UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.16 (2);
https://unijerps.org
2021 Impact Factor: 5.641; 2020 Impact Factor: 5.355.
July-December, 2023
Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363

PERCEIVED INFLUENCE OF PEER GROUP ON STUDENTS' ACADEMIC ACHIEVEMENT IN CHEMISTRY

Pius Promise Obinna, Ogochukwu Chinelo Odukwe., Achugbu Chinwe. N.J

promisepius850@gmail.com; oc.odukwe@unizik.edu.ng; cn.achugbu@unizik.edu.ng
Department of Science Education Nnamdi Azikiwe University Awka

ABSTRACT

This study investigated on perceived influence of peer group on students' academic achievement in Chemistry in Awka education zone in Anambra state. The study adopted a descriptive survey design. Three research questions guided the study. The population of the study were all S S 2 and 3 secondary school Chemistry students in the zone. The sample of the study was 500 Chemistry students randomly selected from the sample schools from the zone. The instrument for data collection was named Peer Groups Influence Achievement Test Questionnaire (PGIATQ) containing 19 items spread over three clusters A, B, and C adapted from Filade et. al. (2019) peer group questionnaire. The reliability of the instrument was tested using Cronbach alpha technique and value obtained was .70 indicating that the instrument was reliable. Data obtained were analysed using mean to answer all the three research questions. From the findings conclusions and recommendations were made.

Keyword: Secondary school education, Chemistry and Peer group

Introduction

Secondary school education system in Nigeria is described by Federal Republic of Nigeria (FRN) (2014) as a crucial link between primary school, tertiary education and the labour market. Secondary school education is the second tier of Nigerian educational system is of strategic importance to Nigerian development and capacity building process, given the fact that 60% of Nigerian population are made up of students of secondary school age (Lewin, 2019). This apparently underscores the need for improved secondary education that is closely linked to effective school management. The secondary school education subjects which entails; Mathematics, English language, arts, social and science subjects are designed to prepare students for higher education and useful living in the society. The development of the nation is usually measured by the degree of imparting science subjects and extent of growth brought to it through the enterprise of science education and a gate way to it is Chemistry education.

Chemistry is a popular science subject among senior secondary school students due to its nature. According to Okebukola, (2019) Chemistry as a science subject addresses the needs of majority through its relevance and functionality in content, practice and application as many nations like Nigeria need functional Chemistry education that will assist in national development. Chemistry education has been identified to be one of the major

bedrock for the transformation of our national economy as it is reviewed as a visual and conceptual metaphor that was created to emphasize the need to situate chemical concepts, symbolic representations, and chemical substances and reactions in important human contexts. These are importance and educational activities in Chemistry (Olagunju, 2021).

Chemistry educational activities are geared towards ensuring that students achieve mastery of Chemistry educational objectives in the school. In school, the extent to which these educational objectives are achieved is determined by the level of peer pressure, in students' academic achievements which serve as a huge role in the social and emotional development of adolescents (Allen, 2019). As a child grows older and more matured, it becomes more necessary for the external bodies to be involved in his life. The family is not expected to provide all the education required by the growing child. The school which is an established academic institution in which the behaviour of an individual is sharpened to get him equipped for occupational socialization. Their influence starts at an early age and increases through the teenage years, it is natural, healthy and important for adolescent to have and rely on friends as they grow and mature. A peer could be any one you look up to in behaviour or someone who you would think is equal to your age or ability (Hardcastle, 2018). On the other hand, the term "pressure" implies the process that influence people to do something that they might not otherwise choose to do.

The peer group according to Ezewu (2017) is a person's own friends and equal member of the group often have common characteristics or interest. The peer group interests are short rage and temporary. The Oxford Advanced Learners Dictionary (2022) defined peer group as a group of people of same age or social status. The peer group is the first social group outside the home in which the child attempts to gain acceptance and recognition. According to Castrogiovanni (2018), a peer group is a small group of similarly aged; fairly close friends, sharing the same activities. Peer groups consist of individuals that are within ages that are close in years, for instance between range of twelve to fifteen years, the school serves as primary setting for the membership of peer group, they may be in the same class, the same sex and close interaction is of equals (Hartney, 2015). It is generally observed that peer group has a lot of influence on students. This is seen from the role played by the peer group in the life and learning of an individual, it is believed that students feel more comfortable and relaxed among fellow students. Peer groups come with peer pressure which is commonly associated with episodes of adolescent risk taking (such as delinquency, drug abuse, immoral sexual behaviours), because these behaviours commonly occur in the company of peers. Experts have also expressed considerable concern about the poor performance and achievement in external examinations such as Joint Admission Matriculation Board (JAMB), West African Examination Council (WAEC) etc. One of the major reasons outlined as the causes of poor achievement of Chemistry students and other science students in public secondary schools in South Eastern part of Nigeria was attributed to influence of negative peer pressure (Okebukola, 2019; Olagunju, 2021).

It can also have positive effects in school when students are pressured by their peers toward positive behaviour, such as volunteering for charity or excelling in their academic achievements.

Hussain et. al. (2022) revealed that, peer group has significant influence on academic achievement of secondary school students, as such the students peer group must have common goals, interests and motivations for it to be accomplished. Adeyemi et. al. (2019) revealed the reasons students join peer groups in secondary schools is that member students must have common goals, interests and motivations, the peer groups are made up of the same age level and status with each other, they must come from high urge for leadership to form peer group with themselves from similar urge and vice-versa, member students must bound together by purpose or abilities to perceive themselves to be alike in significant ways, member students must care so much about being liked and respected by their peers and therefore will try to impress each other both in academics and other aspects. Allen et. al. (2019) averred that even if high school students' impresses each other in academic and other aspect that both teachers and parents must have influence on the peer group.

Filade et. al. (2019) opined that the reason why teachers approves and influences students peer group in secondary school is that it permits students with sense of belonging to feel heard in the school, creates an effective learning environment for students to participate and function in the group, makes the students more knowledgeable and behave in productive ways through understanding group characteristics and social interactions. Other researchers were of the opinion that the reason why teachers approves and influences students peer group in secondary school is because it help them build group work own cohesion and continually resolves the group`s internal problems and it enhances teacher-students relationship by providing teacher with information on their students' abilities, home, environmental problems, emotional problems and encourage them to use his information in planning their work (Chebet 2018; Uzezi & Deya 2017). Since teachers are involved in the issues of home environmental problems to enhance students' academic achievement, parents must have influence on their children peer group to strengthen the teachers' efforts at school environment for effective academic achievement.

Ajidade (2016) observed that for effective academic achievement among children, parent must contribute in Students direct connection with the (parent) to create expression of affection, interest, understanding and willingness to function in peer group, make sure their children (students) in the group are morally disciplined and better accessible and ascertained that divorced or conflict effected families do not function in the peer group for a better and effective academic achievement. Furthermore, Hussain et. al (2018) reported that for effective academic achievement among peer group parents must contribute to an extent of making sure that their children are properly educated and well-disciplined in the group, encourage their children to participate in positive group activities, making sure that children from broken home do not cause problems that may affects group

productivity, provide them with highly personal and emotional relationship. With all these assertions, views and observations from the literature reviewd the researchers wish to purposefully examine the following; to examine the reasons Chemistry students join peer groups in secondary schools, to identify the teachers' influences of peer groups on Chemistry students' academic achievement in Chemistry in secondary schools and to identify the parents' influences of peer groups on Chemistry students' academic achievement in Chemistry in Awka Education zone of Anambra State.

Research Questions

The following research questions guided the study:

1. What are the reasons Chemistry students join peer groups in secondary schools in Awka Education zone in Anambra State?
2. What are the teachers' influences on peer groups on chemistry students' academic achievement in secondary schools in Awka Education zone in Anambra State?
3. What are the parents' influences on peer groups on chemistry students' academic achievement in secondary schools in Awka Education zone in Anambra State?

Research Method

The design of the study was a descriptive survey research design. The study was carried out in Awka education zone of Anambra state. The population for the study consisted of 4996 senior secondary school students in Awka education zone (Post Primary School Service Commission 2022). Simple random sampling technique was adopted in selecting 500 senior secondary school students (SSS 2 and 3) using standard table of Yamame, sample size of 0.5% of population of 4996 is 500.

Instrument

The instrument for data collection was named Peer Groups Influence Achievement Test Questionnaire (PGIATQ) adapted from Filade et. al. (2019) questionnaire. The instrument consisted of nineteen item questions. To ensure the reliability of PGIATQ, the instrument was administered to a group of twenty students in Awka education zone which is out the place of study. The result obtained was .70 using Cronbach alpha indicating that the instrument was reliable. Data collected in the study were analyzed using weighted mean. The raw scores was presented in tables showing relative frequencies of each item or group of items. A cut-off point of 2.50 which is the mean of the weights given to the response options was used for determining the extent of agreement to each item. The decision rule was that any item with mean score of 2.50 and above would be taken as having attracted positive response, while any item with mean score below 2.50 would be taken to have attracted negative response.

Presentation of Results

The result of this study was presented in line with the research questions

Research Question 1: What are the reasons Chemistry students join peer groups in secondary schools in Awka Education zone in Anambra State?

Table 1: Mean response on reasons Chemistry students join peer groups

S/N	Items	Freq.	SA	A	D	SD	Score	X	Remark
1.	Members have common goals, interests and motivations	500	220 880	260 780	15 30	5 5	1695	3.39	Agree
2.	The peer groups are made up of students in the same age level and status with me	500	300 1200	140 420	30 60	30 30	1710	3.42	Agree
3	Students from high urge for leadership form peer group with students from similar urge and vice-versa	500	310 1240	90 270	40 80	10 10	1600	3.20	Agree
4.	Members are bound together by purpose or abilities who perceive themselves to be alike in significant ways	500	168 672	159 477	91 182	82 82	1413	2.83	Agree
5.	Students care so much about being liked and respected by their peers and therefore will try to impress them both in academics and other aspects	500	312 1248	99 297	80 160	9 9	1714	3.42	Agree
6.	The opportunity to mix with young students from different social background is likely to readily mix up with other students of the same ethnic background.	500	112 448	199 597	120 240	9 9	1294	2.58	Agree

From the table 1 on the reasons Chemistry students join peer groups in secondary schools in Awka education zone of Anambra State revealed that the respondents agreed in items 1, 2, 3, 4, 5 and 6 with various mean values of 3.39, 3.42, 3.20, 2.83, 3.42 and 2.58 above 2.5, while no respondent disagreed in item with mean value lower than 2.5. This means that the reasons Chemistry students join peer groups in secondary schools in Awka education of Anambra State are positive in interest peer group.

Research Question 2: What are the teachers' influences on peer groups on chemistry students' academic achievement in secondary schools in Awka Education zone in Anambra State?

Table 2: Mean responses on teachers' influences on peer groups on Chemistry students' academic achievement

S/N	Items	Freq.	SA	A	D	SD	Score	X	Remark
7.	It permits students with sense of belonging to feel heard in the school	500	210 840	200 600	40 80	50 50	1330	2.66	Agree
8.	Creates an effective learning environment for students to participate and function in the group	500	235 940	182 728	53 106	30 30	1804	3.61	Agree
9.	Makes the students more knowledgeable and behave in productive ways through understanding group characteristics and social interactions	500	221 884	123 369	65 130	91 91	1474	2.90	Agree
10.	Help build group work own cohesion and continually resolves the group`s internal problems	500	281 1124	140 420	69 138	10 10	1692	3.38	Agree
11.	Enhance teacher-students relationship by providing teacher with information on their students' abilities, home, environmental problems, emotional problems and encourage them to use his information in planning their work.	500	150 660	200 600	100 200	50 50	1450	2.90	Agree
12.	Teachers help resolve centralizing the independence of students (decentralizing authority) and the social access of members	500	250 1000	150 450	50 100	50 50	1600	3.20	Agree

From table 2 on the teachers' influences on peer groups on Chemistry students' academic achievement in secondary schools in Awka education zone of Anambra State shows that, the respondents agreed with items 7, 8, 9, 10, 11 and 12 with mean values 2.66, 3.61, 2.90, 3.38, 2.90 and 3.20 above 2.5. No respondent disagree with mean value less than 2.5. This indicates teachers' in the school influence Chemistry students' peer groups that has influenced their academic achievement in secondary schools in Awka education zone of Anambra State

Research Question 3: What are the parents' influences on peer groups on chemistry students' academic achievement in secondary schools in Awka Education zone in Anambra State?

Table 3: Mean responses on parents' influences on peer groups on chemistry students' academic achievement

S/N	Items	Freq.	SA	A	D	SD	Score	X	Remark
13.	Students direct connection to the parent create expression of affection, interest, understanding and willingness to function in the group	500	305 1220	100 300	90 180	5 5	1705	3.60	Agree
14.	Parents make the students in the group morally disciplined and better accessible	500	68 272	59 177	191 382	182 182	1013	2.02	Disagree
15.	Students from divorced or conflict effected families do not function properly in the group	500	61 244	109 327	190 380	140 140	1091	2.18	Disagree
16.	Students of parents properly educated are well disciplined in the group	500	208 832	211 633	48 96	33 33	1504	3.40	Agree
17.	Parents encourage us to participate in my group activities	500	150 600	151 453	120 240	79 79	1462	2.92	Agree
18.	Students from broken home cause problems that affects our group productivity.	500	112 448	99 297	120 240	169 169	1154	2.31	Disagree
19.	Parents provide us with highly personal and emotionally involved relationship	500	254 1016	110 330	84 168	52 52	1566	3.13	Agree

Table 3 on the parents' influences on peer groups on chemistry students' academic achievement in secondary schools in Awka education zone of Anambra State from indicates that the respondents agree with items 13, 16, 17 and 19 with various mean values of 3.60, 3.40, 2.92 and 3.13 above 2.5, while respondents disagreed in items 14, 15 and 18 with different mean values of 2.02, 2.18 and 2.31 less than 2.5. This indicates parents' influences peer groups on Chemistry students' academic achievement in secondary schools in Awka education zone of Anambra State is relatively agreeable.

Discussions

The findings in Table one in agreement with observations of Adeyemi et. al. (2019) and Allen et. al. (2019) whom in their separate observations revealed that the reasons students join peer groups in secondary schools is that member students must have common goals, interests and motivations, the peer groups are made up of

the same age level and status with each other, they must come from high urge for leadership to form peer group with themselves from similar urge and vice-versa, member students must bound together by purpose or abilities to perceive themselves to be alike in significant ways, member students must care so much about being liked and respected by their peers and therefore will try to impress each other both in academics and other aspects. The agreement could be that secondary school Chemistry students in Awka education zone are positively interested in peer group for academic achievement.

Secondly, the findings in table two is in line with Filade et. al. (2019), Chebet (2018) Uzezi and Deya (2017) whom in their different studies reported that reason why teachers approves and influences students peer group in secondary school is that it permits students with sense of belonging to feel heard in the school, creates an effective learning environment for students to participate and function in the group, makes the students more knowledgeable and behave in productive ways through understanding group characteristics and social interactions, help them build group work own cohesion and continually resolves the group`s internal problems and it enhances teacher-students relationship by providing teacher with information on their students' abilities, home, environmental problems, emotional problems and encourage them to use his information in planning their work. The agreement could be that peer group influences academic achievement of Chemistry students in Awka education zone.

Finally, the findings in table three is in consonance to Ajidade (2016) and Hussain et. al (2018) which stated that for effective academic achievement among children, parent must contribute in Students direct connection with the (parent) to create expression of affection, interest, understanding and willingness to function in peer group, make sure their children (students) in the group are morally disciplined and better accessible and ascertained that divorced or conflict effected families do not function in the peer group for a better and effective academic achievement, parents must contribute to an extent of making sure that their children are properly educated and well-disciplined in the group, encourage their children to participate in positive group activities, making sure that children from broken home do not cause problems that may affects group productivity, provide them with highly personal and emotional relationship. The agreement could be that parents in Awka education zone positively influences their children peer group for effective academic achievement in the zone.

Recommendations

Based on the findings of this study the following recommendations are made:

1. The findings from this study is important and had helped in unveiling the influence of peer group on the academic achievement of a Chemistry student as well as making an effort to strike a balance in the educational system in line with the national policy on education.
2. School authorities/teachers should pay attention towards encouraging peer group activities in schools especially in the area of group discussion.
3. The selection of peer groups is an important decision in a student's academic

life. It affects the overall educational life of the student. This decision is often taken by parents themselves at primary level as the child is not in the position to make choices by his own while at secondary level students often follow others particularly their friends which sometime leads in wrong direction. It is therefore strongly suggested to parents to include their children in consultation for selection proper academic institutions especially at the secondary level and so on and also to encourage them in choosing best institute that is properly fit for the field of study they have selected.

4. School counselors, teachers, parents, and other government agencies should actively participate and get involved in role – modeling of students by introducing informative programs that could educate them about peer group influence and thus, refocus them meaningfully towards excellent academic performance; this could help the development of the nation's academic future.

References

Ajibade., B. O. (2016). Influence of Peer Group Relationship on the Academic Performance of Students in Secondary Schools (A Case Study of Selected Secondary Schools in Atiba Local Government Area of Oyo State). *Global Journal of human-social science: A Arts & Humanities - Psychology Volume 16* (4). 1-12

Allen, J. P., Porter, M. R., McFarland, F. C., Marsh, P., & McElhaney, K. B. (2019). The two faces of adolescents success with peers: Adolescent popularity, social adaptation, and deviant behaviour. *Child Development*, 76(3). 747-760.

Castrogiovanni, D. (2018) Adolescence peer groups. *hptt// Bard.Edu/academics/specialproj/darling/adolescence.*

Chebet, E. (2018). The influence of peer group on the academic performance of secondary school students in Bukwo District. [A research report submitted to college of education and open e-learning at Kampala International University for fulfilment of award in Bachelor of Arts in Education].

Ezewu, C. (2017), "Peer effects in the Classroom: *Learning from Gender and Race Variation*", NBER Working Paper 7867.

Federal Republic of Nigeria (2014). *National Policy of Nigeria.* 4th Edition. Yaba: Lagos. NERDC.

Filade, B. A., Bello, A. A., Uwaoma, C. O., Anwanane, B. B. & Nwangburuka, K., (2019). Peer group influence on academic performance of undergraduate students in Babcock University, Ogun State. *African Educational Research Journal, 7*(2), 81-87.

Hardcastle, L. (2018). Psychology of adolescents. New York: McGraw.

Hartney, B. (2015). Peer effects with random assignments: Results for Dartmouth roommates. The Quarterly *Journal of Economics*: MIT Press.

Hussain, S., Ali, R., Zaman, A., Ghaffar, A., Aamir, S. M. & Minaz, M. (2022). The Impact Of Peer Groups On The Academic Achievements Of Secondary School Students. Department of Education Abdul Wali

Khan University Mardan. *Journal of American Science, 9*(11) 11-17.

Lewin, J. T. (2019). Fitting in: Exploring the emotional dimension of adolescent pressure. *Adolescence*, *35*(140) 747-757.

Okebukola, P. A. O. (2019). Curriculum implementation in Nigeria strategies for the 21st century. *Journal of the Institute of Education, Lagos state University, 1*, 1-6.

Olagunju, O. (2021). Corruption control in Nigeria: Holistic approach. Advance in Arts, *Social Sciences and Education Research. 2*(1), 76-84.

Oxford Advanced Learners Dictionary (2020). New 9th *Edition*, New York: Oxford University Press.

Uzezi, J. G. & Deya, G. D. (2017). Relationship between peer group influence and academic achievement of secondary school chemistry students in some selected secondary schools in Jalingo metropolis of Taraba State. *American Journal of Educational Research, 5*(4), 350-356.

Uzezi, J. G. & Deya, G. D. (2017). Relationship between Peer Group Influence and Students' Academic Achievement in Chemistry at Secondary School Level. *American Journal of Educational Research*, *5*(4), 350-356.

West African Examinations Council (2022). West African senior school certificate examination May/June chief examiners' report (Nigeria). Yaba-Lagos, Nigeria.