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Psychosocial Risk Factors for Suicidal Behavior in Adolescents

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Abstract

Suicidal Behavior (SB) in adolescence is a growing concern. Suicide is the number one cause of death for adolescents, especially as they suffer from huge crises. The aim of this paper it was to evaluate the psychosocial risk factors for SB among adolescents in secondary school students in the city of Baghdad. The study used a cross section design and results in the primary analysis. Secondary school students aged 13-22 years were targeted. Four secondary schools were purposefully sampled and data were extracted from 300 respondents in all school students examined at baseline. Data were collected using the Suicidal Behavior Rating Scale for Adolescents (SENTIA), the Psychosocial Risk Factors Scale, and the Sociodemographic Questionnaire. The data analyzed using SPSS version 26 is presented in tables and the results are discussed. The results revealed psychological factors as significant risk factors ($P < 0.001$) for SB. Discrete logistic models established the following life stressors as psychosocial risk factors ($p < 0.001$) for SB in the next order of severity; Desperation and worthlessness, relationship problems, traumatic experiences, mental disorders, family problems, alcohol or drug abuse, physical illness, academic challenges, financial problems and the death of loved ones. The researcher concluded there are a number of factors that indicate a teenager commits suicide, as the family must pay attention to its children at this dangerous age, and monitor their behavior greatly for early detection of those at risk.

Keywords: Risk factors, suicidal behavior, psychosocial, adolescents

Introduction:

Suicide is the leading cause of death, and ranks second globally, in terms of causes of death among adolescents and young adults between the ages of 15 and 29 [1]. The incidences of suicide attempts peaks during the mid-teen years, and suicide deaths, which increase steadily with age during the teenage years, are the third leading cause of death among youth aged 10–24 years [2]. Of the most unusual deaths, about 11% were suicide-related, in 9.5% of adolescents [3]. Therefore, the need to investigate the factors that put adolescents at risk for SB to create awareness and strengthen support systems. Risk factors are defined as characteristics that increase the likelihood of an outcome. Information on risk factors is critical in the detection and management of high-risk suicidal patients [4].

Biological, psychological, and social factors contribute to the risk profile in children and adolescents. However, the specific purpose of this paper is to review the literature focusing on psychosocial risk factors and suicide among children and adolescents [5]. Biological factors are associated with mental disorders resulting from low levels of serotonin that characterize mood and personality disorders [6]. It has been proven that 90% of suicides are related to psychological problems [7];[8]. This qualifies SB as a mental health problem. These problems include: mental disorders, psychological stress, family problems, dysfunctional interpersonal relationships, alcohol or drug abuse and financial limitations. [9]

In Iraq, nationally representative data on suicidal thoughts are still not available. Therefore, the study aimed to identify risk factors for SB among these vulnerable adolescents. This would lead to enhanced early detection and support for suicidal adolescents at high risk.

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Aim of the study:

This study aims to assess the prevalence of suicidal behavior and associated factors among secondary-school students.

Methodology:

The study used cross-sectional design and findings in the primary analysis. The target population was secondary-school students from the Baghdad city, the capital of Iraq. The inclusion criteria were both genders aged between 13-22 years old and willingness to participate in current study and the exclusion of individuals who did not respond to the question on suicidal ideation. Baghdad has a total of 80 governorate secondary schools. From the 80 secondary schools were randomly selected. A total of 130 responses were online randomly recruited by social media for this survey study from government secondary schools in Baghdad. Data collection was conducted from 17th February to 1st Mars, 2022.

A self-structured questionnaire was used to collect information. Demographics surveys, Adolescent Suicidal Behavior Assessment Scale (SENTIA) it is composed of 16 items in dichotomic format (yes/no) developed by Gómez. And Psychosocial Risk Factors scale consists of a total of 18 items that are response format (yes/no) construct by the researcher was internal consistency 0.86. Each such item was framed so as to ask about different aspects of suicidal behaviors (i.e. thinking, planning, and attempts). Total score range from (0-16) with which higher scores on each scale indicating greater adolescents reported they wished they were dead and adolescents have life stressors as psychosocial risk factors. The purposes of the study, the main questions to be asked, their rights, anonymity and their responses were explained to the participants in the sampled households. After obtaining informed consent from the School administration and respondents, standardized questionnaires that included variables of demographic and electronic questionnaire were administered to the sample respondents and a randomized sampling method for data collection. A descriptive and inferential statistical measure mean, frequency and percentage of the respondents was used to find out the general pattern of Suicidal Behavior Assessment Scale and Psychosocial Risk Factors scale among the respondents age, gender, monthly income, living arrangement and residence. Pearson correlation was calculated to provide information on whether there is a statistically significant relationship between psychological distress and the social and demographic characteristics of the respondents. In addition, t. test was utilized to find out the difference of psychological distress in regard gender and used Binary Logistic Regression for prediction what psychosocial factors established with suicidal behavior.

Result:

Table 1: Distribution of sample according to socio-demographic characteristics

List	Characteristics		f	%
1	**Age (year)** **M±SD= 17.73±2.433**	< 14	5	3.8
		14	3	2.3
		15	22	16.9
		16	12	9.2
		17	21	16.2
		18 +	67	51.5
		Total	*100*	*100*
2	**Gender**	Male	49	37.7
		Female	81	62.3
		Total	*100*	*100*
3	**Occupation**	Work	16	12.3
		Don't work	114	87.7

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			f	%
		Total	*100*	*100*
4	**Monthly income**	Sufficient	56	43.1
		Barely sufficient	54	41.5
		Insufficient	20	15.4
		Total	*100*	*100*
5	**Residency**	Low class neighborhood	76	58.5
		High class neighborhood	20	15.4
		Sub high class neighborhood	34	26.1
		Total	*100*	*100*
6	**Living arrangement**	Live with parents	104	80
		Single parent	14	10.8
		With relatives	12	9.2
		Total	*100*	*100*

f: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table shows that addicts are young with average age 17.73±2.433 years in which 51.5% of them are seen with age group 18 + year. Regarding gender, the highest percentage refers to female (62.3). The occupational status refers that 87.7 of them are doesn't working and remaining are working (12.3). Regarding monthly income, the highest percentage among refers to 43.1 of adolescents who perceived sufficient monthly income, (41.5) perceived barely sufficient incomes, and only (15.4) are perceived sufficient income. Regarding residency, 58.5 of them are reported they are living in a low class neighborhood. Regarding living arrangement, the highest percentage refers living with parents (80%).

Table 2: Psychosocial Risk Factors for Suicide behavior among Adolescents

List	Factors	No		Yes	
		f	%	f	%
1	Having a mental disorder, such as severe depression or psychological trauma	63	48.5	**67**	**51.5**
2	Having a family history of suicidal behaviour	111	85.4	19	14.6
3	Having a family history of mental illness	93	71.5	37	28.5
4	Having a history of physical or sexual abuse	99	76.2	31	23.8
5	Exposure to violence, such as being injured or threatened with a weapon	104	80	26	20
6	Easy access to means of suicide, such as firearms	103	79.2	27	20.8
7	Death of a close family member or close friend	74	55.9	56	43.1
8	Substance abuse	111	85.4	19	14.6
9	Social isolation	73	56.2	57	43.8
10	Have you witnessed a suicide at school or in another peer group	97	74.6	33	25.4
11	Humiliation by family members or friends	88	67.3	42	32.3
12	Being bullied at school	91	70	39	32
13	Failure at school or work	98	75.4	32	24.6
14	problem with the law	112	86.2	18	13.8
15	Moving from a familiar environment (such as a school or neighborhood) or friends to	98	75.4	32	24.6

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	one that is unfamiliar to you				
16	Feeling hopeless and worthless	70	53.8	60	46.2
17	Having family problems	67	51.5	**63**	**48.5**
18	Sleep disturbance	61	46.1	**69**	**53.9**

f: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table revealed the frequency and percentage questions of psychosocial risk factors related suicide behavior among adolescent so, the highest percentage refers to Sleep disturbance (53.9) followed by those who having family problems and feeling hopeless and worthless.

Table 3: Assessment of Suicidal Behavior among Adolescents

Suicidal behavior	f	%	M	SD
None problematic	111	85.4		
Problematic	19	14.6	3.90	4.59
Total	*130*	*100*		

f: Frequency, %: Percentage

M: Mean for total score, SD: Standard Deviation for total score

Non problematic= 0 – 8, Problematic= 9 – 16

This table indicates that the majority (85.4%) of respondents with unlikely to present with SB and only a minority (14.6% %) had SB.

Table 4: Binary Logistic Regression for Psychosocial Factors with Suicidal behavior

Factors	B	S.E.	Wald	df	Sig.	Exp(B)
Having a mental disorder, such as severe depression or psychological trauma	1.249	.912	1.875	1	.171	3.486
Having a family history of suicidal behaviour	.450	1.057	.181	1	.670	1.568
Having a family history of mental illness	-.814-	.890	.837	1	.360	.443
Having a history of physical or sexual abuse	1.054	.952	1.225	1	.268	2.868
Exposure to violence, such as being injured or threatened with a weapon	.014	1.106	.000	1	.990	1.015
Easy access to means of suicide, such as firearms	2.427	1.113	4.757	1	**.029**	11.322
Death of a close family member or close friend	-.671-	.911	.542	1	.462	.511
Substance abuse	-4.804-	1.495	10.329	1	**.001**	.008
Social isolation	.735	.889	.682	1	.409	2.085
Have you witnessed a suicide at school or in another peer group	1.152	.732	2.477	1	.116	3.164
Humiliation by family members or friends	.166	.940	.031	1	.860	1.180
Being bullied at school	2.053	.784	6.867	1	**.009**	7.795
Failure at school or work	-1.330-	1.038	1.643	1	.200	.264

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problem with the law	.770	1.222	.397	1	.529	2.161
Moving from a familiar environment (such as a school or neighborhood) or friends to one that is unfamiliar to you	-.308-	.821	.141	1	.707	.735
Feeling hopeless and worthless	.761	.870	.765	1	.382	2.140
Having family problems	.543	.880	.380	1	.537	1.720
Sleep disturbance	-.093-	.804	.014	1	.907	.911

The Binary Logistic Regression indicates that suicidal behavior among adolescents influenced by factors of "easy access to means of suicide, substance abuse, and being bullied at school" as revealed significant at p-values= .029, .001, and .009.

Table 5: Determine significant differences between participants' suicide behavior regarding to their Gender group

		No.	M	SD	Independent Test		
					t-value	Sig.	P ≤ 0.05
Suicide behavior	**Male**	49	3.80	4.046	-.277-	0.821	NS
	Female	81	3.96	4.09			

No:

Number, M: Mean, SD: Standard deviation, t: t-test, Sig: Significance, p: Probability value, N.S: Not significant

This table indicates that there is no significant difference between suicide behavior with respect to participants' gender that mean the male and female respondents showed equally having SB.

Table 6: Correlation among Suicidal behavior and socio-demographic characteristics of adolescents

Correlation		Age	Gender	Occupation	Income	Residency	Living With	Suicidal behavior
Age	Pearson Correlation	1						
	Sig. (2-tailed)							
Gender	Pearson Correlation	-.198-*	1					
	Sig. (2-tailed)	.024						
Occupation	Pearson Correlation	.061	-.143-	1				
	Sig. (2-tailed)	.491	.103					
Income	Pearson Correlation	-.077-	.146	.084	1			
	Sig. (2-tailed)	.383	.097	.340				
Residency	Pearson Correlation	-.096-	.082	-.137-	.053	1		
	Sig. (2-tailed)	.277	.355	.120	.549			

Living With	Pearson Correlation	.011	.059	.162	-.182-*	-.157-	1	
	Sig. (2-tailed)	.898	.505	.066	.039	.075		
Suicidal behavior	Pearson Correlation	-.086-	.020	.003	-.257-**	-.098-	.018	1
	Sig. (2-tailed)	.331	.821	.969	**.003**	.269	.842	

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

This table displays that suicidal behavior is strongly associated with monthly income among adolescents evidence by positive correlation at p-values= .003.

Discussion:

Suicidality among children and adolescents is a topic of increasing concern, and this is reflected in the strong/large increase in the amount of literature assessing suicidality over recent years. In assessing the risk factors for SB, a highest percentage refers to Sleep disturbance followed by those who having family problems and feeling hopeless and worthless, implying they are risk factors for SB. Students who felt lonely most of the time or were always too anxious about something they couldn't sleep at night (anxiety) were more likely to think about suicide compared to those students who were not lonely or very anxious about loneliness and (anxiety) [3].

Researchers have found family problems such as physical and emotional abuse, poor parent-child relationship, poor parenting styles, and psychopathology in close family members to be highly related to SB [10];[11]. The study by Jeon et al. (2014) agreed with the current study that feelings of worthlessness were more strongly associated with suicidal attempts. Since hopelessness is associated with multiple psychiatric problems, this may be an indication that their symptoms are highly distressing leading to feelings of helplessness and worthlessness.

The overall prevalence of suicidal ideation in the current study was 14.6%. The rates of suicidal ideation observed in the current study are very consistent with the outcomes of two nationally representative studies on health risk behaviors of South African young people. The two studies indicated that 18% of the students in 2002 and 19% in 2008 had suicidal ideation [12].

The current study found the assessed risk factors for SB. In their rating, Easy accesses to means of suicide, such as firearms were the first risk factors for SB among the stressors. Many suicide attempts take place during a short-term crisis, so it is important to consider a person's access to lethal means during these periods of increased risk and access to lethal means is a risk factor for suicide [13]. In this study, adolescents who abused drugs or smoked marijuana were significantly associated with suicidal ideation. Several studies support this finding and also reveal positive and significant relationships between drug use and marijuana smoking with suicidal ideation[14];[15]. Regarding violence, students who experienced bullying, assault, or getting involved in a physical fight were more likely to contemplate suicide compared to students who did not engage in violence [3]. The study focused analyzes on both sexes without looking at differences. When it found that there was no significant difference between suicidal behavior with respect to the gender of the participants, which means that the male and female participants showed an equal SB. A previous study showed that males were more likely to die from suicide, while females were more likely to attempt suicide [16].

Financial instability was also associated with a heightened risk for suicidality in low, middle, and high- income countries [17];[18]. For example, studies of suicide among adolescents from low- and middle-income countries showed significant prevalence rates of suicidal thoughts: 19.6% in Uganda, 23.1% in Botswana, 27.9% in Kenya, 31.9% in Zambia, and 18.4% in Guyana.

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Limitations

This study has a few limitations, the first one limitations of this study lies in the fact that the sample size was small, so the findings of the study cannot be generalized the findings to the general population of adolescents. The second limitation of this study is cross-sectional nature, which prevented the identification of causal relationships between the identified factors and suicidal ideation.

Conclusion

Suicidal behavior among adolescents is a public health problem in Iraq. This current study sheds light on psychological disorders and stressful events that increase the risk of suicidal behavior. It is suggested that different components and factors may contribute to the risk/development of suicidal behavior in adolescents, for example. Psychological distress, substance misuse, family problem, bullying at school.

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