



PERCEIVED INFLUENCE OF PARENTS' SOCIO-ECONOMIC BACKGROUND ON SECONDARY SCHOOL STUDENTS' PERFORMANCE IN CHEMISTRY IN KONSHISHA, BENUE STATE

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Abstract

Perceived Influence of parents' socio-economic background on chemistry students' academic performance in secondary schools in Konshisha, Benue State was investigated in this study using descriptive survey design. Three objectives, three research questions and three hypotheses guided the study. 405 students' were randomly sampled from a population of 4520 students from 10 secondary schools within the study area. Parents Socio-economic Background Questionnaire (PSBQ) was used for data collection. Validation of the instrument was done by experts in Benue State University, Makurdi. The reliability was ascertained using Cronbach's alpha and it yielded 0.79. Data were analysed using mean and standard deviation to answer research questions. Findings showed that parents socio-economic background influence students' academic performance therefore, the study recommends that governmental and non-governmental organizations should assist students whose parents' socioeconomic background is low by providing the basic academic needs of students to improve their academic performance in Chemistry.

Key words: Parents, Socio-economic- background, Academic performance and Chemistry.

Introduction

Education is a fundamental cornerstone for an individual and societal development and secondary education serves as a critical phase that shapes students' future academic and career paths. Chemistry is one of the science subjects taught at secondary school level and the subject is significant in several spheres of life including agriculture, medicine, pharmacy, housing and myriads of industries. However, students' performance in the subject has been inconsistent in recent years. For instance, Chief Examiner's Report (WAEC, 2016) particularly shows that

Chemistry students' poor performance in Chemistry. Chemistry requires abstract thinking, practical experiments, and a solid understanding of scientific concepts, students' academic performance could be significantly influenced by various factors such as family, parental income, the education level of parents, parents' occupation. Adebayo (2017) highlighted the challenges faced by students from lower socio-economic backgrounds in accessing quality education and the resulting disparities in academic performance. Among these factors, the socio-economic background of

parents stands out as a pivotal determinant. Socio-economic background encompasses elements such as parental income, education level, and occupational status, which collectively influence the resources and support available to students through their families.

A Family is the fundamental unit of social existence. Harrigurus, (2019) confirmed that family is the first social environment the child finds himself or herself. According to Nweke, Ihejirika and Deebom (2018), family is relevant and very significant to the well-being of a child as well as his/her later development in life. The contribution of the family to the training of the child determines how far he/she will go in life. The family unit plays the role of helping the child in determining their future career pursuit through socializing them into their choices of career for self-reliance, by supporting them with the resources available to either pursue the career (Aliyu, 2016). This implies that the importance of family cannot be overemphasized; hence, it forms the basis upon which all other social attributes are built. The family in this context involves everything that surrounds the parents including income.

Parental income refers to the total earnings received by parents from all sources, including salaries, wages, business profits, investments, and other income-generating activities. This income determines the financial resources available to a family, which in turn influences the quality and quantity of educational opportunities that parents can afford for their children. Higher parental income is often associated with better access to educational materials, private tutoring, extracurricular activities, and conducive learning environments, all of which contribute positively to children's academic performance (García & Weiss, 2021). A meta-analysis by Sirin (2020) established that socio-economic status

remains a robust predictor of academic performance, with higher socio-economic status linked to better educational outcomes. Reardon (2020) emphasizes the enduring impact of parental income and education on students' academic success, noting that disparities in these areas contribute to significant achievement gaps. Following parental income is as an aspect of parents' socio-economic background is the parents' educational level. Chetty (2014) also, found that higher parental income is associated with better educational outcomes due to greater access to educational resources and supportive learning environments.

The education level of parents pertains to the degree or level of formal education that the parents have completed. This factor is crucial as it could affect the academic environment at home and the value placed on education within the family. Well-educated parents are more likely to have higher educational expectations for their children and possess the knowledge and skills to assist with academic work. They can create an enriched learning environment and provide the necessary support and motivation for their children to excel academically. Research indicates that children of parents with higher education levels tend to achieve better academic outcomes Davis-Kean, Chambers, Davidson, Kleinert and Sexton (2018). In this context, Olatunji, Akintayo and Ayodele (2021) found that students from higher socio-economic backgrounds tend to perform better in science subjects, including chemistry, due to greater access to educational materials, private tutoring, and supportive learning environments.

Parental occupation refers to the jobs or professions held by parents, which often determine the family's socio-economic status. The nature of a parent occupation affects income stability, work hours, and the amount of time and energy parents can dedicate to their children's education.



Occupations that offer higher salaries and greater job security enable parents to invest more in their children's educational needs. Additionally, certain occupations provide more flexible working hours, allowing parents to be more involved in school activities and offer greater support for their children's academic endeavours (García & Weiss, 2021). Studies by García and Weiss (2021) indicate that parental occupation influences the availability of educational resources and the level of academic performance support provided at home.

Academic performance is the measurement of student achievement across various academic subjects including chemistry. Teachers and education officials typically measure achievement using classroom performance, graduation rates and results from standardized tests. Academic performance is often measured through formal examinations or continuous assessment test, but there is no general agreement on how it is best tested or which aspects is most important procedural knowledge such as skills or declarative knowledge such as facts (Nelson, Devardhi and Panigrahi (2013).

Empirically, Studies have been carried out on influence of parents' socio-economic background on students' academic performance in secondary schools but such evidence is still scarce in the study area. For instance, Erola, Jalonen and Lehti (2020) examined impact of parental income on students' academic achievement among secondary schools in Finland and found that higher parental income significantly improved students' performance in subjects like chemistry, primarily through better educational resources and supportive learning environment. Zhao, Wang and Yue (2021) investigated parental socioeconomic

status and its effect on academic performance among chemistry high school students' in Rural China and observed that students from higher-income families in rural China performed better in chemistry due to increased access to quality educational materials and extracurricular support. Also, Sulemana and Haruna (2021) examined impact of parental education level on students' academic performance in chemistry Senior high school students in Ghana and found that students with more educated parents performed better in chemistry, as these parents were more likely to provide educational support and resources at home. Kim and Choi (2020) investigated parental education and high school students' performance in chemistry in South Korea and found that higher parental education levels were associated with better academic outcomes in chemistry, due to parents' greater ability to assist with homework and encourage academic excellence. Furthermore, Adelakun and Olumide (2021) investigated impact of parental occupation on secondary school students' academic performance in chemistry in Lagos State and found that students whose parents held professional occupations performed better in chemistry compared to those whose parents had non-professional occupations, due to better access to educational resources and a Conducive learning environment at home. Olayiwola and Alabi (2020) examined parental occupation and senior secondary school students' performance in chemistry in Oyo State and found that students with parents in higher-status occupations had better academic outcomes in chemistry, attributed to the parents' ability to provide a supportive learning environment and educational materials.

All the reviewed empirical studies are related to this study on parents' socio-economic background factors including income, educational level and occupation on performance. However, the studies are different because they did not include Benue state geographically. With this gap the current study intends to investigate perceived influenced of parents' socio-economic background on chemistry students' academic performance in secondary schools in Konshisha, Benue State, Nigeria.

Purpose of the Study

This study examined perceived influence of parents' socio-economic background on chemistry students' academic performance in secondary schools in Konshisha, Benue State. Specifically, the study:

1. determined the influence between parental income on students' academic performance in chemistry.
2. examined the influence of parental education level on students' academic performance in chemistry.
3. ascertained the influence of parental occupation on students' academic performance in chemistry

Research Questions

The following research questions guided the study:

1. How does parental income influence the mean academic performance of chemistry students in secondary schools in Konshisha?
2. What is the influence of education level of parents on mean academic performance of students in chemistry?
3. How does parental occupation influence students' mean academic performance in chemistry?

Research Hypotheses

The following null hypotheses were tested at 0.05 level of significance

1. Parental income does not significantly influence the mean academic performance of chemistry students in secondary schools
2. Education level of parents does not significantly influence the mean academic performance of students in chemistry.
3. Parental occupation does not significantly influence students' mean academic performance in chemistry.

Method

The research design for this study was descriptive survey design. The design is considered appropriate for this study because it sought to sample opinions of the respondents who are students within the study area. Survey design is the type that a group of people: Are considered to be representative of the entire group (Emaiku, 2021). The population of the study comprised 4,520 students in all secondary schools in Konshisha Local Government Area of Benue State. Area Education Office, Konshisha Local Government Area, Benue State, Sample size of 405 students was selected using random sampling technique. Socio-economic Background Performance Questionnaire (SBPQ) as constructed by the researcher. The instrument was validated by two experts to improve its validity. The instrument was trial tested on 30 students and it yielded a reliability Cronbach's value of 0.79. The SBPQ has two sections: Section A contained bio-data of respondents' parents' information and section B contained 15 items, structure based on objectives of the study that is five items per objective. The instrument has four points response options of Strongly Agree (SA) Agree (A), Disagree (D) Strongly Disagree (SD) with numerical values of 4, 3, 2, 1 for positive items and the reverse for negative items. The data collected



were collated and subjected to mean and standard deviation to answer research questions. Mean scores of 2.50 and above were taking as having high influence. Meanwhile mean scores below 2.50 were taking as having low influence. Chi-square was used to test hypotheses at 0.05 level of significance.

Results

Research Question One: How does parental income influence the mean academic performance of chemistry students in secondary schools in Konshisha?

Table 1: Mean Ratings and Standard Deviation of Parental Income and the Academic Performance of Students in Chemistry

S/N	Item Description	SA	A	D	SD	\bar{X}	S.D	Decision
1.	My performance is poor because my parents do not pay my school fees early because they do not have money.	89	168	85	38	2.81	0.91	High influence
2.	I performance poorly in chemistry since it is difficult for my parents to provide private teacher for me.	111	159	66	44	2.89	0.96	High influence
3.	I perform high in Chemistry since my parents can buy necessary textbooks for me.	125	140	52	63	2.86	1.06	High influence
4	It's easy for me to score high in Chemistry because my parents can take me on field trips to industries for real life experiences	77	140	52	63	2.62	1.06	Accepted
Cluster mean						2.80	1.06	High influence

Table 1 shows mean ratings of parental income and the academic performance of chemistry students from items one to four showing means of 2.81, 2.89, 2.86, and 2.62 respectively. Also, the cluster mean showed 2.80. This implies that parental income status

influences mean academic performance of students in Chemistry.

Research Question Two: How does the education level of parents influence the academic performance of students in chemistry?

Table 2: Mean Rating and Standard Deviation of Education Level of Parents Influence the Academic Performance of Students in Chemistry

	Item Description	SA	A	D	SD	\bar{X}	S.D	Decision
1	I perform low in Chemistry because my parents are not educated.	124	126	78	52	2.85	1.03	High influence
2	I perform high in Chemistry since my educated parents can assist me in chemistry homework	156	99	88	37	2.98	1.03	High influence
3	My performance in Chemistry is low since my uneducated parents have no study library at home	102	85	144	49	2.63	1.02	High influence
4	My performance in Chemistry is high since my learned parents ensure I study hard at home	133	128	58	61	2.88	1.06	High influence
	Cluster Mean					2.84	1.04	High influence

Table 2 shows mean ratings of parental income and the academic performance of chemistry students from items one to four showing means of 2.85, 2.98, 2.63 and 2.88 respectively. Also, the cluster mean showed 2.84. This implies that educational level of

parents influences mean academic performance of students in Chemistry.

Research Question Three: How does parental occupation influence students' academic performance in chemistry?

Table 3: Mean Ratings and Standard Deviation of Parental Occupation Influence on Students' Mean Academic Performance in Chemistry

S/N	Item Description	SA	A	D	SD	\bar{X}	S. D	Decision
1	My parents' lack of job, hinders them from providing financial support for purchasing my educational materials	155	101	71	53	2.93	1.07	High influence
2	My parents' work does not give them time to help me with chemistry homework and this affect my performance	205	112	39	24	3.31	0.90	High influence
3	My parents' job makes them to find it difficult to expose me in scientific discussions which affects my performance in school.	164	98	77	41	3.01	1.03	High influence
4	My parents do not motivate me to perform well in chemistry because they do not have job.		146	75	39	2.91	0.96	High influence
	Cluster Mean					3.04	0.99	High influence



Table 3 shows mean ratings of parental income and the academic performance of chemistry students from items one to four showing means of 12 2.94, 3.31, 3.01, and 2.9 respectively. Also, the cluster mean showed 3.04. This implies that occupation of parents influences mean academic performance of students in Chemistry.

Discussion of Findings

This study investigated perceived influence of parents' socio-economic background on chemistry students' academic performance in secondary schools in Konshisha, Benue State and found that parental income status influences academic performance of Chemistry students. This study agrees with Erola et al. (2020) who found that higher parental income significantly improved students' performance in subjects like chemistry. This study agrees with Zhao et al. (2021) who observed that students from higher-income families in rural China performed better in chemistry due to increased access to quality educational materials and extracurricular support.

Also, this found that educational level of parents influences academic performance of Chemistry students. This agrees with Sulemana and Haruna (2021) who found that students with more educated parents performed better in chemistry, as these parents were more likely to provide educational support and resources at home. The study further agrees with Kim and Choi (2020) who found that higher parental education levels were associated with better academic outcomes in chemistry, due to parents' greater ability to assist with homework and encourage academic excellence.

Furthermore, the study found that occupation of parents influences academic performance of Chemistry students. The study concord with Adelakun and Olumide (2021) who established that students whose parents held professional occupations performed better in chemistry compared to those whose parents had non-professional occupations, due to better access to educational resources and a Conducive learning environment at home. The study further agrees with Olayiwola and Alabi (2020) who found that students with parents in higher-status occupations had better academic outcomes in chemistry, attributed to the parents' ability to provide a supportive learning environment and educational materials. The agreement of the findings could be due to the fact that parental occupation, education level and income determines the level exposure and value, salaries, wages, business profits, investments, and other income-generating activities. This income determines the financial resources available to a family, which in turn influences the quality and quantity of educational opportunities that parents can afford for their children. Higher parental income is often associated with better access to educational materials, private tutoring, extracurricular activities, and conducive learning environments, all of which contribute positively to children's academic performance (García & Weiss, 2021).

Conclusion/Recommendation

Based on the findings, it was concluded that parents socio-economic background influence students' academic performance. Therefore, it is recommended that:

1. Governmental and non- governmental organizations should assist students whose parents socioeconomic background is low by providing the necessary materials and financial assistance that will make them comfortable to learn very well like those from high socio-economic status.
2. Parents should work very hard to make sure they are able to provide conducive home environment for their wards and children so that they can also feel comfortable to learn when at home and improve their academic performance in school.
3. Government should try to create a forum whereby parents will be given orientation on the need for them to be educated even at adulthood since education level has positive influence on their children's education. They should be encouraged to go for programmes like sandwich, Open University, and other forms of continuing education that might not conflict with their other activities

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