



# **Bullying Victimization and Juvenile Delinquency in Ghanaian Schools: The Moderating Effect of Social Support**

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Abstract: Researchers from Western countries and Asia have documented that bullying victimization positively predicts juvenile delinquency. Other researchers have reported that social support considerably reduces adolescent offending. However, little is known about the role of social support in the association between bullying victimization and teenage delinquency. This study investigated the moderating effect of social support on the relationship between bullying victimization and juvenile delinquency in Ghanaian schools. Data for this research were drawn from the 2012 Global School-Based Student Health Survey. Negative binomial regression was used to analyze the data. The results revealed that bullying victimization significantly predicted adolescent delinquency. In addition, physical bullying significantly increased teenage offending. Moreover, parental and school support meaningfully reduced antisocial behavior. Finally, social support did not moderate the effect of bullying victimization on delinquency. The limitations and policy implications of this study are discussed.

Keywords: bullying; victimization; delinquency; social support

# 1. Introduction

Bullying is a grave issue among students and adolescents around the globe [1,2]. Volk et al. [3], defined bullying as "aggressive goal-directed behavior that harms another individual within the context of a power imbalance" (p. 329). According to UNESCO [4], the proportion of children and young people affected by school bullying ranges from less than 10% to over 65% in some countries [4]. In Ghana, for example, Antiri [5] reported that 47.9% and 37.2% of students had been victims of physical and verbal bullying, respectively. Another study found that roughly 40.1% of high school students have experienced bullying [6].

Research shows that bullying can have adverse ramifications on the victims. For example, studies have reported that victims can suffer psychological effects such as anxiety, depression, and suicidal thoughts [7–9]. In addition, research has shown that victims of bullying have higher chances of experiencing colds, headaches, and stomach aches [10,11]. Bullying also affects education because those bullied are more likely to drop out, skip classes, and experience learning challenges [12,13]. Many studies have also found that bullying victimization is associated with delinquency or antisocial behavior [14–17].

Researchers who have investigated the bullying victimization and delinquency relationship have mainly used the general strain theory as their theoretical framework and have tested the theory. The general strain theory claims that when people experience strain, it could lead to negative emotions. Without positive coping mechanisms, victims of strain might resort to offending behaviors [18]. Researchers who have used bullying victimization to test the general strain theory have reported that victims are more likely to engage in offending behaviors than non-victims [14–17]. Moreover, the literature shows that types of bullying victimization (physical and social) significantly predict teenage misconduct [14,19].

Social support is an important variable linked to positive outcomes in school performance, attendance, self-worth, and health [20–26]. In addition, some scholars have



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**Copyright:** © 2023 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). reported that social support reduces the risk of bullying and involvement in offending behavior [27–29]. Existing studies have also shown that social support moderates the relationships between being bullied and mental health and problem behaviors [30–32].

# 1.1. Bullying Victimization and General Strain Theory

General stain theory, by Robert Agnew [33], is the theoretical framework for this research. The theory was developed to address the shortcomings of the classical strain theories. Classical strain theories have been criticized for their failure to adequately explain crimes that occur among the middle class, neglect of goals other than monetary success, and lack of empirical support. Agnew [33] extended the definition of strain to include "events or conditions that individuals dislike." Overall, he identified three different types of strain or negative relationships: (1) the failure to achieve positively valued goals, (2) the removal of positively-valued stimuli, and (3) the presentation of negative stimuli [33]. In this study, bullying victimization is the strain that we used to predict delinquency.

The theory maintains that victims of strain could experience negative emotions, including anger, frustration, disappointment, depression, anxiety, and fear. Individuals deal with negative emotions by acting, avoiding, or coping with the strain. In Agnew's view, negative emotions mediate between strain and criminal behavior [18].

Agnew [18] contended that positive coping mechanisms, such as intelligence, creativity, self-efficacy, social support, social control, and self-esteem, could help a person to positively cope with the strain. Individuals with positive coping mechanisms such as social support would be less likely to offend [18].

In this research, bullying victimization is the strain that we tested. Bullying victimization is a strain because it is a negative stimulus that teenagers experience. When adolescents are bullied, it could lead to negative emotions such as anger, depression, fear, and anxiety. Without positive coping mechanisms such as social support, social control, intelligence, and creativity, victims of bullying might engage in delinquency. Several scholars from Europe and North America have tested the general strain theory by using bullying victimization as a strain. Most research reported that bullying victimization is positively associated with juvenile offending [17,34]. Other researchers from Asian countries such as China, Taiwan, and South Korea have also attempted to establish the link between general strain theory and adolescent delinquency. Scholars from Asia have found that bullying and life strains significantly predict juvenile offending. Some researchers also reported that social support moderated the effect of strain on delinquency [35–40].

## 1.2. The Current Study

In spite of the fact that many studies have reported that bullying victimization significantly predicts teenage delinquency, most of them were conducted in countries such as the United States, the United Kingdom, Sweden, and Asian countries [15–17,35–40]. Few studies have investigated how being a victim of bullying can lead to delinquency in Africa [14]. The lack of empirical studies on this topic in African countries, including Ghana, is problematic because the sociocultural conditions that exist in Africa and Ghana are much different from those of Western countries. Therefore, the effect of bullying victimization on delinquency in Ghana might be different. Three reasons make Ghana a unique place for conducting this study. First, bullying in Ghana is viewed as an initiatory rite for adolescents in middle and high schools. Second, bullying is a form of entertainment for older students in middle and high schools [5,41]. Third, studies have shown that the bullying victimization rate among juveniles in Ghana ranges from 39 percent to 62 percent [6,42].

In addition, the literature shows that social support is a protective factor against bullying victimization and juvenile offending [27–29]. However, little is known about its role as a moderator in the bullying–delinquency relationship. The general strain theory contends that positive coping mechanisms, such as social support, could help victims of strain to cope positively [18]. This study therefore aimed at examining the moderating

effect of social support on the relationship between bullying victimization and adolescent delinquency. The research specifically tested the following hypotheses:

Hypothesis 1. Bullying victimization will positively predict delinquency behavior.

**Hypothesis 2.** Social support will inversely predict delinquency.

**Hypothesis 3.** *Types of bullying victimization (physical and social) will positively predict juvenile offending behaviors.* 

**Hypothesis 4.** Social support will moderate the relationship between bullying victimization and delinquency.

The findings from this study will contribute to the criminology literature in three ways. First, this study adds to the existing literature by offering a fresh perspective from a different cultural context—examining the association between bullying victimization and delinquency in Africa, specifically, Ghana. Additionally, the study provides insights into the effect of social support on bullying and teenage delinquency. Lastly, this research provides empirical support for the general strain theory about the moderating role of social support in the bullying–delinquency relationship.

## 1.3. Country Profile

Ghana is located in West Africa, and Accra is its capital. It was the first country in Sub-Saharan Africa to gain independence from the British Empire in 1957. The country borders Burkina Faso in the north, Togo in the east, Côte d'Ivoire in the west, and the Atlantic Ocean in the south. Ghana covers an area of 239,540 square kilometers or 92,486 square miles [43]. The country has 16 regions: Western North, Western, Volta, Greater Accra, Eastern, Ashanti, Central, Northern, Upper East, Upper West, Oti, Bono East, Ahafo, Bono, North East, and Savannah. Currently, the population is estimated to be 30,955,204, comprising 15,182,459 males and 15,610,149 females. Ghana has over 75 ethnic groups. The Akans constitute 47.5 percent of the population [43].

Politically, Ghana has been through several coups d'état after the overthrow of its first leader, Kwame Nkrumah, in 1966 by the National Liberation Council (NLC) led by General E. K. Kotoka. After the 1966 coup d'état, four more military takeovers took place: That of 1972 by General Kutu Acheampong, that of 1979 by Flt.-Lt. Jerry John Rawlings, and that of 1981 by Flt.-Lt. Jerry John Rawlings. In 1992, Jerry Rawlings restored democratic governance and became the first president of the fourth republic. Since 1992, Ghana has maintained a stable political environment and has produced five presidents [44].

The economy of Ghana has been bad since the 1970s due to flawed policies. The fragile nature of the economy led to the country enrolling in International Monetary Fund (IMF) and World Bank programs, including Structural Adjustment programs and Economic Recovery Programs. Therefore, the economic growth of the country plummeted. However, since 2000, Ghana's economy has been growing at an average of 6.1 percent until 2020, when it reduced to 0.5 percent due to the COVID-19 pandemic [45]. The standard of living has been improving steadily since the 1990s. Poverty levels reduced from 51.7 percent in 1991 to 24 percent in 2012. Nonetheless, the country has a huge gap between the rich and the poor. The top 10 percent of the population accounts for thirty-two percent of total consumption, whereas the deprived account for only two percent [46].

#### 2. Materials and Methods

## 2.1. Data

Data used in answering our research questions were derived from the 2012 Global School-based Student Health Survey (GSHS). The data were collected in 2012, but they are still relevant today because they are the most recent data available from Ghana and

contain the variables needed for this study. More so, since no study has focused on this subject in Ghana and the African continent, the findings might shed light on the need to collect more data about the variables in the future. The instruments for the survey were developed by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) in partnership with UNICEF, UNESCO, and UNAIDS. It aimed to provide data for improving Ghana's school and youth health programs and policies [47]. The Ghana GSHS focused on 150 schools from all regions of the country. The students surveyed were between the ages of 13 and 17 and were attending junior high school (JHS), grades 7 through 9, or senior high school (SHS), grades 10 through 13, at the time of the study. Cluster sampling, which involved two stages, was used to select all students in JHS 1 through 3 and SHS grades 1 through 4. First, participating schools were chosen with the odds corresponding to the enrollment size. Second, the classes were randomly chosen, and all students in selected grades were qualified to participate. The Ghana GSHS covered alcohol use, dietary practices, drug abuse, hygiene, psychological conditions, physical exercise, protective factors, reproductive behaviors, cigarette use, brutality, and inadvertent injury. Students answered questions provided on survey sheets that were later scanned using a computer [48]. A sample size of 2241 participants was used in this study.

#### 2.2. Variables

The dependent variable of interest in this study was delinquency. It was measured using six items: (a) During the past 30 days, how many days did you smoke cigarettes? (b) During the past 30 days, how many days did you have at least one drink containing alcohol? (c) During the past 30 days, how many times have you used marijuana? (d) During the past 30 days, how many times classes or school without permission? (e) During the past 12 months, how many times were you in a physical fight? (f) During the past 30 days, how many times have you used amphetamine? The responses were: (1) 0 days/times, (2) 1 or 2 days/times, (3) 3 to 5 days/times, (4) 6 to 9 days/times, (5) 10 to 19 days/times, (6) 20 to 29 days/times, (7) all 30 days/times. The responses were recoded as (0) never or (1) ever. A delinquency index was created based on the six variables ranging from 0 to 6.

Bullying victimization and the types (physical and social) were the independent variables in this research. This variable was measured by asking: "During the past 30 days, how many days were you bullied? The responses include: (1) 0 days, (2) 1 or 2 days, (3) 3 to 5 days, (4) 6 to 9 days, (5) 10 to 19 days, (6) 20 to 29 days, (7) all 30 days. Types of bullying victimization were measured using the question: During the past 30 days, how were you bullied most often? The responses were grouped into physical and social bullying. Physical bullying was defined by the response: (a) I was hit, kicked, pushed, shoved around, or locked indoors. Social bullying was defined by this answer: (f) I was left out of activities on purpose or completely ignored.

The moderator variable in this research was social support. This variable was composed of three items: parental support, friendship, and school support. School support was measured using the question: During the past 30 days, how often were most of the students in your school kind and helpful? The responses were: (0) never, (1) rarely, (2) sometimes, (3) most of the time, and (4) always. Friendship is measured with the question: How many close friends do you have? The responses were 0, 1, 2, and 3 or more. Finally, parental support was measured with the following questions: (a) During the past 30 days, how often did your parents or guardians check to see if your homework was done? (b) During the past 30 days, how often did your parents or guardians understand your problems and worries? (c) During the past 30 days, how often did your parents or guardians really know what you were doing with your free time? The responses included: (0) never, (1) rarely, (2) sometimes, (3) most of the time, and (4) always. A parental support scale was developed which ranged from 3 to 15, with a Cronbach's alpha reliability coefficient of 0.7.

The existing literature shows that several variables are relevant to our understanding of the bullying–delinquency relationship. For example, studies have found that gender

significantly predicts delinquency—specifically, being male increases the likelihood of engaging in delinquent acts [17,34]. Studies have also found that age is significantly related to delinquency. However, the relationship is curvilinear: it starts slowly at a young age, peaks in adolescence, and plummets during adulthood [34,48]. Extant research on the relationship between school grade and delinquency shows that the relationship is positive, although the behavior reaches its zenith in higher grades [49,50]. Based on findings from previous studies, I included sex, age, and school grade (JHS 1–3, SHS 1–3) in my analysis of the link between bullying and delinquency. Age and school grade were treated as continuous variable, whereas sex was categorical (male, female).

# 2.3. Analytic Strategy

The data analysis for this study was performed using STATA (StataCorp, College Station, TX, USA, version 16). I used both descriptive and multivariate techniques to analyze the data. Descriptive statistics such as mean, proportions, and standard deviations were used to summarize the data. Pearson's correlation was also used to establish a bivariate correlation among some variables to avoid multicollinearity. The relationships between the dependent, independent, and moderating variables were estimated using negative binomial regression. Negative binomial regression was used because the dependent variable was positively skewed.

# 3. Results

Table 1 presents the descriptive statistics of the variables used in this research. The results show that most (56%) of the adolescents involved in the study were males, and their mean age was 16 years. Additionally, the average school grade of the respondents was 10, which represents the first year of senior high school. Concerning social support, the mean friendship, school, and parental were 2.79, 3.16, and 9.35, respectively. The latter results imply that the participants received moderate social support. Likewise, the mean delinquency among the respondents was 0.95, implying that antisocial behavior among teenagers was low. Moreover, the average bullying victimization was 1.81, indicating that many juveniles in this study were not bullied. Regarding the types of bullying, 11.77% experienced physical bullying, and 2.68% were victims of social bullying.

#### Table 1. Descriptive statistics of the variables in this study.

| Variables              | Mean/<br>Proportions | Standard<br>Deviation | Min | Max | Ν    |  |
|------------------------|----------------------|-----------------------|-----|-----|------|--|
| Sex                    |                      |                       | 0   | 1   | 2241 |  |
| Male                   | 56                   |                       | -   | -   |      |  |
| Females                | 44                   |                       |     |     |      |  |
| Age                    | 16.1                 | 1.9                   | 11  | 18  | 2241 |  |
| Grade                  | 10                   | 2.02                  | 7   | 13  | 2241 |  |
| Moderators             |                      |                       |     |     |      |  |
| school support         | 3.16                 | 1.27                  | 1   | 5   | 2241 |  |
| Friendship             | 2.79                 | 1.04                  | 1   | 4   | 2241 |  |
| Parental support       | 9.35                 | 3.58                  | 3   | 15  | 2241 |  |
| dependent variable     |                      |                       |     |     |      |  |
| Delinquency            | 0.95                 | 1.16                  | 0   | 6   | 2241 |  |
| independent variable   |                      |                       |     |     |      |  |
| Bullying victimization | 1.81                 | 1.36                  | 1   | 7   | 2241 |  |
| Types of bullying      |                      |                       |     |     |      |  |
| victimization          |                      |                       |     |     |      |  |
| Physical bullying      |                      |                       | 0   | 1   | 2241 |  |
| victimization          |                      |                       | 0   | 1   | 2241 |  |
| Yes                    | 11.69                |                       |     |     |      |  |
| No                     | 88.31                |                       |     |     |      |  |
| Social bullying        |                      |                       | 0   | 1   | 2241 |  |
| Yes                    | 2.68                 |                       |     |     |      |  |
| No                     | 97.32                |                       |     |     |      |  |

Table 2 shows the bivariate correlations among the dependent, independent, and moderating variables. Results from the table indicate a significant positive relationship between delinquency and bullying victimization (r = 0.309, *p* < 0.001). In addition, delinquency positively correlated with physical (r = 0.123, *p* < 0.001). On the other hand, offending behavior was inversely linked to social support from school (r = -0.075, *p* < 0.001) and parents (r = -0.110, *p* < 0.001). In addition, bullying victimization was significantly and inversely correlated with school support (r = -0.05, *p* < 0.05).

| Variables              | Delin  |     | Bully<br>Vict |     | Phy<br>Bully |    |     | Social<br>Bully | Friend |     | School<br>Support |     | Parental<br>Support |
|------------------------|--------|-----|---------------|-----|--------------|----|-----|-----------------|--------|-----|-------------------|-----|---------------------|
| Delinquency            | 1.000  |     |               |     |              |    |     |                 |        |     |                   |     |                     |
| Bullying victimization | 0.309  | *** | 1.000         |     |              |    |     |                 |        |     |                   |     |                     |
| Types of bullying      |        |     |               |     |              |    |     |                 |        |     |                   |     |                     |
| Physical               | 0.123  | *** | 0.307         | *** | 1.000        |    |     |                 |        |     |                   |     |                     |
| Social                 | 0.031  |     | 0.184         | *** | -0.060       | ** | *** | 1.000           |        |     |                   |     |                     |
| Social support         |        |     |               |     |              |    |     |                 |        |     |                   |     |                     |
| Friendship             | 0.086  | *** | 0.008         |     | 0.020        |    |     | 0.017           | 1.000  |     |                   |     |                     |
| School support         | -0.075 | *** | -0.050        | *   | -0.031       |    |     | -0.014          | 0.105  | *** | 1.000             |     |                     |
| Parental support       | -0.097 | *** | 0.007         |     | 0.027        |    |     | 0.012           | 0.042  | *   | 0.287             | *** | 1                   |

Table 2. Bivariate correlations among the variables.

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Results from the negative binomial regression are presented in Table 3. In model 1, delinquency was regressed based on bullying victimization whiles controlling for sociodemographic variables. The results show that an increase in bullying victimization significantly increased the estimated log count of delinquency by 0.205. In addition, as school grade increased, the estimated log count of delinquency significantly reduced by 0.036. In model 2, whiles holding demographic variables constant, I regressed delinquency on bullying victimization and social support. Like model 1, the results revealed that bullying victimization (b = 0.205, *p* < 0.001) significantly predicted juvenile delinquency. The results further showed that school (b = -0.41, *p* < 0.5) and parental support (b = -0.032, *p* < 0.001) significantly lowered delinquency among the participants. On the contrary, friendship (b = 0.104, *p* < 0.001) significantly increased adolescent offending behavior.

Table 3. Bullying victimization predicting juvenile delinquency.

| Variables                | Model 1 |     |       | Model 2 |     |       | Model 3 |     |       |
|--------------------------|---------|-----|-------|---------|-----|-------|---------|-----|-------|
|                          | b       |     | SE    | ь       |     | SE    | b       |     | SE    |
| Bullying victimization   | 0.205   | *** | 0.015 | 0.205   | *** | 0.015 | 0.120   | *   | 0.058 |
| Sex (male $= 1$ )        | 0.029   |     | 0.049 | -0.014  |     | 0.050 | -0.015  |     | 0.050 |
| Age                      | -0.017  |     | 0.019 | -0.017  |     | 0.019 | -0.017  |     | 0.019 |
| School Grade             | -0.036  | *   | 0.018 | -0.027  |     | 0.018 | -0.028  |     | 0.018 |
| Social Support           |         |     |       |         |     |       |         |     |       |
| Friendship               |         |     |       | 0.104   | *** | 0.024 | 0.080   | *   | 0.039 |
| School support           |         |     |       | -0.041  | *   | 0.020 | -0.065  | *   | 0.033 |
| Parental support         |         |     |       | -0.032  | *** | 0.007 | -0.038  | *** | 0.012 |
| Interaction terms        |         |     |       |         |     |       |         |     |       |
| Bullying victimization * |         |     |       |         |     |       | 0.011   |     | 0.014 |
| friendship               |         |     |       |         |     |       | 0.011   |     | 0.014 |
| Bullying victimization * |         |     |       |         |     |       | 0.010   |     | 0.010 |
| school support           |         |     |       |         |     |       | 0.010   |     | 0.012 |
| Bullying                 |         |     |       |         |     |       |         |     |       |
| victimization*parental   |         |     |       |         |     |       | 0.002   |     | 0.004 |
| support                  |         |     |       |         |     |       |         |     |       |
| Intercept                | 0.206   |     | 0.241 | 0.206   |     | 0.241 | 0.397   |     | 0.270 |
| /lnalpha                 | -1.524  |     | 0.177 | -1.524  |     | 0.177 | -1.527  |     | 0.177 |
| alpha                    | 0.218   |     | 0.038 | 0.218   |     | 0.038 | 0.217   |     | 0.038 |
| Pseudo R-squared         | 0.034   |     |       | 0.042   |     |       | 0.042   |     |       |

\* p < 0.05, \*\*\* p < 0.001.

Interaction terms were introduced in model 3 to determine whether social support will moderate the relationship between bullying victimization and delinquency. The results from model 3 indicate that being bullied increases the anticipated log count of delinquency by 0.120. This result implies that bullying victimization significantly predicts juvenile offending. This result confirms the findings of earlier investigations [14–17]. Additionally, for every unit increase in parental or school support, the predicted log count of delinquency significantly diminished by 0.065 or 0.038, respectively. On the other hand, friendship (b = 0.080, p < 0.05) significantly increased antisocial behavior among teenagers. Finally, none of the interaction terms included in the model significantly predicted juvenile offending. Therefore, social support does not significantly weaken the impact of bullying victimization on juvenile offending behaviors.

The effects of types of bullying victimization on juvenile offending are presented in Table 4. In model 1, I regressed delinquency based on physical and social bullying while controlling for demographic variables. The results show that physical bullying (b = 0.365, p < 0.001) positively predicted juvenile offending. Contrarily, school grade (b = -0.059, p < 0.01) was inversely related to delinquency. The results in model 2 are similar to those of model 1 after introducing social support variables and controlling for social demographics. As expected, a unit increase in physical bullying significantly increased the expected log counts of juvenile offending by 0.374 units. Similarly, the results show that an increase in the number of friends (b = 0.106, p < 0.001) is positively associated with adolescent offending. On the contrary, school (b = -0.047, p < 0.05) and parental support (b = -0.032, p < 0.001) significantly reduced teen offending behavior. In model 3, I introduced an interaction term to determine whether social support would moderate the associations between types of bullying victimization and delinquency. The results revealed that physical bullying positively predicted adolescent offending, but the result was not significant. Additionally, friendship (b = 0.102, p < 0.001) positively and significantly predicted delinquency. Conversely, school (b = -0.044, p < 0.05) and parental (b = -0.033, p < 0.001) support were inversely related to delinquency. Lastly, there was no significant association between the interaction terms and delinquency. Hence, social support does not moderate the relationships between types of bullying and juvenile offending.

| Variables                |             | Model 1 |       |        | Model 2 |       |        | Model 3 |       |
|--------------------------|-------------|---------|-------|--------|---------|-------|--------|---------|-------|
|                          | b           |         | SE    | b      |         | SE    | b      |         | SE    |
| Physical bullying        | 0.365       | ***     | 0.071 | 0.374  | ***     | 0.070 | 0.407  |         | 0.277 |
| Social bullying          | 0.265       |         | 0.144 | 0.260  |         | 0.143 | -0.497 |         | 0.638 |
| Sex                      | 0.014       |         | 0.051 | -0.029 |         | 0.051 | -0.029 |         | 0.051 |
| Age                      | -0.007      |         | 0.019 | -0.007 |         | 0.020 | -0.007 |         | 0.020 |
| Grade                    | -0.059      | **      | 0.019 | -0.051 | **      | 0.019 | -0.051 | **      | 0.019 |
| Friendship               |             |         |       | 0.106  | ***     | 0.026 | 0.102  | ***     | 0.027 |
| School support           |             |         |       | -0.047 | *       | 0.021 | -0.044 |         | 0.023 |
| Parental support         |             |         |       | -0.032 | ***     | 0.007 | -0.033 | ***     | 0.008 |
| Physical bullying *      |             |         |       |        |         |       | -0.016 |         | 0.070 |
| Friendship               |             |         |       |        |         |       | -0.010 |         | 0.070 |
| Physical bullying *      |             |         |       |        |         |       | -0.021 |         | 0.059 |
| school support           |             |         |       |        |         |       | 0.021  |         | 0.009 |
| physical                 |             |         |       |        |         |       |        |         |       |
| bullying*parental        |             |         |       |        |         |       | 0.010  |         | 0.023 |
| supervision              |             |         |       |        |         |       |        |         |       |
| Social bullying *        |             |         |       |        |         |       | 0.192  |         | 0.152 |
| Friendship               |             |         |       |        |         |       |        |         |       |
| Social bullying * school |             |         |       |        |         |       | -0.017 |         | 0.132 |
| support                  |             |         |       |        |         |       | 0.0.2. |         |       |
| Social bullying *        |             |         |       |        |         |       | 0.024  |         | 0.040 |
| parental supervision     | a <b></b> a |         | 0.014 | 0.445  |         | 0.045 |        |         |       |
| Intercept                | 0.579       |         | 0.214 | 0.645  |         | 0.247 | 0.672  |         | 0.251 |
| /lnalpha                 | -1.081      |         | 0.132 | -1.164 |         | 0.138 | -1.170 |         | 0.139 |
| alpha                    | 0.339       |         | 0.044 | 0.312  |         | 0.043 | 0.310  |         | 0.043 |
| Pseudo R-squared         | 0.010       |         |       | 0.018  |         |       | 0.018  |         |       |

Table 4. Types of bullying predicting juvenile delinquency.

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Previous research has reported that bullying victimization leads to adolescent offending behavior. Additionally, extant studies have found that victims of physical, verbal, and social bullying are at a greater risk of engaging in delinquency. Moreover, past studies have documented that social support reduces bullying and antisocial behavior among adolescents [25,33]. However, little is known about social support's role in the link between being bullied and juvenile delinquency. This study, therefore, aimed to investigate the moderating effect of social support on the relationship between bullying victimization and delinquency. The study used data from the 2012 Global School Health Survey and a sample size of 2241. I used negative binomial regression to determine the relationship between the dependent, independent, and moderator variables.

The study led to four critical findings. First, there was a significant positive association between bullying victimization and delinquency. This result is not surprising because former investigators arrived at the same conclusion [14–17,34]. This finding supports the first hypothesis: that bullying victimization predicts juvenile offending positively. Second, the study found that juveniles who experienced physical bullying were more likely to become delinquents. This finding is partly in line with the second hypothesis, which states that certain types of bullying will positively predict adolescent offending. The results support the inferences of past investigators [16,19]. Third, this study revealed that parents and school support significantly reduced adolescent delinquency. On the other hand, participants who had more close friends were at a higher risk of engaging in juvenile antisocial behavior. The latter outcome confirms the findings of extant studies [27–29]. Finally, the study found that social support did not moderate the bullying–delinquency relationship. Hence, our fourth hypothesis was not supported. This finding seems to contradict the conclusion of Guo et a. [32], who reported that social support reduced the impact of bullying victimization on externalizing disorders.

The findings of this study have implications for theory, social policy, and social services. For theory, this research makes a significant contribution to the general strain theory in two ways. First, this study provides additional support for Agnew's general strain theory in terms of the role of strain in delinquency behavior in the African context. According to the theory, there are three types of strains that can lead to delinquent behavior: (1) the failure to achieve positively valued goals, (2) the removal of positively valued stimuli, and (3) the presentation of negative stimuli (2) [33]. Previous research that tested this theory or used it as a theoretical framework was mostly from Western countries, except Duah [14]. This study has shown that bullying victimization, a form of negative stimuli, predicts delinquency behavior. Second, this study contributes to the general strain theory regarding the role of social support in reducing delinquency. General strain theory asserts that victims can cope with strain positively if they have access to social support. Thus, I hypothesized that when bullied victims have access to social support, it could reduce the possibility of them engaging in criminality. However, I found that social support did not moderate the bullying–delinquency association in the African context.

Regarding social policy implications, stakeholders in the educational sector and the Ministry of Youth should endeavor to implement antibullying policies to help bullying among teenagers. Extant researchers have evaluated a couple of antibullying prevention programs that have yielded positive results in several countries. These antibullying programs include the Confident Kids program, the Olweus Bullying Prevention Program, and the Positive Action Program steps to respect [51,52]. If these programs are implemented on the African continent, they could help curb bullying. In addition, stakeholders in the security services should also help implement delinquency-prevention programs on the continent. Scholars have documented a couple of prevention programs that have been successful in many countries. Such programs include Stop Now, Act Later (SNAL), the Perry Preschool Program, and the Syracuse University Family Development Program [53]. Although social support did not moderate the bullying–delinquency relationship, the study found that parental support and school support reduce adolescent offending. Nonetheless,

the descriptive statistics from this study showed that the adolescents received moderate social support. Therefore, an attempt should be made by parents, school officials, and the community to support the youth. Researchers have also recommended ways to improve social support, including social support skills training groups, peer support or "self-help" groups, and combined provision of support and social skills training [54].

With respect to social services, school authorities and community leaders should ensure that counseling services are available to adolescents. Providing counseling services for students is crucial because studies have documented that counselors are more likely to receive reports of bullying, recognize the adverse effects, and participate in bullyingprevention programs [55–57]. Counseling services could help teenagers to cope positively with bullying in a positive manner. Educators should also ensure that they spell out clearly how students are to treat each other. In addition, teachers should show support and encouragement to bullied adolescents. Moreover, schoolteachers and principals should make bullies comprehend the ramifications of their actions. Notwithstanding the contributions of this research to theory and policy, there were some weaknesses in the methods. First, the juvenile delinquency was measured using status offenses. Other offenses, such as property offenses, violent offenses, sex offenses, and gang membership, were not included. Future researchers should attempt to use data that include the variables mentioned above. In addition, critical sociodemographic variables, such as parental education, income, and employment, which are known predictors of delinquency, were not available in the data used in this study. Researchers who designed the questionnaire for the global schoolbased student health survey and prospective scholars should endeavor to include the latter variables in their research.

Furthermore, the cross-sectional nature of data means that one will have to be cautious about the conclusion. Therefore, prospective researchers should endeavor to collect and use longitudinal data to determine the moderating role of social support on the bullying-delinquency correlation. Another shortcoming of this study is the measurement of social support. The variable was measured using the number of friends, parental support, and school support. Subsequent researchers should endeavor to include support from religious institutions, siblings, and extended family in their investigations. Finally, the data used in this study were collected in 2012. Hence, effort should be performed by researchers to collect data that are more recent.

## 5. Conclusions

Regardless of the shortcomings of this research, it makes a significant contribution to the literature on general strain theory by examining the moderating effect of social support on the association between bullying victimization and juvenile offending behaviors. The results should show that bullying victimization positively predicts adolescent delinquency. In addition, the results indicate that parental and school support significantly reduce teenage antisocial behavior. Lastly, social support did not reduce the impact of bullying victimization on juvenile offending behaviors. Subsequent investigators should endeavor to use longitudinal data to study this topic. In addition, prospective researchers should include some of the variables that were not included in this study.

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