

Prevalence of Suicide Ideation and Attempt among Palestinian Adolescents: Across-Sectional Study

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Abstract: Although suicide behavior is a major public health priority in many developed countries, it remains largely ignored and underestimated in developing countries, especially among impoverished rural population. Thus, it is a major public health concern in its own, calling for urgent suicide intervention strategies. A descriptive cross-sectional study aimed to determine the prevalence of mental health-related behavior among 720 Palestinian school adolescents in Tarqumia. Students in the 7th through 11th grades (n=720, aged 13–17 years) in 4 public secondary and high schools anonymously completed the Arabic version of the international Global School-Based Health Survey. Results revealed high prevalence rate (24.58%) of suicide ideation and suicide attempt (25.28%) among Palestinian adolescents, where males were at high risk. The prevalence of felt lonely was reported by 25.28% of male and female adolescents. Further work is needed to reduce the escalating ideation and trend of suicide among the most vulnerable populations. Hopefully this study will contribute to the understanding of this phenomenon and to the development of prevention strategies.

Key words: Suicide Behavior • Ideation • Attempt • Mental Health • Palestine

INTRODUCTION

Worldwide, all countries are disproportionately suffering from suicide, with the greatest burden in developing countries. Suicide is an enormous personal and public health problem that has long-term costs on families and communities. It receives increasing public health in many developed countries, unfortunately it remains largely ignored and under estimated in developing countries, especially among impoverished urban population.

Suicide is a final stage of behavior that is probably the final result of interactions of various risk factors including biological, genetic and environmental factors, as well sociopolitical factors. Suicide has been considered as the second cause of death worldwide among 10-24 years old, with approximately 1 million people worldwide die by suicide, it is projected to increase to 1.53 million by 2020,

making it one of the leading causes of death, this roughly corresponds to one death every 40 seconds [1, 2]. Suicide affects all groups, but some are at higher risk than others. Globally, suicide rates are consistently greater in males as compared to females [3, 4]. But, the gender ratio is also consistently reversed when suicidal thoughts and behaviors are considered with females showing a higher rate of ideation and attempts as compared to males [5, 6]. Moreover, suicide is projected to become the greater leading cause of the global burden of disease over the coming years [7].

Unfortunately, in Arab countries and due to the combination of the stigma, familial, religious and social taboo affiliated with suicide; previous studies have focused solely on suicide ideation and /or thoughts of killing oneself, but not on attempted or completed suicide. Suicide has been under researched in developing countries including the Eastern Mediterranean Region.

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Adolescent mental health is a major public health concern [8]. Therefore, assessment and prevention/intervention of negative mental health symptoms among adolescents is an important public health goal [8, 9]. Palestine is interesting to study because mental health problems in the general population are high, but the proportion of those who are untreated is much higher due to the stigma against seeking mental health treatment [10], attributed by some to prolonged exposure to violence from wars or armed conflicts.

In Palestine, suicide ideation has been reported by national previous study using the Global School-Based Students Health Survey (GSHS). Karaman reported a prevalence of 18.5% in Gaza Strip and 23.3% in West-Bank, for students who ever seriously considered attempting suicide during the past 12 months [11].

International research among adolescents between 12 and 19 years old on suicide ideation has found that it is associated with gender differences, with females more at risk [12]. Social roles and life experiences have been hypothesized regarding gender differences [13]. Psychological and psychiatric problems including: isolation, sleep disorder, khat use [14], sadness, loneliness and depression [6,15-19], alcohol consumption [20], weak familial or social bonds [21], social, economic and cultural factors [22-26], emotional abuse and/or disorder study [27-29], sexual abuse [30-32], aggression and bullying [33-35]. In addition, recent studies have recommended for examining risk-factors of suicidal symptoms for men and women together at the same time [36]. This study aimed to determine the prevalence of suicide ideation and attempt among male and female school adolescents in 7th-11th grades.

Purpose: A descriptive, exploratory cross-sectional study was conducted to estimate the prevalence of mental health-related behaviors among Palestinian school adolescents in Tarqumia, in Palestine.

Methods: Students in the 7th through 11th grades (n=720, aged 13-17 years) in 4 public secondary and high schools anonymously completed the Arabic version of the international Global School-Based Health Survey. SPSS version 20.0 was used to describe the data.

Questionnaire: All students in the study sample were given a modified Arabic version of the Global School-Based Student Health Survey (GSHS) developed by the WHO in 2003; the questionnaire is already available in

Arabic language. Cronbach alpha was used to measure the internal consistency of the questionnaire, which was 0.82.

This questionnaire included 87 items covering demographic information, physical activity and sedentary behavior, tobacco use, substance use behaviors, diet and weight concerns, as well as additional items relating to other health areas. The focus of this paper is on mental health-related behaviors including Loneliness/depression and Suicide ideation and attempts; therefore, analysis was conducted only on those variables relevant to these issues.

Suicide ideation was measured with the question "during the past 12 months have you ever seriously considered attempting suicide?" The answer to this question was binary (yes = 1; no = 0). In addition to demographic variables (Age, gender and grade) adolescents answered questions related to mental health. Three mental health questions asked how often they felt lonely in the previous 12 months (Coded as most of the time or always = 1; never to sometimes =0); worried so much that they could not sleep in the previous 12 months (coded as most of the time or always = 1; never to sometimes = 0); and How many close friends do you have? (Coded as one or more = 1; no = 0).

Statistical Analysis: Data of the questionnaire was entered and analyzed using STATA software version 11. Descriptive statistics were used to show the demographic profile of the study sample. Mean and confidence interval were calculated to determine the prevalence of Loneliness/depression and Suicide ideation and attempts behavior among the study sample. Chi-square was used and/or Fisher's exact tests to identify associations between dichotomous variables and considered a probability value of =0.05 to be statistically significant.

RESULTS

Sample Description: The response rate was 97.3% (720 out of 740 secondary-school students). The results are based on the questionnaire responses of 720 study participants. Table 1 summarizes the overall demographic characteristics of the 720 students. Females and males were evenly distributed. The population age ranged from 13 to 17 years, with the majority being between 16 and 17 years (43.4%). The mean age was 15.4 (Standard deviation 1.3) years, with males and females being of almost equal ages (Table 1).

Table 1: Demographic characteristics of the students (n = 720)

Characteristics	Number of respondents	(%)
Age (years)		
13 years	122	16.9
14 years	14	19.7
15 years	156	21.7
16 years	153	21.3
17 years	147	20.4
Gender		
Male	363	50.4
Female	357	49.6

Table 2: Prevalence of mental health issues among the respondents by gender (n = 720; male = 363, female = 357)

Items	Gender			Pearson Chi-Square	P-value
	Male% (95% CI)	Female% (95% CI)	Total% (95% CI)		
Felt lonely-most of the time or always during the past 12 months	15.98(12.36, 20.16)	16.53(12.83, 20.79)	16.25(13.63, 19.15)	0.34(4)	0.987
Felt worried and affected sleep - Most of the time or always during the past 12 months	15.98 (12.36, 20.16)	22.97 (18.71, 27.69)	19.44 (16.61, 22.53)	22.99 (4)	<0.001
Seriously considered attempting suicide during the past 12 months	30.30 (25.62, 35.32)	18.77 (14.85, 23.21)	24.58 (21.48, 27.90)	12.92 (1)	<0.001
Made a plan on how to attempt suicide during the past 12 months	30.58 (25.88, 35.60)	19.89 (15.87, 24.41)	25.28 (22.14, 28.62)	10.89 (1)	0.001
Have no close friends	57.30 (52.03, 62.45)	54.34 (49.02, 59.59)	55.83 (52.12, 59.50)	19.77 (3)	<0.001

Note: 1. CI = Confidence interval.

2All the activities were recorded for the 12 months recall

Mental Health-Related Behavior

Loneliness/Depression: A total of 16.25% (13.63, 19.15) of male and female students felt lonely most of the time or always during the past 12 months. Female students at 16.53% (12.83, 20.79) were more likely than male students at 15.98% (95% CI: 12.36, 20.16) to report that they felt lonely most of the time or always during the past 12 months. The Pearson chi-square indicated no significant difference ($p = 0.987$) between gender and feeling lonely (Table 2).

Overall, 19.44% (16.61, 22.53) of male and female students felt so worried about something that they could not sleep at night most of the time or always during the past 12 months preceding the survey. Female students at 22.97% (95% CI: 18.71, 27.69) were significantly more likely than female students at 15.98% (12.36, 20.16) to report feeling so worried about something they could not sleep at night most of the time or always. The Pearson chi-square indicated significant differences ($p < 0.001$) between gender and reporting feelings of worry.

Suicide Ideation and Attempts: Overall, 24.58% (95% CI: 21.48, 27.90) of male and female students had seriously considered attempting suicide during the past 12 months. Male students at 30.30% (95% CI: 25.62, 35.32) were significantly more likely than female students at 18.77% (95% CI: 14.85, 23.21) to have considered attempting suicide. The Pearson chi-square indicated significant

differences ($p < 0.001$) between gender and seriously considering attempting suicide.

More serious suicide ideation was observed among 25.28% (95% CI: 22.14, 28.62) of students who, during the past 12 months, had made specific plans to attempt suicide. In Tarqumia, male students at 30.58% (95% CI: 25.88, 35.60) were significantly more likely than female students at 19.89% (95% CI: 15.87, 24.41) to make plans to attempt suicide. The Pearson chi-square indicated significant differences ($p = 0.001$) between gender and making plans to attempt suicide.

Up to 55.83% (52.12, 59.50) of male and female students reported that they had no close friends. Female students were significantly less likely at 54.34% (95% CI: 49.02, 59.59) than male students at 57.30% (52.03, 62.45) to report having no close friends. The Pearson chi-square indicated significant differences ($p < 0.001$) between gender and having no close friends (Table 2).

DISCUSSION

The prevalence of suicide ideation among Palestinian adolescents 24.6% was higher compared to that reported in neighboring countries of the Eastern Mediterranean Region, where in Jordan 18% and in Tunisia 19.8%. The findings of this study are also higher than results of the previous international studies, in Belgium (19.55), Finland (19.5) and Austria (15.45) and greater than what is found

in countries such as Germany (11.95), the Netherlands (9.3), Spain (7.65), the United Kingdom (6.95) or in the United States (11.1) [4].

This phenomenon is apparent among Palestinian population due to living in continuous turmoil and in a violent region attributed to political instability, combined with poverty and unemployment, closure and war, which may result in post-traumatic stress disorder, including disrupted patterns of eating and sleeping, difficulties in controlling attention and relating to others, anxiety responses, fear and recurring experiences of the violent episodes they have witnessed. Exposure to violence may also adversely affect the mental health of children and adults due to the need to deal with losses and cope with grieving for family members, neighbors and friends who have been killed. Such grieving and stress life events increased depressive episodes [6, 37]. These factors are considered contributing factors in increasing the prevalence of depression, anxiety, schizophrenia and suicide among Palestinian adolescents. The Director of Mental Health Services, Gaza, reported a high frequency of mental health problems in 1989.

Cases in the Palestinian population, including anxiety, depression and psychotic reactions, are frequently seen. Problems with children, such as temper tantrums, aggressive behavior, sleep disturbances and anxiety are also increasing [2], although knowledge about these mental health issues is poor. The results reflect that both male and female students equally feel lonely, but males are more depressed and suicidal. Therefore, psychosocial counselors must be more active in schools, at home and in communities.

In conclusion, this study fills the gap of the limited literature on suicide ideation in Palestine and the East Mediterranean region. It provides information on the prevalence of and the underlying factors for suicide ideation among adolescents in Palestine. The findings of this study have implications in future public health approaches that aiming to the reduction in rates of adolescent suicide attempts. They help a professional to identify high-risk cases and intervene before the crisis occurs. Finally, findings help health professionals in developing culturally tailored school-based suicide prevention program. Cooperation among family, school and psychological professionals may help reduce the attempted suicide rate.

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