

Suicide Ideation in Jamaican Youth: Sociodemographic Prevalence, Protective and Risk Factors

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ABSTRACT

Objective: To determine the prevalence of suicidal ideation and examine the association between suicidal ideation and sociodemographic characteristics, protective and risk factors among Jamaican youth.

Method: In this cross-sectional study, an interviewer administered school-based survey was conducted among 2997 students 10–15 years old in Jamaica. Although there were a number of questions on suicide, this paper focusses on one question “During the past year, did you ever seriously consider attempting suicide?” as the measure of suicidal ideation.

Results: The prevalence rate of suicidal ideation was 9.7%. Logistic regression analysis revealed that significant correlates of suicidal ideation were being female (odds ratio = 1.49), being depressed (odds ratio = 5.78), living in a rural area (odds ratio = 0.62), likes oneself (odds ratio = 0.58), indulging in aggressive behaviour (odds ratio = 1.43), has considered harming others (odds ratio = 3.11), protective factors in the home (odds ratio = 0.62), involvement in risky behaviour (odds ratio = 1.56) and being teased/bullied (odds ratio = 1.69).

Conclusion: These findings have implication for prevention and treatment of suicidal behaviour in children and adolescents.

Keywords: Jamaica, suicide ideation, youth

Ideación Suicida en la Juventud Jamaicana: Prevalencia Sociodemográfica, Factores de Riesgo y Factores de Protección

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RESUMEN

Objetivo: Determinar la prevalencia de ideación suicida y examinar la asociación entre la ideación suicida y las características sociodemográficas, así como los factores de protección y riesgo entre la juventud jamaicana.

Método: En este estudio transversal, un entrevistador administró una encuesta escolar entre 2997 estudiantes de 10–15 años de edad en Jamaica. Aunque había varias preguntas sobre el suicidio, el documento se centraba en la siguiente, con el objeto de medir la ideación suicida: “¿Consideraste alguna vez seriamente cometer suicidio el año pasado?”

Resultados: La tasa de prevalencia de ideación suicida fue 9.7%. El análisis de regresión logística reveló que los correlatos significativos de ideación suicida fueron: ser mujer (cociente de probabilidades OR = 1.49), estar deprimido (cociente de probabilidades OR = 5.78), vivir en un área rural (cociente de probabilidades OR = 0.62), gustarse a sí mismo (cociente de probabilidades OR = 0.58), permitirse un comportamiento agresivo (cociente de probabilidades OR = 1.43), considerar hacer daño a otros (cociente de probabilidades OR = 3.11), factores de protección en la casa (cociente de probabilidades OR = 0.62), involucrarse en conductas arriesgadas (cociente de probabilidades OR = 1.56) y ser víctima de burla o acoso abusivo (cociente de probabilidades OR = 1.69).

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Conclusión: *Estos hallazgos tienen implicaciones en cuanto a prevenir y tratar la conducta suicida en niños y adolescentes.*

Palabras claves: Jamaica, ideación suicida, juventud

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INTRODUCTION

Adolescent suicide is a major public health problem (1). Suicide now ranks among the top five causes of death among adolescents, along with unintentional injuries, violence, HIV/AIDS and other communicable diseases. Analyses of the trends in adolescent suicide have shown that the rate is increasing in many regions across the world over the last quarter century (2, 3).

Suicidal behaviour spans a spectrum of behaviours ranging from precursor behaviours such as suicidal ideation, suicide plan and suicide attempt to completed suicide. Suicidal ideation varies in severity from passively thinking of death and that “life is not worth living” to having specific suicidal thoughts associated with an intent or plan (4) whereas suicide attempt is “self-inflicted behaviour” intended to result in death (5).

Nock and colleagues reported that adolescents are at greatest risk for suicidal ideation. Additionally, they found that the early onset of suicidal ideation is associated with a greater risk of suicide plan and attempt and that the transition from ideation to plan and attempt occurs within the first year of onset (6).

The risk of suicide increases as an individual progresses from having passive thoughts of self-harm to having a suicide plan (7). Arguably, young people perceive suicide differently from adults and the extent to which adolescents perceive suicide as an acceptable alternative increases the likelihood of considering suicide (5). Furthermore, adolescents with multiple problems are more likely to engage in suicidal acts (8). Noteworthy, suicidal ideation is an important marker for future distress and deficits in psychological and behavioural functioning (9).

Cross-national data reveal prevalence estimates for suicidal ideation, plans and suicide attempts are similar for countries regardless of their stage of economic development (10). Reported prevalence rates of suicidal ideation among youth range from 11 to 25 per cent (11–13). Fewer adolescents have a plan accompanying their suicidal ideation and the incidence of having a plan is higher in adolescent girls (6.0%) compared to boys [2.3%] (5, 14). Generally, females are at greater risk for suicidal ideation and attempts. However, more males complete suicide due to more lethal suicide behaviour. Gender apparently plays less of a role in low- and middle-income countries (6).

Emerging evidence suggests that adolescents who consider suicide fall into one of two groups, those exhibiting dysphoria and hopelessness and those with an impulsive,

externalizing pattern of behaviour (15). Evidence indicates that hopelessness may serve as a cognitive factor directly affecting depressive symptoms and indirectly affecting suicidal ideation (15).

Numerous risk factors for suicide behaviour have been cited in the literature, these include genetic predisposition, personal, familial and ecological factors (16, 17). Intra- and extra-personal factors, such as poor self-esteem, loneliness and hopelessness are well documented (18–20).

Mental disorders, especially depressive symptoms, are among the strongest predictors of suicide precursors such as ideation and attempts. Substance abuse, including alcohol and marijuana use (17, 21, 22), is an important risk factor for suicidal behaviours. The association between suicidal ideation and disruptive disorders in adolescents has been reported in the literature (17, 22–25). King *et al* also showed that involvement in risk behaviours, such as sexual activity and physical fighting, is associated with suicidal ideation (22). Chronic exposure to trauma, including physical and sexual abuse, is well documented (26). Research has also shown that low academic performance is a risk factor for suicidal behaviour (17, 27).

A broad body of literature also emphasizes the role of ethnicity, acculturation, socialization and the familial factors such as diminished family life, lack of family cohesion, poor family adaptability and poor parental monitoring in the aetiology of suicide behaviour among adolescents (22, 23, 25). Additionally, the death or loss of a family member may predispose an adolescent to contemplating and completing suicide (24). The presence of psychopathology in the parent, including suicidal behaviour has also been identified as a risk factor in adolescents (22, 25).

It should be reiterated that, in general, young people are exposed to numerous risk factors yet only a comparatively small group will actually engage in these behaviours. The pathways from suicide ideation to completed suicide and the roles of the numerous intervening variables and modifiable risk factors are complex and not well understood. A clearer understanding of this would add additional insight and would have implications for prevention and treatment.

Despite the growing significance and body of knowledge of suicide, still very little is known about suicide behaviours among youth and the potentially modifiable associated risk factors associated with suicide behaviours in Jamaica. In this study, we used data from a school-based survey of children to determine the prevalence of suicidal ideation and to identify psychosocial protective and risky behaviours associated with suicidal ideation.

SUBJECTS AND METHODS

The study was a cross-sectional, interviewer-administered school-based survey of children aged 10–15 years old attending all school types across Jamaica. A listing of primary and secondary schools and their enrolment records provided the sample frame and schools were randomly selected with probability proportional to size. At each school, children within the grades with the required age groups were randomly selected from the school register of children present on the day of the interviewer visit. Written informed consent and assent was obtained from the parent/guardian and the child, respectively. Children, who reported that they had been abused, or had considered or attempted suicide, were referred for treatment.

The instrument used was an interviewer-administered questionnaire which was compiled using validated questions from previous surveys on the same age group of Jamaican children (28, 29). Validation of the final questionnaire for this study was done during the pre-testing phase of the project. The questionnaire included information about suicidal ideation, sociodemographic characteristics, risk factors including being teased/bullied and being physically abused and risk behaviours as well as protective factors within and outside the home.

Principal component analysis was used to create resiliency scores for: protective factors in and outside the home, including whether parent/guardian monitors the students and monitors their homework; and risk scores for personal risk-taking and community disorganization – rundown neighbourhood, neighbourhood with criminal activities including prostitution, gangs and/or guns, and neighbourhood with drug criminal activities.

The data were analysed using SPSS version 12.0. Frequencies, cross-tabulations, independent *t*-test of difference between means and logistic regressions were performed. For the logistic regression, all continuous variables except age were dichotomized using the standard method of application of 95% CI of mean of the variable of interest for choosing a cut-off. The data were weighted by age, gender, school type and parish.

RESULTS

Of the 2997 students who responded to the question “During the past year, did you seriously consider attempting suicide?” 9.7% stated that they had, with significantly more females than males and more students in the urban areas than in rural areas reporting suicidal ideation (Table 1). There was no significant difference by age of student.

Significantly more students with negative opinions/thoughts and behaviours *ie* they did not like themselves, were depressed, considered harming others and exhibited some form of aggressive behaviour had suicidal ideation (Table 2). Some 36.6% of students who were depressed and 27.1% and 22.3%, respectively, who exhibited aggressive behaviour and considered harming someone, had suicidal ideations. This

Table 1: Whether student seriously considered suicide in the past year by sex, age and school location

Characteristic		During the past year, student seriously consider attempting suicide	n
Sex*	Male	7.2	1418
	Female	11.6	1579
Age of student (years)**	10	10.5	494
	11	8.4	526
	12	8.0	523
	13	11.8	508
	14	7.8	485
Urban-rural*	Urban	11.5	1591
	Rural	7.3	1406

**p* < 0.01; ** not significant

Table 2: Whether student seriously considered suicide in the past year by whether likes oneself, whether depressed, whether exhibits aggressive behaviour, whether considered harming someone, whether a victim of physical attack and whether teased/bullied

Characteristic		% seriously considered attempting suicide	n
Likes oneself*	No	10.8	2127
	Yes	6.4	870
Is depressed*	No	8.2	2863
	Yes	36.6	134
Exhibits aggressive behaviour*	No	6.9	1948
	Yes	27.1	70
Considered harming someone*	No	6.7	2445
	Yes	22.3	534
Has been a victim of a physical attack*	No	7.4	2032
	Yes	13.7	951
During the past month has been teased/bullied*	No	7.7	1956
	Yes	13.1	1024
Has been physically* abused or mistreated*	No	7.9	2567
	Yes	21.4	412

**p* < 0.01

compares with only 8.2%, 6.9% and 6.7% suicidal ideation among students who were not depressed, did not exhibit aggressive behaviours and did not consider harming anyone, respectively. Also, more children who had been the victim of a physical attack (13.7%) or who had been teased or bullied (13.1%) reported considering suicide when compared with those who had not been victims of attack (7.4%) or been teased/bullied (7.7%).

The mean scores for several risk and resiliency factors associated with suicidal ideation are shown in Table 3. Students reporting suicidal ideation obtained higher mean scores for risky behaviour and for reporting criminal activities in their community. On the other hand, they had lower mean scores for protective factors within the home and for monitoring of the student by the parent/guardian. Protective fac-

Table 3: Whether student seriously considered suicide in the past year by protective and risk factors and behaviours

	Had suicidal ideation	n	Mean ± SD	p
Involved in risky behaviour	No	2703	1.12 ± 0.19	0.00
	Yes	285	1.22 ± 0.25	
Protective factors outside the home score	No	2659	4.17 ± 0.90	0.06
	Yes	274	4.06 ± 0.95	
Parent monitors student score	No	2707	3.79 ± 0.79	0.00
	Yes	285	3.51 ± 0.81	
Protective factors inside the home score	No	2701	4.41 ± 0.68	0.00
	Yes	284	4.17 ± 0.82	
Community crime score	No	2654	0.266 ± 0.339	0.00
	Yes	281	0.383 ± 0.376	

tors outside of the home were not associated with suicidal ideation.

In order to estimate the independent effect of each of these variables on suicidal ideation while controlling for the other variables, a multiple logistic regression with all the variables found to be significant in the bivariate analysis was performed. The odds ratios and confidence intervals for each variable are shown in Table 4. With the exception of com-

Table 4: Odds ratios of factors associated with suicidal ideation among students 10–15 years old

Factor	Odds Ratio	95.0% CI for Odds Ratio
Being female	1.49	1.02 – 2.19
Being depressed	5.78	3.37 – 9.90
Living in a rural area	.62	0.41 – 0.86
Likes oneself	0.58	0.40 – 0.95
Indulging in aggressive behaviour	1.43	1.01 – 4.39
Has considered harming others	3.11	2.03 – 4.77
Having protective factors in the home	0.62	0.43 – 0.90
Involved in risky behaviour	1.56	1.01 – 2.41
Been teased/bullied	1.69	1.17 – 2.43
Has ever been physically abused	NS	
Community crime	NS	
Parents monitoring child	NS	

munity crime and involvement and parent monitoring of child, all the variables remained significant. Students reporting depression were 5.78 times (CI 3.37, 9.90) more likely to have suicidal ideation, and those reporting that they considered harming others, 3.11 times (CI 2.03, 4.77) more likely to report suicidal ideation. Females, those indulging in aggressive behaviours or risky behaviours were also more likely to report suicidal ideation than males, non-aggressive students and those not involved in risky behaviours, respectively. Students who reported being teased/bullied in the past month were also more likely to express suicidal ideation. Protective factors within the home, living in rural areas and liking self reduced the risk of suicidal ideation.

DISCUSSION

In this study, we found that the prevalence of suicidal ideation was 9.7%. This is consistent with that previously reported in the literature (10–12) and in accord with rates previously reported by Pottinger *et al* in Jamaica (30). These rates are relatively low compared to the global rates and are consistent with trends previously reported for suicide in Jamaica (31) which indicate that Jamaica records comparatively low suicide rates.

Not surprisingly, we found the prevalence of suicide ideation to be higher among females compared to males. This gender differential is also well documented in previous research done in Jamaica (5, 14, 24, 30, 32). Several factors may account for this observation including the higher life time prevalence of depression in females (31).

Extant research indicates that adolescents with disruptive behaviour, such as aggression, were more likely to display suicidal behaviour (17, 22, 24). In this study, we found 22% of students reported aggressive behaviours and considered harming others. Nock *et al* made an interesting observation that the presence of impulse control disorder is more strongly correlated with suicide ideation in low- and middle-income countries as compared to depression which is more strongly correlated with suicidal ideation in high income countries (8). These differences, however, may be related to the fact that there are lower rates of detection of depression in low- and middle-income countries. The association between suicidal behaviour and externalizing behaviours such as aggression certainly warrants further investigation as they may share a common aetiological pathway with conditions such as personality disorders.

Consistent with the literature, we also found that several environmental factors such as protective factors within the home reduce the risk of suicide ideation (24).

Adolescents who admitted “to not liking self” were at greater risk for suicidal ideation. The association between poor body image and suicidal behaviour has also been reported among adolescents (15).

There are several limitations to this study that should be noted. Firstly, this study was an interviewer-assisted survey which could have reduced the level of reporting of a culturally sensitive and potentially embarrassing subject as suicidal ideation. Secondly, the assessment of depression was not based on a standardized screening tool but on a limited number of reported symptoms. Thirdly, the assessment of suicidal ideation relied on a single item only. Finally, conclusion about causality cannot be drawn given the fact that this is a cross-sectional study.

Notwithstanding these limitations, this study has added to the emerging body of literature on suicide in adolescents especially in a middle-income country such as Jamaica. Furthermore, it has provided greater insight into modifiable risk and protective factors for suicide behaviour in adolescents and therefore has implications for the development of pre-

vention and treatment programmes. It is therefore of benefit to policy-makers and service providers. Additionally, the study has highlighted other areas for future exploration.

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