyze how the dimensions of social goal orientation could predict academic achievement in mathematics. As social goal orientation has been included as an extension of achievement goal theory, Urdan and Maehr (1995) have described this construct as the perceived social purpose of trying to achieve academically. Within the classroom learning situation, the reasons for the students to engage and achieve academically could be socially driven, influenced, and externally motivated. In this study, five dimensions of social goal orientation which were classified by the study of Dowson and Mclnerney (2004) were examined such as social affiliation, social approval, social concern, social responsibility, and social status.

For example, for a social approval goal, the reason for engaging in the learning task would be to get the approval of parents and teachers. The focus is on the attainment of social recognition from adults for schoolwork. Social affiliation goal orientation refers to wanting to achieve in order to enhance a sense of belonging to a group and to build or maintain interpersonal relationships. Students who endorsed this goal are motivated when they work with friends or belong to a group. Social concern goal orientation refers to wanting to achieve academically so as to be able to assist others in their academic or personal development. Students who endorsed this goal orientation show concern towards others and express a willingness to help other students with schoolwork. Social responsibility goal orientation refers to wanting to achieve to meet social role obligations and interpersonal or moral commitments. Students who endorsed this goal orientation have the desire to contribute to the development of their immediate environment. Social status goal orientation refers to wanting to achieve so as to

attain wealth or position in later life (Dowson & Mclnerney, 2004). This represented cognitive engagement in learning depending upon the degree of association between academic tasks and status considerations. These explanations helped the study to explore and elucidate how social goal orientation could influence students' desire to engage in the academic context. This is to justify that social goal orientation is concerned with the social reasons to achieve or not to achieve academically.

It will be interesting to state that Dowson and Mclnerney (2001) previously argued that social goal orientation may actually be more salient and predictive of students' global and academic achievement. Also, Dowson and Mclnerney (2003) before the above classification, illustrated that social goal orientation may interact with other multiple academic goals in conflicting, converging, or compensating ways to influence students' academic motivation and performance in real school contexts. According to Weiner (1990) school motivation cannot be divorced from the social fabric in which it is embedded, therefore social factors must be considered in order to gain a deeper understanding of school motivation from a multidimensional perspective. Though in the Nigerian academic environment, social factors have not been given due attention in motivational research, with most studies focusing on internally referenced constructs such as self-esteem, self-concept and self-efficacy beliefs, and achievement goal orientation respectively.

Suffice it to say that an important approach to comprehending how social factors could impact students' learning would be to examine socially oriented goals that involve social purposes for wanting, or not wanting to achieve in academic tasks or contexts. Therefore, examining social goal orientation can create an insight to understand how it can impact on students' learning in the academic situation. The need for students to work with others, to cooperate and comply with the expectations of significant others, the desire to become a leader of the peer group, and the desire to achieve for the sake of the peer group are all important aspects of school motivation that is driven by social variables (Covington, 2000, Urdan & Maehr, 1995).

Research in the domain of social goal orientation has shown the significant impact of social motivation on students' classroom behavior and academic achievement (Martin & Dowson, 2009). Several studies have demonstrated the importance of considering socially oriented goals as predictors of academic achievement. For example, King, Mclnerney, and Watkins (2010) found that social goal orientation related to pursuing relationships with others and helping other students was positively related to effort exertion and engagement in school learning. Wentzel (1999) found that pursuing prosocial goals was positively related to academic achievement. The study of Wentzel concentrated on the relationship between social goal orientation and academic achievement, while the present study concentrated on using social goal orientation to predict students' academic achievement.

Drawing from the study conducted by King, Mclnerny, and Watkins (2011) which investigated how these five dimensions of social goal orientation were correlated with various educational outcomes. A simple correlation analysis indicated that these five socially orientated goals showed that these social goals were positively related to adaptive educational outcomes. Moreover, the researchers also investigated whether these five types of social goal orientation added any additional variance in predicting various educational outcomes. The results indicated that social goal orientation dimensions predict additional variance in academic outcomes. For

example, social concern, social responsibility, and social status goal orientation seem to be the most adaptive types of social goal orientation that have positive predictors of beneficial academic outcomes. Social affiliation and social approval goal orientation did not emerge as predictors of academic outcomes. The study of King et al (2011) examines the relationship and the predictive aspect of the five dimensions of social goal orientation with academic achievement without testing the predictive assumptions in their study. Testing these assumptions is one of the gaps the present study has sought to close. With respect to the findings from the above findings, exploring these attributes of social goal orientation in relation to students' academic achievement may impact positively students' learning processes in Nigeria mostly in Anambra State. In response to these explanations, the researcher operationally defined social goal orientation as the perceived purposes or reasons for trying to achieve more meaningfully in any context either in school or later in life. To this end, examining whether dimensions of social goal orientation can individually and jointly predict academic achievement is the main objective of the present study.

Academic achievement has been defined as scores obtained from examinations that measure the extent to which a person has acquired certain information or mastered certain skills, usually as a result of specific instruction (Meherns & Lehman, 2008). These scores characterized the academic outcome obtained from achievement tests assigned to assess a person's performance in a course of study that he/she has undergone. On this note, the researchers defined academic achievement as a performance outcome that reveals the areas of students' weaknesses and strengths in a particular academic context. Suffice it to say that studies on social goal orientation have awakened the growing interest in psychological research to examine the assumption that the variable could potentially predict academic achievement.

Judging from the observation of students' academic achievement, students' good performance at the secondary school level will be actualized if teachers direct students' beliefs towards endorsing social goal orientation through effective teaching and learning. Considering the importance of students' performance at the secondary school level defined the crucial aspect of academic achievement especially in mathematics as one of the indicators through which students' lifelong learning could be actualized successfully. Students' academic achievement in mathematics is of great importance to nation-building, and interests in the subject at all levels are being intensified. The importance of students' achievement in mathematics made it to be enshrined in the National Policy on Education (NPE) as a core and compulsory subject for all primary and post-primary school students in Nigeria (Federal Republic of Nigeria (FRN, 2013). This is large because of the indispensable role it plays in the advancement of science and technology of any nation (Iyekekpolor and Bulus, 2009).

Despite the social imperative of academic achievement in mathematics, students still perform abysmally in the subject. This was observed in students' performance in the subject in Senior Secondary Certificate Examination (SSCE) conducted by both West African Examination Council (WAEC) and National Examination Council (NECO) over the years. According to Oguguo and Uboh, (2020), the WAEC report (2016- 2020) indicated that in 2016, 2017, 2018, 2019, and 2020, only 35.15%, 35.9%, 25.7%, 35.99%, and 35.10% of the students recorded credit in mathematics. This raises the question as to whom or what organization is to be blamed for this incident. Whether the poor performance be attributed to examination institutions such

as; WAEC, and NECO, as well as education stakeholders like teachers, and government, or the students themselves is an issue that has been left unresolved.

Certainly, with the poor performance of students, the aim of the National Policy on Education (FRN, 2013) towards getting students prepared for higher education seems threatened as there has been a decline in the academic achievement of the students, especially in mathematics at the secondary school level. For instance, Anierobi, Nwikpo, Okeke, and Unachukwu (2018) observed that the declining achievement of secondary school students is obvious in external examinations conducted by West African Examination Council over the past years. This fluctuation in academic achievement mostly in mathematics calls for the attention of the stakeholders in education. In Nigeria's match towards scientific and technological advancement, the country needs nothing short of good performance in mathematics at all levels of schooling. Unfortunately, the performance of students in mathematics at the end of secondary education has not improved despite government efforts to have positive improvement in this aspect.

Various factors have been adduced for the poor performance of students in mathematics such as; feeling of inadequacy or incompetence during mathematics class, lack of motivation and self-confidence, mathematics anxiety, negative attitude developed towards mathematics, lack of interest in mathematics, mathematics fright/phobia and so no (Matawal, 2013). All these negative factors could hinder students from engaging actively in the learning of mathematics which may result in poor achievement in mathematics. In view of the negative factors and poor achievement in mathematics among secondary school students in Nigeria and Anambra State in particular, one could boldly assert that students have failed to manipulate their social goal orientation in the learning of mathematics.

Of all the personal and psychological variables that have attracted researchers in this area of educational achievement, social goal orientation, seems to have been neglected. In an effort to improve students' cognitive and affective outcomes in mathematics, educational psychologist and mathematics educators have continued to search for variables that could be manipulated to predict academic achievement. Such a psychological variable is social goal orientation. For this reason, the present study aimed to investigate these motivational constructs to see how they could impact and predict academic achievement in a collaborative learning situation. Examining this variable could motivate and attract the tacit knowledge of the students toward learning scenarios. The problem is, could social goal orientation predict academic achievement in mathematics? Therefore examining this construct in connection with mathematics achievement is empirically needed in Nigerian educational research. Against this backdrop, the researchers examined social goal orientation as a predictor of secondary school student's academic achievement in mathematics in Anambra State, Nigeria.

Research Questions

1. To what extent are the assumptions of the regression equation for predicting students' academic achievement in mathematics using social goal orientation scores met?
2. What is the nature of the regression equation for predicting students' academic achievement in mathematics using social goal orientation scores?
3. What proportion of variance in students' academic achievement in mathematics is explained by variance in social goal orientation scores?

4. Which of the independent variables best predict students' academic achievement in mathematics?

Hypotheses

1. The regression equation does not significantly predict academic achievement in mathematics using social goal orientation scores.
2. The proportion of variance in students' academic achievement in mathematics explained by variance in social goal orientation is not significant.
3. Social goal orientation does not significantly predict students' academic achievement in mathematics.

2.0 RESEARCH METHOD

The researchers adopted a predictive correlational design and used questionnaires to collect data for the study. The population of this study consisted of 21,204 which represented all the Senior Secondary School Students II in Anambra State. A sample of 1560 SS2 students was drawn from the senior secondary schools in the six education zones in Anambra State. Probability sampling procedure was used to select the respondents. The procedures for the selection were as follows: In stage one, three education zones were selected from the six education zones in the state by simple random sampling. Then in stage two, from each sampled education zone, one local government area (L.G.A) was selected through simple random sampling given a total of three (3) L.G.As. In stage three, from each sampled L.G.A, 10 schools were randomly selected giving a total of 60 schools. Then, from each of the schools, 26 SSII students were selected for the study using a table of simple random sampling. This gave a total number of 1560 students used in the study.

The study adapted a standardized research questionnaire namely, Social Goal Orientation Questionnaire designed by Dowson and Mclnerney (SGOQ, 2004). The students' achievement scores were obtained from that state wide Senior Secondary One (SS1) promotion examination from the schools before the administration of the instruments. The methods used for validating the instruments were face and construct validity by the three experts from the Faculty of Education, Nnamdi Azikiwe University Awka. Cronbach's alpha reliability method was used to determine the internal consistency of the sub-scales for the instrument were such as; social affiliation, social approval, social concern, social responsibility and social status were .82, .79, .68, .87, and .69 respectively. The overall scores of the coefficients is .77 which made the instruments fit for the study. The data were analyzed using standard multiple regression analyses. The t-test for r, F-test and test of significance for β, were used to test hypotheses at .05 level of significance.

2.1 Presentation of Results

The data were first screened for missing values, and 30 respondents had missing representing 3.8%. Hence likewise deletion approach was adopted. After deleting the 60 respondents, the sample size was reduced to 1500. Thereafter, analysis of the study was carried out using standard multiple regression analysis with SPSS 26.

Research question 1: To what extent are the assumptions of the regression equation for predicting students' academic achievement in mathematics using social goal orientation scores met?

Table 1: Correlation and descriptive statistics of independent and dependent variables in the regression model for this study.

Variables	Soc Aff	Soc App	Soc Con	Soc Resp	Soc Stat	Achievement
Social Aff	1					
Soc App	.185	1				
Soc Con	.144	.442	1			
Soc Resp	.190	.394	.387	1		
Soc Stat	.138	.224	.229	.420	1	
Achievement	.148	.002	.056	.012	.499	1
Mean	21.3391	22.9252	22.4359	22.3698	21.5401	57.3151
SD	3.50510	4.40514	3.52871	3.52405	3.20634	8.34331
Variance	12.286	19.405	12.452	12.419	10.291	69.611
Skewness	-.171	.402	.262	-.113	.154	.163
Kurtosis	1.575	.154	.954	1.359	2.157	-.669
VIF	1.058	1.357	1.338	1.455	1.228	--
TF	.945	.737	.747	.687	.814	--

Std. Residual Min = -2.894, Std. residual Max = 2.600

Durbin Waston statistics = 1.904

Soc Aff = Social Affiliation, Soc App = Social Approval, Soc Con = Social Concern, Soc Resp = Social Responsibility, Soc Stat = Social Status and Academic Achievement

Fig 1 the normal P-P plot of standardized residuals data points of academic achievement.
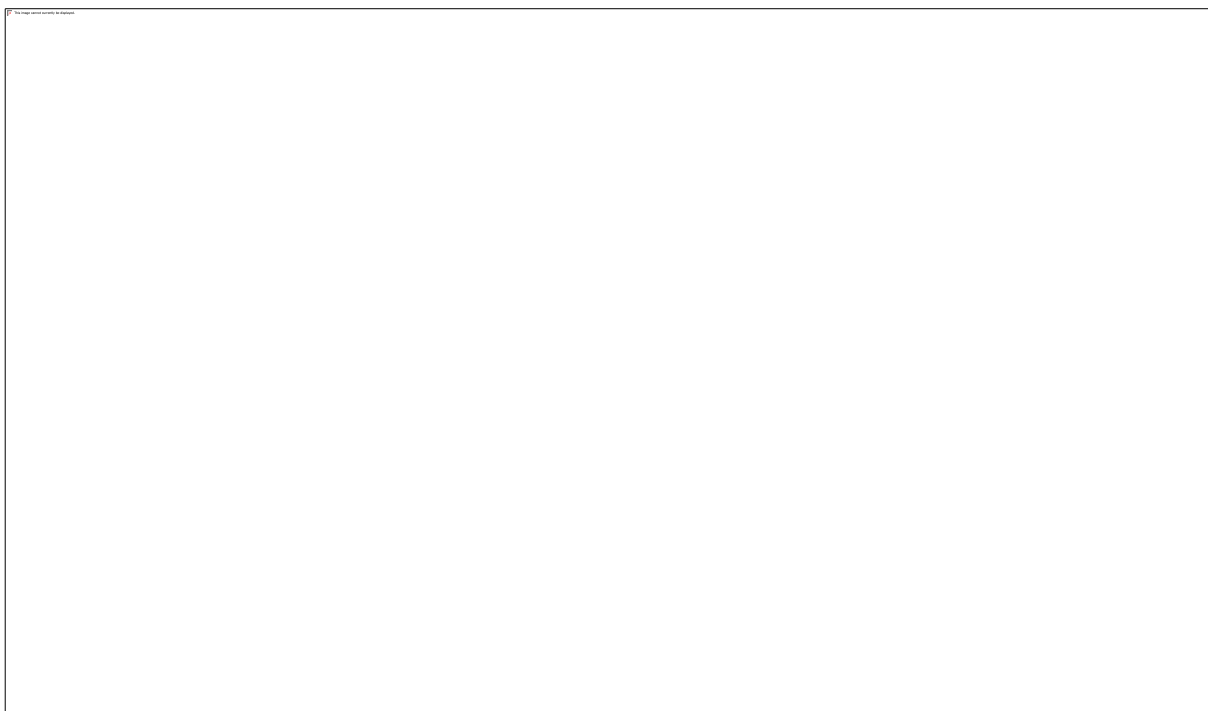
Fig 2 Scatter plot of standardized predicted values of academic achievement.

To find out if the assumptions of the regression model were met, the influence of outliers on the outcome of the result was checked using standardized residual. The result in table 1 indicated that the data contains no outliers (Std. Residual min = -2.894, Std. Residual max = 2.600) as standardized values lies between -3 to 3 as recommended (Tabachnick & Fidell,

2018). To test if the assumption of absence of multicollinearity among the predicting variables was violated; Variance Inflated Factor (VIF) and Tolerance Factor (TF) (Social affiliation, Tolerance Factor = .945, VIF = 1.058; Social approval, Tolerance Factor = .737, VIF = 1.357; Social concern, Tolerance Factor = .747, VIF = 1.338; Social responsibility, Tolerance Factor = .687, VIF = 1.455; Social status, Tolerance Factor = .814, VIF = 1.228) of the independent variables were examined, results in table 1 also show that values are less than 10 for VIF and greater than .20 for TF respectively as recommended by (Schumacker, 2015). Durbin Waston statistics was used to test if the assumption of independent errors was violated; the results showed that Durbin Waston statistics is 1.904 less than 4 but greater than zero as recommended by (Denis, 2020). Hence, the assumption of independent variables were met. Fig 1 shows that the normal P-P plot of standardized residuals data points were completely off the line, but close. Hence, the errors were normally distributed. The scatter plot of standardized predicted values in Fig 2 shows that the data met the assumptions of homogeneity of variance and linearity as the data were distributed above zero in both dimensions and do not show any pattern. The data also met the assumption of non-zero variances (Social affiliation, Variance = 12.286; Social approval, Variance = 19.405; Social concern, Variance = 12.452; Social responsibility, Variance = 12.419; Social status, Variance = 10.291; Academic achievement, Variance = 69.611) as there is no zero variance for any of the variable in the study as shown in table 1.

Research Question 2: What is the nature of the regression equation for predicting students' academic achievement using social goal orientation scores?

Table 2: Regression coefficient for social goal orientation scores.

Model	Unstandardized Beta	Std. Error	Standardized Beta
Constant	61.142	2.117	
Soc Aff	-.028	.063	-.012
Soc App	-.114	.057	-.060
Soc Con	-.007	.071	-.003
Soc Resp	-.110	.074	-.046
Soc Stat	.092	.074	.035

Using the information in table 3, the nature of the regression equation for predicting students' academic achievement in mathematics using social goal orientation scores follows:

$Y = b0 + b1x1 + b2 x 2 + b3 x3 + b4 x4 + b5 x5$

$Y = 61.142 + -.028 x 1+ -.114 x2 + -.007 x 3 + -.110 x4 + .092 x 5$

$Y = 61.142 - 0.028 - 0.228 - 0 .021 - 0.44 + 0.46$

Achievement = 61.142 - 0.028 SA - 0 .228 SAp - 0. 021 S C - 0 .44 SR + 0.46 SS.

The equation shows that for every unit decrease in social affiliation, achievement decreased by -0.028. For every unit decrease in social approval, achievement decreased by - 0.228. For every unit decrease in social concern, achievement decreased by - 0.021. For every unit decrease in social responsibility, achievement decreased by - 0.44 and for every unit increase in social status, achievement increased by 0.46.

Research Question 3: What is the proportion of variance in academic achievement in mathematics scores that is explained by variance in social goal orientation?

Table 3: Regression model summary of social goal orientation scores on students' academic achievement in mathematics.

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
	.087[a]	.008	.004	8.32554

To answer this research question the adjusted multiple regression R square in 3 was used. The result of the table show that using social goal orientation scores yielded an adjusted R squared of .004. This implies that predictors accounted for about 0.4% of the variance scores in mathematics academic achievement.

Research Question 4: Which of the independent variables best predict Students' academic Achievement in Mathematics?

Table 4: Regression coefficient for students' academic achievement scores in mathematics using social goal orientation scores.

Model	Unstandardized Beta	Std. Error	Standardized Beta
Constant	61.142	2.117	
Soc Aff	-.028	.063	-.012
Soc App	-.114	.057	-.060
Soc Con	-.007	.071	-.003
Soc Resp	-.110	.074	-.046
Soc Stat	.092	.074	.035

To answer this research question 4 the standardized regression coefficient (B) in table 4 was used for comparison. The regression coefficients presented in table 4 shows unstandardized (B) and standardized regression coefficient (B) for social affiliation scores are -. 028 and -.012, for social approval scores are -.114 and -.060, for social concern scores are - .007 and -.003, for social responsibility scores are - .110 and -.046, while social status scores are .092 and .035 respectively. Using the standardized beta for comparison, social status is mostly predicted students' academic achievement in mathematics as shown by the B of .035. Social approval is the second most predicted students' academic achievement in mathematics as shown by the B

of -.060. Social responsibility is the third most predicted students' academic achievement in mathematics as shown by the B of -.046. Social affiliation is the fourth most predicted students' academic achievement in mathematics as shown by the B of -.012. While social concern is the fifth most predicted students' academic achievement in mathematics as shown by the B of -.003.

Hypothesis 1: The regression model does not significantly predict academic achievement in mathematics.

Table 5: F- test for regression model of social goal orientation scores on students' academic achievement in mathematics scores.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	789.772	5	157.954	2.279	.045[b]
Residual	103417.507	1492	69.315		
Total	104207.279	1497			

The analysis of variance in the table shows that the regression equation was statistically significant $F_{(5, 1492)} = 2.279$, $p < .05$. This implies that at least one of the independent variables significantly predicted the academic achievement in mathematics.

Hypothesis 2: The proportion of variance in academic achievement scores in mathematics explained by social goal orientation scores is not statistically significant.

Table 6. T-test of adjusted R square of the regression model for this study.

Model	R	R- Square	Adjusted R- Square	Std. Error Estimate	t – cal for adj. R^2	DF	t- crt.	Remark
	.087[a]	.008	.004	8.32554	3.38079	1498	1.960	NS

To test hypothesis 2, t-test for adjustment R square was conducted. Results of the study shown in table 6 indicates that t-critical for adjusted R square is 1.960 while that of the calculated is 3.38079. Since the t-calculated for adjusted R square 3.38079 is less than t-critical 1.960, the null hypothesis which states that the proportion of variance academic achievement scores in mathematics explained by social goal orientation scores is not statistically significant is rejected and the alternative hypothesis is accepted. In other words, the proportion of variance academic achievement scores in mathematics explained by social goal orientation scores is statistically significant. Effect sizes were also evaluated using adjusted R2 comparing it with Cohen's d statistics guideline, where d < 0.20 indicates a minimal effects size, 0.20 < d < 0.50 indicates a small effect size, 0.50 < d < 0.80 indicates a moderate effect size, and d > 0.80 indicates a large effect size. The value of R adjusted square .004 indicates a minimal effect.

Hypothesis 3: Social goal orientation do not significantly predict students' academic achievement in mathematics.

Table 7: t-test of regression coefficient of students' academic achievement scores in mathematics using social goal orientation scores.

Model	Unstandardized Beta	Std. Error	Standardized B	T	p-value	remark
Constant	61.142	2.117		28..881	.000	S
Soc Aff	-.028	.063	-.012	-.436	.663	NS
Soc App	-.114	.057	-.060	-1.995	.046	S
Soc Con	-.007	. 071	-.003	-.096	.924	NS
Soc Resp	-.110	.074	-.046	-1.493	.136	NS
Soc Stat	.092	.074	.035	1.234	.213	NS

Table 7 shows that social status scores significantly predict students' academic achievement scores in mathematics since the p-value is less than .05. Then, social affiliation, social approval, social concern and social responsibility scores do not significantly predict academic achievement in mathematics since their p-values are greater than .05.

3.0 DISCUSSION OF FINDINGS

The researchers found that the proportion of variance in academic achievement scores in mathematics explained by social goal orientation scores is significant. This implies that 0.4% variability in mathematics achievement scores can be explained by dimensions of social goal orientation scores such as social affiliation, social concern, social responsibility social approval and social status. The above finding is in line with King, Mclnerney and Watkins (2011) study that investigated how these five dimensions of social goal orientation added additional variance in predicting various educational outcomes. The results indicated that social goal orientation dimensions predict additional variance in the academic outcomes. Their findings indicated that social concern, social responsibility, and social status goal orientation seem to be the most adaptive types of social goal orientation that have the positive predictors of beneficial academic outcomes. The present study noted that only social status recorded positive predictor of academic achievement in mathematics scores, while other dimensions such as social concern, social responsibility, social affiliation and social approval recorded negative predictors of academic achievement in mathematics scores. This supported the study of King Mclnerney and Watkins (2011) for example, in their study, social concern, social responsibility, and social status goal orientation seem to be the most adaptive types of social goal orientation that have the positive predictors of academic outcomes. Social affiliation and social approval goal orientation did not emerge as predictors of academic outcomes in their study.

4.0 CONCLUSION

The result of this study did not leave any one in doubt concerning the significant prediction that exist between students' social goal orientation and academic achievement in mathematics. The results also showed that some type of social goal orientation such as social status statistically predict academic achievement in mathematics, while other type of social goal

orientation such as social affiliation, social approval social concern and social responsibility do not systematically predict academic achievement in mathematics.

5.0 RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. As a result of lack of research on social goal orientation in Nigerian psychological research, it is recommended that integrating social goal orientation construct in the classroom learning approach through teacher-students' relationship could lead to better understanding of the effects of this construct on students' academic outcomes.
2. With the findings from the study, students should know that the inability to adopt the type of socially oriented goal that could create an insight that will link them in solving academic problem may lead to negative consequences in any academic situation.
3. Students should know that having a socially oriented goal as integral part of achievement motivation can be beneficial in term of facilitating effort and hard work, but it can also lead to feelings of guilt and anxiety if not properly utilized during collaborative learning task.
4. Based on the nature of findings from the study, it was recommended that the researchers and educators in the field of educational psychology should look into the "dark side" of social goal orientation, because pursuing some of these socially oriented construct without proper understanding of how it should be linked with the learning processes could lead to self-handicapping strategies both in learning and in non-learning situations.
5. Despite the advances in social goal orientation research, further research is still needed to clarify the significance of this adaptive or achievement motivational construct in human development and also map out its' nomological network that could lead to acceptable academic outcomes among the Nigerian students.

Authors contributions:

The main contribution of this study is that it elaborates on the idea that students can have multiple beliefs and purposes when they enter the classroom by the inclusion of social goal orientation when being examined using clusters analytic procedure to predict them with academic achievement of the students.

Conflict of Interest:

The authors declared that they do not have any interest that will constitute a real, potential and apparent conflict of interest with respect to their environment in publication. The authors also declared that they do not have financial or other relation with companies, trade associations or group that may gain or lose financially from the result or conclusion in the study.

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