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PREVALENCE AND INDICATIVE CORRELATES OF SUICIDE ATTEMPTS AMONG IN-SCHOOL ADOLESCENTS IN SAINT LUCIA

Prosper Dzifa Dzamesi¹ and Dickson Okoree Mireku²

^{1,2}Directorate of Academic Planning and Quality Assurance, University of Cape Coast, Ghana.

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ABSTRACT

Among adolescents, it is estimated that for every suicide, there are 100–200 suicide attempts, with rates varying by country due to local or individual factors. This study aimed to estimate the prevalence and correlates of suicide attempts among in-school adolescents in Saint Lucia using data from the 2018 Global School-based Health Survey. The study included 1,970 in-school teenagers aged 13-18 years. Multi-binomial logistic regression was used to determine predictors of suicide attempts with adjusted odds ratios (AOR) and 95% confidence intervals (CI). The prevalence of suicide attempts among in-school teenagers in Saint Lucia was 16.2%. Factors associated with suicide attempts included being female (AOR 3.001, 95% CI 2.026-4.445), being physically attacked (AOR 0.573, 95% CI 0.388-0.846), feeling lonely (AOR 0.447, 95% CI 0.294-0.678), worrying and sleeplessness (AOR 0.542, 95% CI 0.336-0.875), and having made suicide plans (AOR 0.051, 95% CI 0.035-0.073).

KEYWORDS: Prevalence, Suicide Attempts, Correlates, In-school Adolescents, Saint Lucia

INTRODUCTION

Suicide among adolescents is a huge public health concern around the world (Shain et al., 2016). Indeed, a recent study by (Méndez-Bustos et al., 2022) found that adolescent suicide is the second and third major cause of mortality, in the 15–29 and 15–19 age groups respectively. It is believed that there are 100–200 suicides among adolescents for every suicide. Although low/middle-income nations account for 79% of global suicides, the majority of scholarly evidence comes from high-income and low-risk countries. Suicide is the second leading cause of death among 15–19-year-olds in the United States, for example. In the Americas, the suicide rate for teenage populations aged 10–19 years is 3.7 deaths per 100 000 (5.06 for males and 2.31 for females), whereas, in South America, the average is 3.3 deaths per 100 000 young people (4.2 for males and 2.4 for females). Adolescent suicide is more common in Bangladesh, with a rate of 39.6 per 100,000 of the young population. Meanwhile, in the Caribbean, suicide attempt rates among adolescents aged 12 - 15 years were 7.8%, 12.0%, 12.2%, 12.3%, 13.1%, 13.8%, and 13.9% in countries such as Suriname, Belize, Antigua and Barbuda, Curacao, Trinidad and Tobago, Bahamas, and Dominica (Koyanagi et al., 2019).

Suicidal thoughts and attempts in adolescents are thought to be the most significant predictors of completed suicide and provide critical intervention points (Pillai et al., 2009) According to Abdirahman, et al. (2012), there has been a lot of concern regarding the rate of suicidal thoughts among in-school teenagers in the Cayman Islands since 2007. More than one in six students (16.7%) in the Cayman Islands reported having conceived and attempted suicide, according to [5]. The documented experience of numerous nations with adolescent suicide attempts should serve as a warning to Saint Lucia, implying that the prevalence and determinants of suicide attempts should be investigated. Identifying potentially modifiable suicide risk behaviours among Saint Lucian students is critical for reducing the future burden of suicide.

Several in-school factors have been discovered to predict adolescent suicide attempts. In most cases, suicide attempts have been linked to violent behaviours, personal psychosocial factors, drug use, and sexual behaviours (Almansour et al., 2017). For instance, physical fights, attacks, and verbal abuse are all positively connected with suicidal attempts among school-aged adolescents, according to the authors of the study. They argue that an unsupportive and uncontrolled social environment for schoolchildren who have been injured in violent attacks brings intimidation and worry to the victims and that eventually causes them to attempt suicide (Koyanagi et al., 2019).

Several studies including that of (Smith et al., 2020) have established a positive association between adolescent sexual engagement and suicide attempts. For instance, towards providing a global picture of the correlation between adolescent sexual engagement and suicide attempts, (Smith et al., 2020) sampled 38 countries across different continents and found that in 32 of them, adolescents' engagement in sexual intercourse was associated with an increased risk of a suicide attempt. In another related study, Alix et al. (2020) discovered self-blame, feelings of shame and peer avoidance to be the strongest factors providing reasons why adolescents who have been engaged in sexual intercourse attempt suicide. Another set of factors that have been found to cause suicide attempts among youngsters are drug-use-related factors. For instance, excessive use of alcohol, or illicit drug use has been observed to predict (Borowsky, Ireland & Resnick, 2001).

Considering the rate of suicidal attempts among young people, current studies (Jung, 2019; Conner & Bagge, 2019) investigate the associations between alcohol abuse, smoking, and suicide risk. These researchers also observed that the combined use of alcohol, drugs and smoking was greatly associated with suicide risk than using alcohol, drugs and smoking separately (Jung, 2019).

Many variables have been discovered that predict adolescent suicide attempts. Suicide attempts have been linked to violent behaviours (Almansour et al., 2017). Physical fights, attacks, and verbal abuse are all positively connected with suicidal attempts among school-aged adolescents, according to the authors of the study. They went on to say that an unsupportive social environment for schoolchildren injured in violent attacks, for example, increases the chance of suicide attempts (Koyanagi et al., 2019).

Another study by (Shain et al., 2016) found that an impaired parent-child connection, living outside the family (either homeless or in a correctional institution or group home), and issues coping with schoolwork or assignments are all factors that contribute to teen suicide attempts. In the instance of the Saint Lucia survey, the variables that may be pushing students to try suicide must be identified to aid the implementation of interventional programs to combat any subsequent prevalence rate.

The assumptions in psychological models that may explain why people attempt suicide are the foundation of this research (Barzilay & Apter, 2014). The following assumptions were evaluated to provide theoretical explanations for why people (including adolescents in the current study region) might choose to commit suicide. Barzilay & Apter (2014) identified a few reasons why people would wish to commit suicide in their paper titled 'Psychological Models of Suicide.' Suicide attempts may occur for one of the following reasons, according to the authors:

1. memory impairs affecting an individual's ability to recall reasons for living or being hopeful about life.
2. familial transmission of the impulsive-aggressive trait places individuals at higher risk of suicidal behaviour.
3. feelings of non-belongingness, friendlessness, and social neglect leading to the desire for suicide attempt.
4. a deficit in interpersonal problem-solving increases the risk of suicidal behaviour as a reaction to stress.
5. unmet psychological needs cause torturing mental pain that leads to suicide as the only option.
6. Suicide ideation develops from feelings of entrapment due to defeat in stressful situations.

Finding an adequate theoretical model to support the analysis of data on suicide attempts in any study, as Prinstein (2008) points out, can be problematic. According to Prinstein (2008), any chosen theory must: be consistent with empirically documented risk factors and able to account for them; comprehensively address the interplay between intra-individual dynamic systems and inter-individual risk factors; provide insight into the processes by which contextual or background factors interact with proximal triggers to predict the emergence of suicidal ideation and behavior. Based on Prinstein's (2008) juxtaposition concerning the adequacy of models to support analysis of research findings, this study detaches itself from any of the assumptions identified by Barzilay & Apter (2014) until the predictors of suicide attempts among Saint Lucian students are discovered. To summarise, any of the assumptions outlined in psychological models of suicide conduct might be used to support this research.

This study sought to answer the following questions

- i. What is the overall prevalence rate of suicide attempts among In-school adolescents between 13-18 years in Saint Lucia?

- ii. What psychological factors could contribute to suicide attempts among in-school adolescents aged 13-18 in Saint Lucia?

METHODS

a. Data Sources and Study Design

The researchers used data from Saint Lucia's 2018 Global School Health Survey to conduct a cross-sectional analysis. The GSHS is a school-based survey that collects data on young people's health behaviours and protective factors through a self-administered questionnaire. The Global School Health Survey (GSHS) is a global survey of in-school teenagers conducted in partnership with the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and Middle Tennessee State University (MTSU). The surveys collect data on several teen health risks and protective characteristics using a standardized questionnaire. The study covers themes such as loneliness, friendliness, bullying, eating habits, sanitary conditions, human mental health difficulties, adolescent physical activities, juvenile substance usage, and youth sexual behaviours. This investigation used a questionnaire that had previously been published. The survey dataset was last viewed in February of 2022, and it is open to anyone who wants to use it.

b. Sampling Method and Sample Size

The two-stage cluster sample approach was used to collect data from Saint Lucia's in-school teenagers. To produce data representative of all students in Saint Lucia's Forms 1-5, Lower 5, and Upper 6, a two-stage cluster sample design was utilized. All schools were invited to participate in the first round. All courses were chosen to participate in the second stage, and all students were eligible to participate. The response rate for the institution was 100%, the student response rate was 77%, and the total response rate was 77%. A total of 1,970 students took part in the poll. The survey comprised in-school adolescent students aged 13 - 18 who were present at school on the day of data collection and provided proof of a documented parental or guardian permission form, as well as a child assent form for students aged 13 - 18. The sampling mechanism used in the study ensured that every eligible student had an equal chance of being selected for participation. Numerical weights were assigned to each student record to allow for the generalization of results. The final analysis of the study included 1,970 in-school teenagers. The 'Strengthening the Reporting of Observational Studies in Epidemiology' (STROBE) guideline was utilised to write the manuscript (Von Elm, 2014).

c. Study Variables

Outcome Variable

This study's outcome variable is 'suicide attempt.' In the study, a "failed" or "unsuccessful" suicide attempt of an individual to commit suicide that results in survival has been defined as a "failed" or "unsuccessful". Through the use of computers, cell phones, or other electronic gadgets, purposeful and repeated injury is perpetrated (Kowalski et al., 2014; Patchin & Hinduja, 2010). Suicide attempts have been expressed in a variety of ways, with multiple catalysing factors such as mental illness, excessive use of drugs or alcohol, access to guns, prolonged stress or a stressful life event, and loss of a loved

one have become topical contemporary literature, and has been widely used by several authors including (Hu et al., 2015; Liu et al., 2021). The term 'suicide attempt' was coined by the writers above to describe the prevalence and factors associated with suicide attempts in young adolescents. The question 'Did you ever really consider attempting suicide in the last 12 months?' was asked to see if a pupil had seriously pondered it. The students who responded "No" to the inquiry were classified as "never seriously consider attempting suicide [No]", whereas those among them who responded "Yes" were classified as "seriously consider attempting suicide" [Yes]".

Explanatory Variables

In this study, we looked at sixteen factors as explanatory variables. The variables were chosen because they were found in the GSHS datasets and had a substantial correlation with suicide attempts. (Hu et al., 2015; Liu et al., 2021) study the prevalence, distribution, and associated factors of suicide attempts among Chinese teenagers, which informed the selection of independent variables. Suicidal behaviour, sexual behaviour, predisposition to aggressive behaviour at school, sex, and age are some of the characteristics included in the survey from which the variables were chosen. The description of the variables, the related structured questions, response choices, and identification codes are all included in the supplement file (Table 1).

Table 1 Definition of explanatory and measurement coding of variables

| Variable | Survey question | Coding |
|------------------|---|---------------------|
| Sex | What is your sex? | 1 male, 2 female |
| Age | How old are you? | 1 13–14, 2 15–17 |
| Were hungry | During the past 30 days, did you go hungry because there was not enough food in your home | 1 Yes 2 No |
| Physical attacks | During the past 12 months, were you physically attacked? | 1 yes; 2 no |
| Physical fight | Have you been involved in a physical fight before? | 1 yes; 2 no |
| Serious injured | Have you been seriously injured before? | 1 yes; 2 no |

| | | |
|--|--|----------------|
| Felt lonely mostly | During the past 12 months, have you felt lonely? | 1 yes; 2 no |
| Were bullied physically | During the past 30 days, how were you bullied most often? | 1 yes 2 No |
| Suicidal plan | Did you make a plan about how you would attempt suicide in the past twelve months? | 1 yes; 2 no |
| Suicide consideration | During the past 12 months, did you ever seriously consider attempting suicide | 1 yes; 2 no |
| Parent used tobacco | During the past 30 days, did you use any tobacco products | 1 yes 2 no |
| Amphetamines or methamphetamines use | During your life, have you used amphetamines or methamphetamines (also called speed)? | 1 yes 2 no |
| Ever used marijuana | During your life, have you used marijuana (also weed, ganja, Mary Jane) before | 1 yes 2 no |
| Ever had sexual intercourse | Have you ever had sexual intercourse | 1 yes 2 no |
| Were bullied and couldn't sleep at night | During the past 12 months, have you been bullied and that you could not sleep at night | 1 yes 2 no |

d. Statistical Analysis

SPSS software version 23 was used to analyse the data. The investigation took place in three parts. To begin, percentages were employed to represent the number of students who attempted suicide. The Pearson chi-square test of independence was used in the second stage to investigate the association between the outcome variable, 'suicide attempts,' and the explanatory factors (Table 2). The link between the explanatory factors and 'suicide attempts' was investigated using a multivariate binomial logistic regression. Any explanatory factors that were statistically significant in connection to any of the outcome variables were integrated into the regression model during the chi-square test. The results of the analysis were given in a tabular form with adjusted odds ratios (AOR) and their associated 95% confidence intervals (CLs). To account for the difficulties in the sample design and data discrepancies, all frequency distributions were weighted, and SPSS commands were used for the estimations.

e. Ethical Consideration

The secondary dataset for this study was obtained with permission from WHO’s Global School Health Survey which is readily available as an open-access document on their website, hence, there was no need to seek ethical clearance for this work. However, before the poll could begin, the WHO obtained ethical approval from those who were concerned. Saint Lucia's Ministry of Health and Wellness also received institutional clearance. According to these institutions, all ethical requirements governing non-abuse of the students chosen for the survey were strictly observed. During data collection, all of the principals and teachers at the research schools gave their informed consent. Before being enrolled in the study, in-school teenagers aged 13 to 18 were requested to provide notes indicating parental or guardian approval as well as child agreement forms.

RESULTS

a. Adolescents’ Background Characteristics.

The overall prevalence of suicide attempts among adolescents of school-going age in Saint Lucia was 16.2%. In terms of the biological characteristics of the students’ suicide attempts was high among females (33.7%) than males (14.7%). Suicide attempts were higher among the older (16 -18 years) adolescent students (25.4%) than those who were young (13 -15 years).

Table 2 Bivariate analysis of ‘suicide attempt’ among in-school teenagers aged 13 - 18 years old option 1-5 grades in Saint Lucia (n = 1,970)

| Factors | | Suicide attempt | No suicide attempt | Chi-square (χ^2) | Phi (ϕ_c) |
|------------------------------------|--------|-----------------|--------------------|-------------------------|------------------|
| Sex (p=0.000) | Male | 131 (14.7%) | 758 (85.3%) | 0.000*** | -91.726a |
| | Female | 345 (33.7%) | 678 (66.3%) | | |
| Age (p=0.639) | 13 -15 | 250 (24.5%) | 772 (53.4%) | 0.220a | -0.011 |
| | 16 -18 | 229 (25.4%) | 673 (74.6%) | | |
| Went hungry (p=0.006) | Yes | 59 (33.5%) | 117 (66.5%) | 7.582a | 0.063 |
| | No | 421 (24.1%) | 1326 (.9%) | | |
| Were physically attacked (p=0.000) | Yes | 182 (33.0%) | 369 (67.0%) | 27.739 ^a | 0.121 |

| | | | | | |
|--|-----|----------------|--------------|----------------------|-------|
| | No | 288 (21.5%) | 1051 (78.5%) | | |
| Were in a physical fight (p=0.010) | Yes | 183 (28.5%) | 458 (71.5%) | 6.554 ^a | 0.058 |
| | No | 298 (23.2%) | 987 (76.8%) | | |
| Were seriously injured (p=0.001) | Yes | 205(28.6%) | 511 (71.4%) | 11.646 ^a | 0.084 |
| | No | 203 (21.4%) | 747 (78.6%) | | |
| Felt lonely (p=0.000) | Yes | 191 (51.8%) | 178 (48.2%) | 177.776 ^a | 0.304 |
| | No | 285 (18.4%) | 1264 (81.6%) | | |
| Were bullied (p=0.000) | Yes | 176 (40.8%) | 255 59.2% | 79.305 ^a | 0.208 |
| | No | 277 (19.7%) | 1129 80.3% | | |
| Made a suicide plan (p=0.000) | Yes | 296 (76.1%) | 93 (23.9%) | 707.956 ^a | 0.612 |
| | No | 166 (11.1%) | 1336 (88.9%) | | |
| Parents who used tobacco (p=0.000) | Yes | 101 (39.6%) | 154 (60.4%) | 34.121 ^a | 0.133 |
| | No | 376 (22.6%) | 1286 (77.4%) | | |
| Ever used amphetamines or methamphetamines (p=0.005) | Yes | 36 (36.4%) | 63 (63.6%) | 7.729 ^a | 0.065 |
| | No | 420(24.0%) | 1331 (76.0%) | | |
| Currently used marijuana (p=0.000) | Yes | 71 (30.5%) | 162 (69.5%) | 43.728 ^a | 0.153 |
| | No | 221 (13.6%) | 1403 (86.4%) | | |
| Ever had sexual intercourse (p=0.000) | Yes | 177 (30.2%) | 409 (69.8%) | 14.955 ^a | 0.093 |
| | No | 252 (21.8%) | 906 (78.2%) | | |

| | | | | | |
|---|-----|-------------|--------------|---------------------|-------|
| Were bullied and could not sleep at night (p=0.001) | Yes | 64 (64.6%) | 35 (35.4%) | 10.116 ^a | 0.199 |
| | No | 69 (44.2%) | 87 (55.8%) | | |
| Currently drank alcohol (p=0.000) | Yes | 265 (31.4%) | 578 (68.6%) | 34.173 ^a | 0.137 |
| | No | 189 (19.5%) | 780 (80.5%) | | |
| Ever got into trouble, became truant (p=0.000) | Yes | 64 (36.2%) | 113 (63.8%) | 13.311 ^a | 0.084 |
| | No | 400 (23.7%) | 1288 (76.3%) | | |

Furthermore, suicide attempts prevailed in high percentages among adolescent students who were hungry most of the time (33.5%, p=0.006), were physically attacked (33.0%, p=0.000), were involved in a physical fight (28.5%, p=0.010), were seriously injured (18.6%, p=0.001), were physically bullied (40.6%, p=0.000), were seriously injured (28.6%, p=0.001), were physically bullied (40.8%, p=0.000), were physically bullied causing them to become sleepless at night (64.6%, p=0.001). Again, high percentages of suicide attempts were found among those who felt lonely (51.8%, p=0.000) and had planned suicide (76.1%, p=0.000). High prevalence was found among those whose parents or guardians used tobacco products (39.6%, p=0.000), were using amphetamines or methamphetamines (36.4%, p=0.005), were using marijuana at the time (30.5%, p=0.000), drank alcohol (31.4%, p=0.000) and got into trouble and became truant (64.6%, p=0.000). Lastly, those who ever had sexual intercourse (30.2%, p=0.000) reported a relatively high percentage that they seriously considered committing suicide.

b. Distribution and Chi-Square Analysis of ‘Suicide Attempts Among In-school Adolescents in Saint Lucia

The results from the conduct of the Chi-square test indicate that students’ sex (χ^2 3.001*** p=0.000), physical bullying (χ^2 0.573**, p=0.005), loneliness (χ^2 0.447*** p=0.000), suicide planning (χ^2 0.051*, p=0.000), and worrying that causes sleepless nights (χ^2 0.542 **, p<0.001), associated significantly with suicide attempts, among adolescents of school-going age in Saint Lucia.

c. Analysis of Factors Associating Significantly with Suicide Attempt

Table 3 displays the results of the binomial logistic regression analysis done on the factors associated with suicide attempts among school-going adolescents in Saint Lucia.

Table 3 Relationships between significant variables and suicide attempts among in-school adolescents

| Variables | B | Wald test (z-ratio) | Sig. | Odds ratio | 95% Confidence interval for odds ratio | |
|--------------------------------|--------|---------------------|-------|------------|--|-------|
| | | | | | Lower | Upper |
| Bio-characteristics | | | | | | |
| Sex (female) | 1.099 | 30.081 | 0.000 | 3.001 | 2.026 | 4.445 |
| Violent behaviours | | | | | | |
| Were physically bullied | -0.557 | 7.827 | 0.005 | 0.573 | 0.388 | 0.846 |
| Psycho-personal factors | | | | | | |
| Felt lonely mostly | -0.806 | 14.336 | 0.000 | 0.447 | 0.294 | 0.678 |
| Worried and couldn't sleep | -0.612 | 6.291 | 0.012 | 0.542 | 0.336 | 0.875 |
| Suicide Planning | -2.984 | 253.349 | 0.000 | 0.051 | 0.035 | 0.073 |
| (Constant) | 2.308 | 158.987 | 0.000 | 10.058 | | |

The results from the analysis showed that being a female (AOR 3.001, 95% CI 2.026 – 4.445), being physically attacked (AOR 0.573, 95% CI 0.388 – 0.846), feeling lonely mostly (AOR 0.447, 95% CI 0.294 – 0.678), worried and couldn't sleep (AOR 0.542, 95% CI 0.336 – 0.875), and suicide plans made (AOR 0.051, 95% CI 0.035 – 0.073).

DISCUSSION

The study pursued the main objective of examining the overall prevalence of suicide attempts and its correlated psychosocial factors among in-school adolescents in Saint Lucia. The authors found a 16.2% prevalence rate of suicide attempts among the adolescents in the study area. It was also found factors such as being a female, physically bullied, mostly, feeling lonely, worried and couldn't sleep and plans of committing suicide contributed significantly to suicide attempts among adolescents in Saint Lucia. Using a representative sample of adolescent students of ages ranging from 13-18, the overall prevalence of suicide attempts among adolescents in Saint Lucia is (16.2% %). The incidence of suicide attempt rate in the current study area (16.2%), though slightly lower than the figure identified among students (16.7%) in the Cayman Islands, but higher than other Caribbean countries of the same middle-income status as Saint Lucia. Countries like Suriname, Belize, Antigua and Barbuda, Curacao, Trinidad and Tobago, Bahamas, and Dominica had suicide attempt rates of 7.8%, 12.0%, 12.2%, 12.3%, 13.1%, 13.8% and 13.9% respectively among adolescents (Koyanagi et al., 2019). This high rate in Saint Lucia is a source of concern and must be looked at critically to save future suicide attempts among adolescents. More so, it is a source of concern because it is higher than the estimate from Indonesia (10.7%) in 2019 among in-school adolescents (Putra et al., 2021). In Saint Vincent and the

Grenadines, the rate of suicide attempts is 17.9%. The above implies that there were some surely notable figures of adolescents who had tried committing suicide. Incidence of suicide attempts has been observed among countries with larger and faster population growth such as in the Americas (3.7% deaths per 100 000 adolescent populations), Canada (15%), Taiwan (11.2%) and China (85%) and this is a caution to Saint Lucia since gradual increases in population have been discovered by the World Bank (2017).

The results obtained after analysing the data showed that sex, specifically, being a female was significantly associated with the adolescents who planned to commit suicide. Authors such as (Akotia et al., 2019) have established several reasons why female adolescents would like to commit suicide. The factors identified by the above authors provide a wider domain for this study to establish the reasons why the in-school females in Saint Lucia attempted to commit suicide. Akotia et al. (2019) in an exploratory study about reasons why young people attempt suicide found abandonment or rejection from close relations to be one of the strongest factors that move females to conceive suicidal ideas and act spontaneously after the ideas have fully matured. Other authors including (Oner et al., 2015) have also found that females mostly have intimate opposite-sex relationship problems, and tend to keep to themselves worries, presumably caused by their intimate partners i.e., boyfriends, instead of seeking counselling from appropriate sources. Hopelessness in living and pessimism about what lies in the future were other reasons discovered earlier by (Batigun, 2005) and (Flowers, 2014) why some African-American females tried committing suicide. Perhaps, the in-school female adolescents in Saint Lucia tried committing suicide because of one of the above reasons found. To deal with the current situation head-on, the above findings indicating that sex (i.e., females) have a higher tendency to commit suicide than males in Saint Lucia is promoting another study into why they would want to do so.

Copeland et al., (2013) have established that suicide attempt is connected with school-based violence or peer-related aggressive activities. To support this assumption is a finding from this present study which is reporting a significant association between suicide attempts and violent-related factors including physical attack, physical fighting, and serious injury. Espelage et al. (2013) maintained that being bullied is associated with an increased risk of suicide ideation and suicide attempts. Indeed, the findings of this study have shown that physical bullying among adolescents in Saint Lucia made some of them attempt suicide. To this end, it is not a stretch to say that the students in the study area engage in frequent suicidal attempts because they experienced worse forms of school bullying which naturally causes pain arousing their desire to commit suicide.

Several studies on suicide probability (Batigun, 2005) done in the immediate past decade have already established that increasing social loneliness predicts suicide ideation and attempts (Gomboc et al., 2022). The authors when highlighting some worrying statistics among people of different age groups, found that the desire for one to commit suicide is one of the developmental trajectories (van Dulmen et al., 2013) of chronically high levels of loneliness among young people. Similar to the above

discovery are the results from this present study which have revealed that intentions to commit suicide emanate from the fact that students in the study area felt lonely for months and probably did not get any support to overcome the situation.

The findings of the study indicate that suicide attempt is significantly predicted by worry and sleeplessness among the in-school adolescents of Saint Lucia. When identifying the predictors of suicide ideation, suicide planning, and suicide attempts among high school students in the Philippines, (Quintos, 2020) discovered that students who worry to the extent that they cannot sleep always think of some drastic ways to come out of their precarious situations. (Winsler et al., 2015) to support the above discovery contended that if teens' sleep is deficient by one hour it can cause hopelessness which has been found to correlate significantly and positively with suicide attempts. It is not far fetch given the outcome of the study for one to connect the sleepless situation of the youth in Saint Lucia to the high levels of worry over several months.

The study also found that suicide attempt among the students of St. Lucia is associated with sexual engagements of them. The prevalence of suicide attempts among the students of St. Lucia who willingly engage in sexual intercourse could also be related to the findings of Alix et al. (2020) discovered that self-blame, feeling of shame and peer rejection are some of the strongest factors that cause teenagers to attempt suicide.

In-school adolescents in St Lucia who currently drank alcohol had attempted suicide. Drinking alcohol can increase someone's risk of dying by suicide (Jung, 2019). Some previous studies revealed the relationship between suicidal behaviour and drinking of alcohol and drug use (Dunlavy, Aquah, & Wilson, 2015; Miller, Hemenwa & Rimm, 2000; Miller et al., 2000). Some possible explanations for the association between these factors and suicide have been linked with depression and low self-esteem (Dunlavy, Aquah & Wilson, 2015).

Aside from alcohol and drug use, parents' habits such as smoking seem to have a link with suicide attempts among adolescents (University of Cincinnati, 2017; Conner & Bagge, 2019). According to a report on the 2012 National Survey on Drug Use and Health in the USA, it was found pupils are significantly more likely to contemplate, plan and attempt suicide when their parents engage in certain habits for instance Smoking, drunkenness. This finding from the study by the University of Cincinnati (2017) confirms our findings that there seems to be a link between parental use of tobacco and the tendency to commit suicide among pupils of Saint Lucia.

CONCLUSIONS

The findings of the study indicated a relatively low prevalence of suicide attempts among adolescents in St Lucia. St Lucia's cyberbullied prevalence though was relatively low (16.2%) when compared to the rates reported among Taiwanese (18.4%) and Canadian (25%) in-school adolescents. It is comparatively higher than those witnessed among young victims of suicide attempts in the United

States (9.3 %), which is an indication that some interventional measures must be put in place to prevent it from spreading shortly.

Also, biological factors such as sex (being a female), and psycho-personal factors such as having experienced hunger worry or seaplanes at night, being bullied, attacked or fought physically or seriously injured were significantly associated with 'suicide attempts among adolescents in Saint Lucia. Additionally, drug use behaviour of parents or students specifically tobacco, methamphetamines, and marijuana as well as students' sexual behaviours are associated significantly with a suicide attempt.

In all, fifteen (15) factors were found to be associated significantly with suicide attempts among the students in St Lucia. We are of the view that, with this rate of suicide attempts, the island of Saint Lucia may not be able to attain the provision of inclusive and equitable quality education and promote lifelong learning opportunities, nor ensure that these school-going-age adolescents get stable minds to learn at school. Hence, there is a need for the government, school authorities, parents, and other stakeholders to strengthen in-school policies and programs to help shape the St Lucia adolescents' behaviour regarding suicide attempts should be seen as urgent. Therefore, the following policy recommendations are worth considering:

First, because significant levels of suicide attempts were found among females, school management authorities must pay special attention to things that are likely to cause worries to females. Earlier studies have established that females normally have relationship problems or face abandonment from their peers and attempt suicide at early stages in life. The St Lucia Ministry of Health and Wellness should team up with school management authorities and design programs that will educate all, especially females, on the dangers of teen suicide. Second, dealing with youth's violent behaviours to curtail suicide attempts must be done with immediate effect. In so doing, secret reporting and rewarding systems must be set for the youth to report their peers who constantly engage in fierce attacking activities. The St Lucia Ministry of Health and Wellness must not equally downplay co-curricular activities and drama shows that highlight the link between excessive drug use and suicide attempts.

Following the above practical measures to reduce the prevalence of suicide attempts will help Saint Lucia to achieve some targets of the SDGs, particularly SDG 4.1 (ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all) since the current rate of suicide attempts can cause teen deaths. More so SDG 4.1 may not be achieved by Saint Lucia because the current rate of suicide attempts (16.2% %) has the probability of rising given the fact that psychosocial factors such as hunger, loneliness, worry and sleepiness have been found to correlate highly negatively with academic achievements of students generally. But this rate of suicide attempts (16.2 %) can be suppressed immediately –fast beforehand -- even before killing many of the associating factors identified in this present study.

STRENGTHS AND LIMITATIONS OF THE STUDY

The authors of this study used data from Saint Lucia to investigate the relationship among variables that were presumed to predict suicide attempts among adolescents of school-going age in general. Undoubtedly, the study has found some significant predictors of suicide attempts among students between the ages of 13-18. The rigorous analytical processes followed to analyse the data have improved the basis of generalising the findings when the causes of suicide attempts are researched in a similar geographical context or country. Conversely, causal inferences could not be made from the results as GSHS utilises a cross-sectional study design. The above limitation notwithstanding, the study gives the “best snapshot” information on suicide attempts among adolescents in Saint Lucia for designing important health education programs to help the students.

DATA AVAILABILITY

The data for this study were sourced from the Global School-Based Student Health Survey Saint Lucia, 2018, it can be located at the Non-Communicable Disease Microdata Repository for the World Health Organization the link: <https://extranet.who.int/ncdsmicrodata/index.php/catalog/877>

REFERENCES

- Alix, S., Cossette, L., Cyr, M., Frappier, J. Y., Caron, P. O., & Hébert, M. (2020). Self-blame, shame, avoidance, and suicidal ideation in sexually abused adolescent girls: a longitudinal study. *Journal of child sexual abuse*, 29(4), 432-447.
- Shain, B., Braverman, P.K., Adelman, W.P., Alderman, E.M., Breuner, C. C., Levine, D.A., Marcell, A.V. and O'Brien, R. F. (2016). Suicide and suicide attempts in adolescents. *Pediatrics*, 138(1).
- Méndez-Bustos, P., Fuster-Villaseca, J., Lopez-Castroman, J., Jiménez-Solomon, O., Olivari, C., & Baca-Garcia, E. (2022). Longitudinal trajectories of suicidal ideation and attempts in adolescents with psychiatric disorders in Chile: study protocol. *BMJ Open* 12(2).
- Koyanagi, A., Oh, H., Carvalho, A. F., Smith, L., Haro, J.M., Vancampfort, D., Stubbs, B. & DeVylder, J. E., (2019). Bullying victimization and suicide attempts among adolescents aged 12–15 years from 48 countries. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(9), 907-918.
- Pillai, A., Andrews, T., & Patel, V. (2009). Violence, psychological distress and the risk of suicidal behaviour in young people in India. *International Journal of Epidemiology*, 38 (2), 459-469.
- Smith, L., Jackson, S. E., Vancampfort, D., Jacob, L., Firth, J., Grabovac, I., ... Koyanagi, A. (2020). Sexual behavior and suicide attempts among adolescents aged 12-15 years from 38 countries: a global perspective. *Psychiatry Research*, 287. <https://doi.org/10.1016/j.psychres.2019.112564>

- Abdirahman, H. A, Bah, T, Shrestha, H. L, & Jacobsen, K. H. (2012). Bullying, mental health, and parental involvement among adolescents in the Caribbean. *West Indian Med Journal*, 61(5): 504-50
- Almansour, A. M, & Mwenya Kwangu, B. V. (2017) Factors associated with suicidal ideation among adolescents attending school in Samoa. *International Public Health Journal*, 9(4): 423-9.
- Barzilay, S. & Apter, A. (2014). Psychological Models of Suicide. *Archives of Suicide Research*, 18 (4). Retrieved from <https://doi.org/10.1080/13811118.2013.824825> on 9th June, 2021.
- Prinstein, M. J. (2008). Introduction to the special section on suicide and nonsuicidal self-injury: A review of unique challenges and important directions for self-injury science. *Journal of Consulting and Clinical Psychology*, 76, 1 – 8.
- Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2014). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Bulletin of the World Health Organization*, 85, 867-872.
- Kowalski, C., Kahana, E, Kuhr, K., Ansmann, L., Pfaff, H. (2014) Changes over time in the utilization of disease-related Internet information in newly diagnosed breast cancer patients 2007 to 2013. *Journal of Medical Internet Research*, 16(8).
- Patchin, J. W. & Hinduja, S. (2010) Cyberbullying and self-esteem. *Journal of school health*, 80(12):614-21.
- Hu, J., Dong, Y., Chen, X., Liu, Y., Ma, D., Liu X, Zheng R., Mao, X., Chen T., He W. (2015). Prevalence of suicide attempts among Chinese adolescents: A meta-analysis of cross-sectional studies. *Comprehensive Psychiatry*, 61, 78-89.
- Liu, X., Huang, Y., & Liu, Y. (2018, Dec. 19). Prevalence, distribution, and associated factors of suicide attempts in young adolescents: School-based data from 40 low-income and middle-income countries. *PloS one*, 13(12).
- Miller, M., Hemenway D., Rimm, E. (2000). Cigarettes and suicide: a prospective study of 50,000 men. *American Journal of Public Health* 90(768). PMID: 10800427.
- Miller, M., Hemenway, D., Bell, N.S., Yore, M. M. & Amoroso, P. J. (2000). Cigarette smoking and suicide: A prospective study of 300, 000 male active-duty army soldiers. *American journal of epidemiology* 151: 1060–1063. PMID: 10873129.
- Putra, I. G., Karin, P. A., Ariastuti, N. L. (2021, Oct 1) Suicidal ideation and suicide attempt among Indonesian adolescent students. *International Journal of Adolescent Medicine and Health*, 33(5).
- Akotia, C. S., Knizek, B. L., Hjelmeland, H., Kinyanda, E., & Osafo, J. (2019). Reasons for attempting suicide: An exploratory study in Ghana. *Transcultural Psychiatry*, 56(1), 233-249.
- Oner, S., Yenilmez, C., & Ozdamar, K. (2015). Sex-related differences in methods of and reasons for suicide in Turkey between 1990 and 2010. *Journal of International Medical Research*, 43(4), 483-493.

- Batigun, D. (2005). Suicide probability: a study on reasons for living, hopelessness and loneliness. *Turk Psikiyatri Derg*, 16, 29-39.
- Dunlavy A.C, Aquah, E.O, & Wilson, M.L. (2015). Suicidal ideation among school-attending adolescents in Dar es Salaam, Tanzania. *Tanzania Journal of Health Research* 17.
- Flowers, K. C., Walker, R. L., Thompson, M. P., & Kaslow, N. J. (2014). Associations between reasons for living and diminished suicide intent among African-American female suicide attempters. *The Journal of Nervous and Mental Disease*, 202(8), 569-575.
- Copeland, W. E., Wolke, D., Angold, A., & Costello, E. J. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA Psychiatry*, 70(4), 419-426.
- Espelage, D. L., & Holt, M. K. (2013). Suicidal ideation and school bullying experiences after controlling for depression and delinquency. *Journal of Adolescent Health*, 53(1), 2731.
- Gomboc, V., Krohne, N., Lavrič, M., Podlogar, T., Poštuvan, V., Zadavec Šedivy, N., & De Leo, D. (2022). Emotional and social loneliness as predictors of suicidal ideation in different age groups. *Community Mental Health Journal*, 58(2), 311-320.
- University of Cincinnati. (2017). Parenting behaviors linked to suicide among adolescents: Junior high school-aged children at significantly higher risk than peers when parents are not emotionally responsive. *ScienceDaily*. Retrieved from www.sciencedaily.com/releases/2017/12/171205091558.htm, on October 25, 2022.
- van Dulmen, M. H., & Goossens, L. (2013). Loneliness trajectories. *Journal of Adolescence*, 36(6), 1247-1249.
- Quintos, M. A. M. (2020). Identifying the Predictors of Suicide Ideation, Suicide Planning, and Suicide Attempts among High School Students in the Philippines from four nationally representative datasets. *Asia Pacific Journal of Education, Arts and Sciences*, 7(2), 1-18.
- Winsler, A., Deutsch, A., Vorona, R. D., Payne, P. A., & Szklo-Coxe, M. (2015). Sleepless in Fairfax: the difference one more hour of sleep can make for teen hopelessness, suicidal ideation, and substance use. *Journal of Youth and Adolescence*, 44(2), 362-378.