

## Modelling the causes and effects of single parenthood on academic performance of students in southwestern part of Nigeria

Lanre Adebara \*, Folashade Adeola Bolarinwa and Bamidele Ajayi

*Department of Statistics, Federal Polytechnic Ado-Ekiti, Ekiti State, Nigeria.*

World Journal of Advanced Research and Reviews, 2025, 26(02), 1731-1738

Publication history: Received on 21 March 2025; revised on 06 May 2025; accepted on 09 May 2025

Article DOI: <https://doi.org/10.30574/wjarr.2025.26.2.1560>

### Abstract

This paper examines modelling the causes and effect of single parenthood on academic performance of students in southwestern part of Nigeria. Questionnaire was administered to 500 respondents in both university and polytechnic in three states of southwestern part of Nigeria for data collection. Four potential causes (poverty, death of spouse, marital violence (divorce and separation), and extra marital pregnancy) and effects (low commitment, lack of attention for children, poor financial strength and low impact on the wellbeing of students) of single parenthood were considered for modelling. Challenges that single parenting students encountered on their academic performance were examined such as single parents do not have enough time to show commitment to their children's school academic activities, students from single parents easily drop out from school, students from single parent perform less academically than students from both parents, coming from single parenting home psychologically may put challenges on academic performance of students and single parents lack financial strength in providing for their children's academic activities. Students from single parent category have the highest percentage of respondents from Ekiti and Ondo state while students from both parent category have the highest percentage of respondent in Osun state. Multiple regression is used for the analysis to determine the causes and effects of single parenting on the academic performance of the students and conclusively the results shows that death and low impact on the wellbeing of the students are the primary cause and effect of single parent on academic performance of students in southwestern states in Nigeria.

**Keywords:** Modelling; Single parenthood; Multiple regression; Causes; Effects

### 1. Introduction

Statistical modeling is the use of mathematical models and statistical assumptions to generate sample data and make predictions about the real world. A statistical model is a collection of probability distributions on a set of all possible outcomes of an experiment.

Single parenting is the practice of supporting a kid solely via one's own means, including money, physical care, psychological support, and emotional support. This means that you must earn the majority of the revenue and manage the home expenses on your own. It's also important to emphasize that all broken or dysfunctional families have a single parent, even though not all dysfunctional families have. Building and maintaining the pillars that support the family, a vast institution, is what parenting is all about. Parents have a responsibility to teach their children about social standards and values in addition to overseeing their psychological and emotional development. In our society, being a single parent is not particularly accepted. Children raised by single parents and their parents are stigmatized by social groups. Mabuza et al (2014). Being a single parent is not generally accepted in our society. Parents have a big impact on a child's behavior, personality, and health. Polanin, et al., (2021). The reality that caring for a child involves less labor but the same amount of work. Iranmanesh and associates (2020). A single parent has to take care of the house and provide financial assistance for their family at the same time. However, single parents seldom ever spent time with their

\* Corresponding author: Lanre Adebara

kids because they were attempting to maintain their stability. The physical, social, and emotional development of kids has become a growing issue in education. According to Sackey et al. (2022), children of single-parent households commonly deal with classmates who lack confidence and struggle to establish friends in the school. The most frequent reason for the increase in single-parent families a few decades ago was the spouse's death.

However, additional causes of single parenthood are on the rise these days, including parental separation or divorce, unintended pregnancies, and the decision to become a single parent through donor insemination or adoption. Ntondwe (2024), Bhat and Patil (2019), Ali and Soomar (2019), and Bharat (1988) all address the various causes of single parenthood. Certain situations, like divorce, adoption, artificial insemination, and surrogate motherhood, are choices, while other situations are the consequence of unforeseen circumstances, like a death, child abuse, neglect, or abandonment by one of the biological parents, or an unmarried woman or teenage girl getting pregnant after a brief

According to Salami and Alamode (2000), "single parenting leaves the role in the hands of a single parent and results from divorce, separation of various kinds, having children from wedlock or death of one spouse. "Abudu and Fuseini (2014) went one step further and stated that "a child would lose the support that would have emanated from that parent when one of the parents is absent from their life, creating a gap."

Since intact families are essential to children's socialization, single parenthood has a significant effect on academic results. A child's academic performance (AP) is significantly impacted by having both parents living at home. According to Zhou (2014) and Uzuki and Suetomi (2015), Every country places a high value on education, which is discussed, planned, and processed at all levels of government as well as in the family and community. In this paper, we model the causes (poverty, death of spouse (divorce and separation), marital violence and extra marital pregnancy) and effects (low commitment, lack of attention for children, poor financial strength and low impact on the wellbeing of students) of single parenthood and examine the type of challenges faced by single parents on academic performance of in three states (Ondo, Ekiti, Osun) of southwestern part of Nigeria.

### *Aim and Objectives*

The aim of this study is to investigate the causes and effects posed by single parenting on the academics of students.

### **2. General Objectives**

This is to examine the causes and effects of single parenthood on academic performance of tertiary institution students in southwestern part of Nigeria

### **3. Special Objectives**

- To identify and model causes and effects of single parenting
- To examine the type of challenges faced by single parents' students on academic performance
- In tertiary institution in south western part of Nigeria

---

### **4. Material and methods**

Multiple regression is used for the analysis to determine the causes and effects of single parenting on the academic performance of the students.

The following is the equation for multiple linear regression:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

$X_1$ ,  $X_2$ , and  $X_n$  are the independent variables in this equation. The intercept is denoted by  $\beta_0$ , the dependent variable is  $Y$ . The error term is represented by  $\varepsilon$ , whereas the coefficients or slopes for each independent variable are denoted by  $\beta_1$ ,  $\beta_2$ , ...,  $\beta_n$ .

When other variables are held constant in multiple regression, the coefficients ( $\beta_1$ ,  $\beta_2$ , ...,  $\beta_n$ ) measure the effect of each independent variable on the dependent variable. A positive correlation denotes a favorable association, whilst a negative correlation points to an unfavorable one. The change in

the dependent variable corresponding to a one-unit change in the corresponding independent variable is represented by the coefficient's magnitude.

**Table 1** The table below shows the frequency of the respondent by Level

Level	Frequency			Percent		
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
Year 1/NDI	75	83	90	15.0	16.6	18.0
Year 2/NDII	118	115	90	23.6	23.0	18.0
Year 3/HNDI	103	69	122	20.6	13.8	24.4
Year 4/HNDII	131	120	124	26.2	24.0	24.8
Year 5 and Above	73	113	74	14.6	22.6	14.8
Total	500	500	500	100	100	100

**Table 2** The table below shows the frequency of the respondent by Grade

Grade	Frequency			Percent		
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
3rd Class/Pass	87	65	53	17.4	13.0	10.6
2nd Class Lower/Lower Credit	137	154	151	27.4	30.8	30.2
2nd Class Upper/Upper Credit	170	218	182	34.0	43.6	36.4
1st Class/Distinction	106	63	114	21.2	12.6	22.8

**Table 3** The table below shows the frequency of the respondent by category of parent

Category of Parent	Frequency			Percent		
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
Single Parent	333	270	204	66.6	54.0	40.8
Both Parent	167	230	296	33.4	46.0	59.2
Total	500	500	500	100.0	100.0	100.0

**Table 4** The table showing the Frequency of Responses for the causes of Single Parenthood in Ekiti Ondo Osun State

Causes	Strongly agree			Agree			Disagree			Strongly Disagree		
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
Poverty	151	81	107	191	131	136	118	210	160	40	78	97
Death of spouse	180	121	146	209	223	199	75	125	83	36	31	72
Marital Violence	194	149	143	207	208	211	65	107	78	34	36	68
Extra Marital Pregnancy	188	120	126	218	204	200	60	123	98	34	53	76

**Table 5** Regression for the Causes of Single Parenthood on academic performance for Ekiti Ondo Osun

Model	Unstandardized Coefficients						Standardized Coefficients								
	B			Std. Error			Beta			t			Sig.		
	Ekiti	Ond o	Osu n	Ekit i	Ond o	Osu n	Ekit i	Ond o	Osu n	Ekiti	Ondo	Osun	Ekit i	Ond o	Osu n
(constant)	3.651	1.828	1.080	.238	.166	.107				15.358	10.991	10.127	.000	.000	.000
Poverty	-.087	.008	.032	.051	.044	.053	-.080	.008	.035	-1.693	.171	.601	.091	.864	.548
Death of spouse	-.097	.173	.166	.056	.056	.078	-.086	.171	.178	-1.745	3.079	2.126	.082	.002	.034
Marital Violence	-.060	.004	.397	.053	.054	.085	-.053	.004	.417	-1.139	.077	4.654	.255	.939	.000
Extramartial Pregnancy	-.104	.077	-.018	.056	.050	.074	-.089	.083	-.019	-1.850	1.555	-.242	.065	.121	.809

- Model 1: To model the causes of single parenting on the academic performance of the students.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Y = Grade

X<sub>1</sub> = Poverty

X<sub>2</sub> = Death

X<sub>3</sub> = Marital Violence (Divorce and Separation)

X<sub>4</sub> = Extra Marital Pregnancy.

E = Error

Ekiti State

Ekiti State

$$Y = 3.651 - 0.087 X_1 - 0.097 X_2 - 0.060 X_3 - 0.104 X_4$$

- Interpretation:** A unit change in the grade of the students is determined by 0.087 decrease of poverty, 0.097 decrease of death, 0.060 decrease of marital violence and 0.104 decrease of extra marital pregnancy.

Ondo State

$$Y = 1.828 + 0.008 X_1 - 0.173 X_2 + 0.004 X_3 + 0.077 X_4$$

- Interpretation:** A unit change in the grade of the students is determined by 0.008 increase of poverty, 0.173 decrease of death, 0.004 increase of marital violence and 0.077 increase of extra marital pregnancy.

Osun State

$$Y = 1.080 + 0.032 X_1 + 0.166 X_2 + 0.397 X_3 - 0.018 X_4 + \varepsilon$$

**Interpretation:** A unit change in grade of student is determined by 0.032 increase in poverty, 0.166 increase in death and 0.397 increase in marital violence and 0.018 decrease of extra marital pregnancy.

**Table 6** The table below shows the Frequency of Responses for the Effects of Single Parenthood. on Academic Performance in Ekiti Ondo Osun

Effects	Strongly agree			Agree			Disagree			Strongly Disagree		
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
Low Commitment	151	135	140	191	205	177	118	118	128	40	42	97
Lack of Attention	180	116	98	209	154	163	75	198	175	36	32	72
Poor Financial Strength	194	135	117	207	177	186	65	147	135	34	41	68
Low Impact on the Wellbeing of Children	161	125	92	207	189	177	99	152	146	33	34	76

**Table 7** Regression for the effect of Single Parenthood on academic performance

Model	Unstandardized Coefficients						Standardized Coefficients								
	B			Std. Error			Beta			t			Sig.		
	Ek iti	On do	Os un	Ek iti	On do	Os un	Ek iti	On do	Os un	Ek iti	On do	Os un	Ek iti	On do	Os un
(constant)	3.641	2.086	0.970	.235	.165	.109				15.516	12.611	8.903	.000	.000	.000
Low Commitment	-.022	.155	-.048	.054	.051	.055	-.020	.161	-.050	-.404	3.031	-.873	.687	.003	.383
Lack_Of_Attention_For_Children	-.118	-.058	.144	.053	.050	.068	-.108	-.060	.145	-.221	1.165	2.120	.027	.245	.035
Poor_Financial_Strength	-.092	.013	.300	.056	.050	.057	-.076	.014	.308	-.163	.263	5.283	.002	.793	.000
Low_Impact_on_the_Wellbeing_of_students	-.109	.053	.271	.056	.051	.054	-.094	.054	.283	-.194	1.041	5.000	.053	.298	.809

Model 2: To know the effect of the single parenting on the academic performance of the students.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Y = Grade

X<sub>1</sub> = Low Commitment

X<sub>2</sub> = Lack of attention for the children

X<sub>3</sub> = Poor financial strength

X<sub>4</sub> = Low impact on the wellbeing of the children

E = Error

Ekiti State

$$Y = 3.641 - 0.022 X_1 - 0.118 X_2 - 0.092 X_3 - 0.109 X_4$$

- **Interpretation:** A unit change in the grade of students is determined by 0.022 decrease of low commitment, 0.118 decrease of lack of attention for the children, 0.092 decrease of poor financial strength and 0.109 decrease of low impact on the well-being of the students.

Ondo State

$$Y = 2.086 + 0.055X_1 - 0.058X_2 + 0.013X_3 + 0.053X_4$$

- **Interpretation:** In this model, a unit change in the grade of students is determined by 0.155 increase of low commitment, -0.058 decrease of lack of attention for the children, 0.013 increase of poor financial strength and 0.053 increase of low impact on the wellbeing of the students.

Osun State

$$Y = 0.970 - 0.048x_1 + 0.144x_2 + 0.300x_3 + 0.271x_4 + \varepsilon$$

- **Interpretation:** In this model, a unit change in grade of student caused by 0.048 decrease in low commitment, 0.144 increase in lack of attention for children, 0.300 poor financial strength and 0.271 increase in low impact on the wellbeing of the students.

**Table 8** Challenges faced by single parents' students on academic performance

QUESTIONS	SA			A			D			SD		
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
Single parents do not have enough time to show commitment to their children's school academic activities	188	135	140	208	206	177	65	118	128	39	41	55
Students from single parents easily drop out from school	143	81	84	196	148	137	112	201	184	49	70	95
Students from single parent perform less academically than Students from both parents	161	161	118	172	172	163	127	127	143	40	40	76
Coming from single parenting home psychologically may put challenges on academic performance of students	160	160	90	198	198	195	109	109	160	33	33	55
Single parents lack financial strength in providing for their children's academic activities	194	135	117	210	178	186	72	146	135	24	41	62

## 5. Result and Discussion

It is discovered from the table 1 that Year 4 /Hnd II level has highest percentage of respondents by level and from table 2, second (2nd) class upper/upper credit under respondent by grade has the highest percentage of respondent in all the three states (Ekiti, Ondo, Osun), also from table 3 students from single parent category have the highest percentage of respondent from Ekiti and Ondo state and students from both parent category have the highest percentage of respondent in Osun state.

From the regression model 1 that model causes of single parenting on the academic performance of the students, a unit change in the grade of the students is determined by 0.087 decrease of poverty, 0.097 decrease of death of spouse, 0.060 decrease of marital violence and 0.104 decrease of extra marital pregnancy in Ekiti state, a unit change in the grade of the students is determined by 0.008 increase of poverty, 0.173 decrease of death of spouse, 0.004 increase of marital violence and 0.077 increase of extra marital pregnancy in Ondo state, a unit change in grade of student is determined by 0.032 increase in poverty, 0.166 increase in death of spouse and 0.397 increase in marital violence and 0.018 decrease of extra marital pregnancy in Osun state.

From the regression model 2 that model the effect of the single parenting on the academic performance of the students, a unit change in the grade of the students is determined by 0.022 decrease of low commitment, 0.118 decrease of lack of attention for the children, 0.092 decrease of poor financial strength and 0.109 decrease of low impact on the well-

being of the children in Ekiti state, a unit change in the grade of the students is determined by 0.155 increase of low commitment, -0.058 decrease of lack of attention for the children, 0.013 increase of poor financial strength and 0.053 increase of low impact on the wellbeing of the children in Ondo state. A unit change in grade of student caused by 0.048 decrease in low commitment, 0.144 increase in lack of attention for children, 0.300 poor financial strength and 0.271 increase in low impact on the wellbeing of the students in Osun state. Also from table 8, it reveals that respondents from the three states (Ekiti, Ondo, Osun) agreed that single parents do not have enough time to show commitment to their children's school academic activities, that students from single parent perform less academically than Students from both parents, that coming from single parenting home psychologically may put challenges on academic performance of students, single parents lack financial strength in providing for their children's academic activities. Respondents from Ondo and Osun states disagreed on the statement that Students from single parents easily drop out from school while respondents from Ekiti state agreed.

## 6. Conclusion

It is concluded that single parents lack financial strength for academic provision and have less time of concentration on their wards academic activities which might result in that psychologically put challenges on academic performance of students from such homes. Also, causes of single parenting are marital violence, extra marital pregnancy and death of spouse in Ekiti, Ondo and Osun states respectively, and the effect of the single parenting on the academic performance of the students is low commitment for both Ekiti and Ondo states while effect in Osun state is low impact on the wellbeing of the students. Therefore death and low impact on the wellbeing of the students are the primary causes and effects of single parent on academic performance of Students in southwestern states in Nigeria.

## Compliance with ethical standards

### *Acknowledgments*

The authors wish to express their gratitude to TETFUND for their support in this research.

### *Disclosure of conflict of interest*

The authors declare that they have no known competing financial interest or personal relationship that could have appeared to influence the work reported in this paper.

## References

- [1] Abudu, A. M. and Fuseini, M. N. (2014). Influence of Single –Parenting on the Academic Achievement of Adolescents in Secondary Schools: Implications for Counseling. Journal Article of the University of Ibadan.
- [2] Ali S.K., Soomar S.M. (2019). Single Parenting: Understanding Reasons and Consequences. JOJ Nurse Health Care. 10(2).
- [3] Bhat N. A., Patil R.R. (2019). Single Parenthood Families and their Impact on Children in India. Delhi Psychiatry Journal, 22(1), 161-165
- [4] Bharat S. (1988). Single Parent Families - Consequences for Single Parents. Indian Journal social Work, 49(3).
- [5] Iranmanesh, M., Kumar, K. M., Foroughi, B., Mavi, R. K., & Min, N. H. (2020). The impacts of organizational structure on operational performance through innovation capability: Innovative culture as moderator. Review of Managerial Science. Advance online publication. <https://doi.org/10.1007/s11846-020-00407-y>
- [6] Mabuza, N. O., Ortmann, G., Wale E., and Onyango M. (2014) Minister of Social Development, South African Journal of economic
- [7] Ntondwe W. C., (2024). Effects of single parenthood in the Education of Children: A Case Study of Kisauni Sub County, Mombasa County. International Journal of Humanity and Social Sciences Vol.2, Issue No.2, pp. 1 – 8.
- [8] Polanin, J. R., Espelage D. L., Grotperter J. K. (2021). A meta-analysis of longitudinal partial correlations between school violence and mental health, school performance, and criminal or delinquent acts. Journal of Research, 147(2), 115–133. <https://doi.org/10.1037/bul0000314>

- [9] Sackey, D. I. Q., Mensah, A. B. and Obeng, P. W. (2022). Influence of Single Parenting on the Education of Junior High School Students of Effiduase in the New Juaben North Municipality. *International Journal of Research and Innovation in Social Science*, 6(7), 322 – 328
- [10] Salami, S. O., and Alawode, E. A. (2000). Influence of Single-Parenting on the Academic Achievement of Adolescents in Secondary Schools: Implications for Counselling Ibadan, Nigeria: University of Ibadan.
- [11] Uzuki, Y. and Suetomi, K. (2015). The Effects of Childhood Poverty on Academic Achievement and Study Habits. *NIER, Research Bulletin Japan*, 145, 125–140.
- [12] Zhou, A. (2014). Parents, Extended Households, and the Control of Adolescents." *Child Population and Development Review*, Vol. 10(4): 647-660.