

Exposure to Domestic Violence as a correlate of Pupils' Achievement in Basic Science in Enugu State: Implications for Educational Evaluators

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Abstract

The study investigated the correlation between domestic violence and pupils' achievement in basic science in Enugu state. The study adopted a correlational research design and was carried out in all the public primary schools in Enugu State using a sample size of 176 primary five pupils. Domestic Violence Questionnaire (DVQ) and a Proforma for Pupils' Achievement in Basic Science (PPABS) were the instruments used for data collection. The instruments were validated by three experts. The reliability indices of the instruments were estimated to be 0.85 and 0.90 respectively using Cronbach Alpha method. Data were analyzed using Regression analysis and independent samples t-test. The finding revealed that there was a significant negative relationship between exposure to domestic violence and pupils' achievement in basic science. This finding has implication for educational evaluators who need to carry out further research on this subject matter to be better positioned in evaluating the aftermath effect of such domestic violence in other areas of children's development. Based on the findings, the researchers recommended that parents and caregivers should be encouraged to reduce the rate at which children are exposed to domestic violence.

Keywords: Domestic violence, pupils, achievement, basic science and gender

Introduction

Globally, science has penetrated every rubrics of life. With the vast products of scientific inquiry, scientific literacy has become a necessity for everyone including children, especially for using scientific information to make choices that arise in peoples' everyday life. According to

Bowman et al. (2001), children who have a broad base of experience in domain-specific knowledge such as mathematics or science move more rapidly in acquiring more complex skills. The need for every individual to be grounded in scientific principles and processes therefore cannot be over emphasized. In many countries, science has been infused into education at all levels. At lower levels, it is often known as basic science aimed at equipping children with the basic science process skills. In Nigeria, for instance, basic science is a subject that is part and parcel of primary education. Primary education is a formal education given in an institution for children aged between 6-11 years plus (FRN, 2013). According to the Federal Republic of Nigeria (FRN), in her National policy on education, primary education aims at inculcating permanent literacy and numeracy and laying a solid basis for scientific and reflective thinking among others. Osokoya (2013) also observed that Basic Science and Technology are two of the core subjects through which the goals of primary education can be achieved.

Basic Science was formerly organized into Primary Science and Integrated Science for Primary and Junior Secondary Schools respectively, until 2008 when Nigeria introduced 9-years Basic Education Programme. Basic Science may be regarded as introduction to sciences. It teaches children the skill of critical thinking and the ability to draw conclusion through observation and data collection (Das, et al., 2014). According to Worth (2010), the objectives of basic science are to equip the children with the ability to: explore materials/objects and events; raise pertinent questions; engage in careful observations; make simple inquiries; compare; sort; and describe things, and events among others. In clear terms, Worth further stated that Basic Science is necessary in the education of children

as it serves not only as a foundation for future scientific learning but also aids in the acquisition of necessary skills and attitudes for life and learning. The crux of Basic Science therefore is to assist children acquire basic skills early for survival and adaptation to changes in a technology driven world. This is as a result of the increasing awareness and appreciation of the capacity of children's thinking and learning at the early childhood and primary school age.

Children in primary school are referred to as pupils. According to ME2U (2011) pupils refer to children who receive instructions and supervisions from a teacher in a primary school. Contextually, pupils are children who receive formal education in an educational setting called primary school. Ifelunni (2018) observed that pupils have peculiar characteristics which includes being: playful, inquisitive asking a lot of questions and demanding answers to each; and seem interested in virtually every object they can lay hands on. Also, Mommyinme.com (2018), pointed out that pupils are naturally curious. From the foregoing, it is evident that pupils enjoy exploration of their environment. Balani (2020) pointed out that inquisitive tendencies of pupils enable them to explore and learn about their environment. Also, Childcare Extension (2020) observed that pupils are explorers by nature and take risks without fear. As a result, they move quickly towards objects that attract them, throw and drop things, put things into the mouth, climb and hide behind peoples and objects among others. In other words, pupils may often act before they think; thus, the need for nurturing and responsive environment for them. Pupils therefore are said to be dependent and needing care, supervision and guidance from significant adults like parents and teachers at home and in school respectively.

Pupils are at the age when they spend great amount of their time with parents and siblings in the home. Therefore, the home environment may be a significant factor to pupils' disposition at school and towards school related activities. Pupils need social and emotional support, love and care among others for adequate development and better achievement in school. They need stable and habitable environment that provides security and peace of mind as well as adequate diet for proper development and school achievement (Johanna, 2015). Similarly, Harry (2016) pointed out that school children need security which means that they must feel safe and secure through the provision of their basic needs: food; shelter; love; clothing; medical care; emotional support; protection from harm among others to do well in school. Nurturing and responsive home environment is more than a necessity for pupils' school achievement especially in basic science where guided exploration is required. The lot falls on the parents and caregivers to provide all these and more for pupils to get them ready and achieve well in school subjects (ChangingMinds.Org, 2018).

In contemporary Nigerian society, where domestic violence often occasioned by poverty, social insecurity and other vices are becoming a new normal, the extent to which parents and the home are meeting up with the demands of providing safe, interactive, nurturing, responsive and violence-free environment for pupils is indeterminable. Domestic violence seems to be a broad term that encompasses all forms of violence in the home. According to Okenyi et al. (2019), domestic violence is perceived as any form of behaviour or action intended to intimidate or gain undue control of any member of the family especially in the household. Domestic violence seems to be the most rampant and prevalent preventable public health issue that afflicts several millions of people especially women and children across the globe (WHO, 2012; Center for Disease Control and Prevention, CDCP 2017). Florida Coalition against Domestic Violence (FCADV) (2014), earlier maintained that domestic violence is a form of behaviour or threats of violence exhibited and used by a family member to establish power and control over any or other members of the family be it a spouse or otherwise. This points to the fact, that, the whole essence of domestic violence is about power, control and supremacy. WHO and CDCP pointed out that domestic violence also known as family violence is certainly the most dangerous and common form of abuse inflicted on women and children all over the world and includes physical, sexual, emotional abuse, child neglect, and domineering or controlling behaviours by an intimate partner. Domestic violence is, therefore, any form of behaviour or action of a family member with the intention to intimidate and gain undue control of any intimate member of the family such as: beating and heating; talking down on a family member; sexual harassment; starvation of food and, or fund; and negligence among others. Fairbrother (2011) pointed out that children who witness domestic violence are emotionally abused and are at the highest risk of physical abuse. Exposing pupils to domestic violence therefore may have deleterious impact on their school achievement especially in basic science where emotional stability and critical thinking are involved.

With increasing domestic violence in Nigeria, its negative influence on pupils especially in their school achievement may be indeterminable. Suffering and or witnessing domestic violence may rob pupils of the required self-esteem, motivation and the spirit of hard work that are inevitable for high academic achievement especially in science related subjects, (Oluwaleye, 2017). The influence of domestic violence on pupils' school achievement may be gender biased. According to Weller (2014), the reactions and effects of domestic violence differ between male and female children. In addition, Weller asserted that while boys tend to project their witnessed or suffered

aggression outwards, girls often keep their own within themselves and withdraw. Therefore, in the face of increasing gender-based violence in Nigeria, especially at home, there may not be an end to pupils' exposure to such acts. That then means shortchanging pupils' opportunities for achieving and contributing to sustainable national development irrespective of gender.

Statement of the Problem

Basic Science is a subject designed to help pupils develop a solid basis for scientific and reflective thinking. Achievement in Basic Science like any other science subject demands emotional stability, social competence, and guided exploration in a nurturing, safe and responsive environment. Parents as the primary caregivers of pupils have the responsibility of providing such environment to ensure that pupils achieve highly in school. Unfortunately, in the contemporary Nigerian society, with particular reference to Enugu State, pupils are often seen going to school looking unhappy, unkempt and sometimes avoiding school. Increasing cases of domestic violence occasioned partly by lack of social support, poverty and personality characteristics among others also abound; and many of the reported cases of domestic violence are gender based. With the increasing rate of pupils' poor achievement in school subjects especially in Basic Science, one may begin to think whether the pupils' exposure to domestic violence has any relationship with their academic achievement in school. The problem of this study therefore is the relationship between pupils' exposure to domestic violence and their achievement in Basic Science.

Purpose of the Study

The general purpose of the study is to investigate the relationship between pupils' exposure to domestic violence and achievement in basic science in Enugu State with gender as a moderating factor. Specifically, the study sought to determine:

1. the relationship between domestic violence and pupils' achievement in Basic Science
2. the moderating influence of gender on the relationship between domestic violence and pupils' achievement in Basic Science.

The study was guided by the following research questions and hypotheses tested at 0.05 level of significance

1. What is the relationship between domestic violence and pupils' achievement in Basic Science?
2. What is the moderating influence of gender on the relationship between domestic violence and pupils' achievement in Basic Science?

Ho₁: There is no significant relationship between domestic violence and pupils' achievement in basic science.

Ho₂: There is no significant moderating influence of gender on the relationship between domestic violence and pupils' achievement in Basic Science.

Methods

The study adopted a correlational survey research design. Correlational survey research design seeks to establish what relationship exists between two or more variables (Nworgu, 2015). This study investigated the relationship between domestic violence and pupils' achievement in Basic Science. This design has been used by Achagh et al. (2020), Eya et al. (2020), Ezema et al. (2019), Gana et al. (2019), Ugwuanyi and Okeke (2020), Ugwuanyi et al. (2020a, b, c) in similar studies. All the 29,640 primary (5) five pupils in the entire 1,226 public primary schools in Enugu state, Nigeria constituted the population of the study. A total of 176 primary five pupils selected through simple random sampling technique made up the sample for the study. A researchers' designed instrument titled: Domestic Violence Questionnaire (DVQ) and a Proforma for Pupils' Achievement in Basic Science (PPABS) were the instruments used for data collection. Three (3) experts; one each from Childhood Education, Educational Psychology, and Measurement and Evaluation validated the instrument. Cronbach alpha formula was used to determine the internal consistency reliability indices of the instrument after pilot testing. The instrument was administered and retrieved on the spot. Data collected were analyzed using regression analysis and t-test of independent samples to answer the research questions and test the null hypothesis at 0.05 level of significance.

Results

Research Question One: What is the relationship between domestic violence and pupils' achievement in Basic Science?

Table 1: Regression analysis of the relationship between domestic violence and pupils’ achievement in Basic Science

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-.427 ^a	.183	.178	12.91271

a. Predictors: (Constant), Domestic violence

Data in Table 1 showed that the correlation between domestic violence and pupils’ achievement in Basic Science is -.427 with a coefficient of determination of .183. This means that there is a negative relationship between domestic violence and pupils’ achievement in Basic Science. In other words, 18.3% negative variation in pupils’ achievement in Basic science can be attributed to domestic violence.

Ho₁: There is no significant relationship between domestic violence and pupils’ achievement in basic science.

Table 2: Analysis of variance of the relationship between domestic violence and pupils’ achievement in Basic Science

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6481.051	1	6481.051	38.870	.000 ^b
	Residual	29012.443	174	166.738		
	Total	35493.494	175			

- a. Dependent Variable: Achievement
- b. Predictors: (Constant), Domestic violence

Data in Table 2 showed that there was a significant relationship between domestic violence and pupils’ achievement in basic science, $F(1, 174) = 38.870, p = .000$. Since the probability value of .000 is less than the 0.05 level of significance, the null hypothesis of no significant relationship was rejected.

Research Question Two: What is the moderating influence of gender on the relationship between domestic violence and pupils’ achievement in Basic Science?

Table 3: Regression analysis of the moderating influence of gender on the relationship between domestic violence and pupils’ achievement in Basic Science

Variables	N	R	R ²
Male	64	-.451 ^a	.204
Female	112	-.399 ^a	.159

Data in Table 3 revealed that the correlation between domestic violence and male pupils’ achievement in Basic Science is -.451 with a coefficient of determination of .204 while those of the female pupils are -.399 and .159 respectively. This means that there is a negative relationship between domestic violence and achievement of both male and female pupils in Basic Science. However, while 20.4% negative variation in male pupils’ achievement in Basic science is attributed to domestic violence, only 15.9% negative variation in female pupils’ achievement in Basic science is attributed to domestic violence.

Ho₂: There is no significant moderating influence of gender on the relationship between domestic violence and pupils’ achievement in Basic Science.

Table 4: t-test analysis of the moderating influence of gender on the relationship between domestic violence and pupils’ achievement in Basic Science

Variables	n	R	R ²	t	p	Decision
Male	64	-.451 ^a	.204	0.400	0.689	NS
Female	112	-.399 ^a	.159			

NS = Not Significant

Data in Table 4 revealed that there was no significant moderating influence of gender on the relationship between domestic violence and pupils’ achievement in basic science, $t(174) = .400, p = .689$. Since the probability value of .689 is greater than the 0.05 level of significance, the null hypothesis was not rejected.

Discussion of the Findings

From the findings of the study, it was evident that domestic violence impact negatively on the academic achievement of pupils in basic science. This finding validates the findings of Oluealeye (2012) who found out that domestic violence stifles children’s self-esteem, motivation and spirit of hard work resulting in poor academic achievement especially in basic science. This can be explained by the fact that pupils who are not emotionally stable will find it difficult to engage in quality exploration and critical thinking required for achievement in science subjects.

Further findings revealed that the influence of domestic violence on the academic achievement of pupils in basic science was not moderated by gender. This finding contradicts the findings of Weller (2014), who discovered that the reactions and effects of domestic violence differ between male and female children. The finding of this study may be true as every child requires healthy, safe, responsive and nurturing environment especially at home to ensure effective development of the whole child. This finding has implication for educational evaluators who need to carry out further research on this subject matter to be better positioned in evaluating the aftermath effect of such domestic violence in other areas of children's development.

Conclusion and Recommendations

Domestic violence is a preventable public health issue that as a cankerworm has eaten deep into the fabrics of the Nigerian society. As a hydra-headed monster, domestic violence is robbing school children of a bright academic achievement in science-based courses and so, of a bright future. Based on the findings of this study, the researchers concluded that pupils' achievement in science related courses will continue to be on the downward trend unless appropriate intervention is provided to minimize children's exposure to domestic violence. Based on the findings of the study, the researchers made the following recommendations.

1. parents and caregivers should be encouraged to reduce the rate at which children are exposed to domestic violence
2. government and non-governmental organizations should sensitize parents through workshops on the negative influence of domestic violence on children's academic achievements
3. parents should minimize gender stereotyping in their relationships with children.

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