

Characteristics of Suicide Attempts in Adolescents: A Comparative Study between Adolescents and Adults

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Abstract

Original Research Article

Introduction: Suicide attempts represent a public health issue due to their significant impact on morbidity and the risk of recurrence. **Objectives:** Determine the sociodemographic and clinical characteristics of suicide attempts among adolescents, compare them to those of adults, and identify the associated risk factors. **Methods:** This is a cross-sectional descriptive and analytical study conducted over a four-month period from September 1 to December 31, 2022, involving a clinical population of adolescents and adults who sought consultation following a suicide attempt at Ar-Razi Hospital in Salé, Morocco. A questionnaire was used to assess sociodemographic characteristics as well as the circumstances surrounding the suicide attempt. Psychiatric disorders were assessed using the diagnostic criteria from the DSM-5 psychiatric manual. **Results:** Our study included 100 patients who sought consultation following a suicide attempt. These patients were divided into two groups: 40 adolescents under the age of 19 and 60 adults aged 19 to 65 years. The mean age was 15.57 ± 2.03 years for adolescents and 36.56 ± 13.06 years for adults. In both groups, there was a higher proportion of females compared to men, with no significant difference between the sexes. The absence of employment among adults was statistically significant ($p < 0.05$). In adolescents, the most common psychiatric disorder was depressive disorder, whereas in adults, addictive behaviors were predominant. The causes of suicide attempts were related to abuse and sexual maltreatment in adolescents, and to psychiatric disorders and financial difficulties in adults ($p < 0.05$). Intentional medication overdose was the most frequently encountered method of suicide (34%) in both groups. **Conclusion:** Suicidal behavior in adolescents is associated with psychosocial factors that differ from those in adults, and the underlying psychiatric disorders are also distinct. Suicide prevention strategies for this population must be tailored to these factors.

Keywords: Suicide attempts, adolescents, adults, risk factors, psychiatric disorders.

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I. INTRODUCTION

Suicide is a major mental health issue. Each year, approximately 800000 people die by suicide, and suicide attempts are about ten times more frequent than completed suicides [1, 2].

The World Health Organization (WHO) defines a suicide attempt as a non-fatal suicidal behavior, including acts of self-poisoning, self-mutilation, or self-injury, whether or not accompanied by an intent to die. It emphasizes that assessing suicidal intent can be complex due to the ambivalence and concealment often associated with these behaviors [3].

Suicide attempts represent a major public health concern due to their significant impact on morbidity and the risk of recurrence [4]. Indeed, one-third of young people who die by suicide have a history of previous

suicide attempts, highlighting their role as a major risk factor for fatal outcomes [5]. Suicidal behaviors pose a significant health issue and challenge clinicians due to their complexity and the diversity of risk factors [2, 4], such as mental disorders, mood disorders, and psychosocial adversities including abuse, conflictual environments, and negative life events [6].

The extent of this phenomenon is not limited to its increasing frequency or the risk of mortality it represents but also includes the severe psychosocial consequences for both the patient and their surroundings [7].

Therefore, a thorough understanding of these factors is crucial for developing effective prevention strategies [4].

The differences between suicide attempts in adolescents and adults are significant [5, 8], due to the physical changes and varied emotional experiences throughout development [2]. Studies indicate that suicidal behaviors in adolescents may occur rapidly and often exhibit an impulsive nature [9], distinguishing them from the behaviors observed in adults.

The aim of our study is to determine the sociodemographic and clinical characteristics of suicide attempts in adolescents, compare them with those in adults, and identify the associated risk factors.

II. MATERIALS AND METHODS

1) Study type and population:

This is a cross-sectional descriptive and analytical study conducted over a four-month period from September 1 to December 31, 2022, involving a clinical population of adolescents and adults who sought consultation following a suicide attempt at Ar-Razi Hospital in Salé, Morocco.

2) Eligibility criteria:

Inclusion criteria

- Patients who sought consultation following a suicide attempt, aged 11 to 65 years.
- For comparison, participants were divided into two groups: adolescents, aged 11 to 18 years, and adults, aged 19 to 65 years.
- Adherence to anonymity and confidentiality of the data

Exclusion criteria

- We excluded from the study subjects over the age of 65.
- Subjects with an intellectual developmental disorder were excluded.
- Suicidal individuals whose suicide attempt occurred more than 48 hours prior: except for cases with neurological impairment, these individuals were examined after regaining consciousness

3) Data collection and measuring instrument:

We used a questionnaire to collect sociodemographic and clinical data on our patients, including age, gender, marital status, education level, occupation, socioeconomic status, personal and family history of suicide attempts, and mental disorders.

We also assessed the characteristics of the suicide attempt: the circumstances of the attempt, the method used, premeditation, and reporting of the attempt.

The definition of a suicide attempt was based on WHO criteria (3). Psychiatric disorders were assessed using the diagnostic criteria from the DSM-5 psychiatric manual.

4) Statistical analysis:

Qualitative variables were expressed in numbers and percentages, and quantitative variables were expressed as mean \pm standard deviation because the variable distribution was symmetrical.

Univariate analysis was performed using the chi-square test or Fisher's exact test, depending on the test conditions. Data analysis was performed using jamovi 2.3.19 statistical software.

III. RESULTS

1) Sociodemographic characteristics, (Table I):

Our study included 100 patients who sought consultation following a suicide attempt between September 1 and December 31, 2022. These patients were divided into two groups: 40 adolescents aged 11 to 19 years and 60 adults aged 19 to 65 years. The mean age was 15.57 ± 2.03 years for adolescents and 36.56 ± 13.06 years for adults.

In both groups, there was a higher proportion of females compared to males, with no significant difference between the sexes.

The majority of our patients were single (73%) and had a low socioeconomic status (52%). The lack of employment among adults was statistically significant ($p < 0.05$).

2) Mental health, (Table I):

Psychiatric history was noted in both groups. Addictive behaviors (48%), depressive disorders (45%), and schizophrenia (39%) were the most prevalent disorders.

In our study, 41% of patients had previously attempted suicide, while 59% had made two or more suicide attempts. Self-harm history was found in 27% of our patients.

We observed a statistically significant difference in addictive behaviors among adults ($p = 0.003$) and in depressive disorders among adolescents. However, there was no statistically significant difference between the two groups regarding personal or family psychiatric history, family history of suicide attempts, or instances of self-harm.

Table I: Sociodemographic and clinical characteristics of suicidal individuals

		Population of suicidal individuals n (%)	Adolescents < 19 years n (%)	Adults ≥ 19 years n (%)	P
Sex	Male	45 (45)	16 (35.6)	29 (64.4)	NS
	Female	55 (55)	24 (43.6)	31 (56.4)	
Marital status	Single	73 (73)	40 (54.8)	33 (45.2)	< 0.05
	Married	20 (20)	0	20 (100)	
	Divorced	7 (7)	0	7 (100)	
Educational level	Never attended school	3 (3)	0	3 (100)	< 0.05
	Primary school level	8 (8)	5 (62.5)	3 (37.5)	
	Secondary school level	57 (57)	35 (61.4)	22 (38.6)	
	Academic level	32 (32)	0	32 (100)	
Socio-economic status	Low	52 (52)	24 (46.2)	28 (53.8)	NS
	Average	48 (48)	16 (33.3)	32 (66.7)	
Professional activity	Yes	21 (21)	0	21 (100)	< 0.05
	No	79 (79)	40 (50.6)	39 (49.4)	
Personal psychiatric history	Addictive disorder	48 (48)	12 (25)	36 (75)	0.003
	Depressive disorder	45 (45)	23 (51.1)	22 (48.9)	0.04
	Schizophrenia	39 (39)	10 (25.6)	29 (74.4)	NS
	Anxiety disorder	30 (30)	12 (40)	18 (60)	NS
	Personality disorder	21 (21)	12 (57.2)	9 (42.8)	NS
	Post-Traumatic Stress Disorder	5 (5)	0	5 (100)	NS
	Schizoaffective disorder	5 (5)	0	5 (100)	NS
	Bipolar disorder	4 (4)	0	4 (100)	NS
	Attention deficit/hyperactivity disorder	2 (2)	2 (100)	0	NS
	Specific learning disorder	2 (2)	2 (100)	0	NS
	Conduct disorder	1 (1)	1 (100)	0	NS
	Anorexia nervosa	1 (1)	1 (100)	0	NS
History of self-harm		27 (27)	18 (66.7)	9 (33.3)	NS
Family psychiatric history		44 (44)	20 (45.5)	24 (54.5)	NS
Family history of suicide attempts		23 (23)	10 (43.5)	13 (56.5)	NS

NS: not statistically significant

3) Characteristics of suicide attempts, Table II:

Intentional medication overdose was the most frequently observed method of suicide attempt (34%) in both groups.

The causes of suicide attempts were related to abuse and sexual assault in adolescents, and psychiatric disorders and financial difficulties in adults ($p < 0.05$).

Premeditation of the suicidal act was reported in 48% of cases, and communication of suicidal intent was noted in 46% of cases, with no significant difference between the two groups.

Table II: Characteristics of suicide attempts by age group

	Population of suicidal individuals n (%)	Adolescents < 19 n (%)	Adults ≥ 19 n (%)	P
Causes of suicide attempts				
Related to psychiatric disorders	41 (41)	8 (19.5%)	33 (80.5)	< 0.05
Family conflicts/violence	31 (31)	12 (38.7)	19 (61.3)	NS
Mistreatment	9 (9)	7 (77.8)	2 (22.2)	< 0.05
Financial difficulties	8 (8)	0	8 (100)	0.01
Sexual abuse	6 (6)	5 (83.3)	1 (16.7)	0.02
Romantic disappointment	2 (2)	2 (100)	0	NS
Associated with a severe organic pathology	2 (2)	2 (100)	0	NS
Methods used				
Intentional medication overdose	34 (34)	18 (52.9)	16 (47.1)	NS

	Population of suicidal individuals n (%)	Adolescents < 19 n (%)	Adults ≥ 19 n (%)	P
Impulsivity	27 (27)	2 (7.4)	25 (92.6)	NS
Phlebotomy	11 (11)	6 (54.5)	5 (45.5)	NS
Hanging	10 (10)	5 (50)	5 (50)	NS
Ingestion of rodenticide	10 (10)	8 (80)	2 (20)	NS
Ingestion of bleach	2 (2)	1 (50)	1 (50)	NS
Self-immolation by fire	5 (5)	1 (20)	4 (80)	NS
Drowning	1 (1)	0	1 (100)	NS
Premeditation of the suicide attempt				
Yes	48 (48)	22 (45.8)	26 (54.2)	NS
No	52 (52)	18 (34.6)	34 (65.4)	
Reporting of the suicide attempt				
Yes	46 (46)	21 (45.7)	25 (54.3)	NS
No	54 (54)	19 (35.2)	35 (64.8)	

IV. DISCUSSION

In our study, we included 100 individuals with suicidal behavior, of whom 40 were under 19 years old and 60 were between 19 and 65 years old. Subjects over 65 years old were excluded as they exhibit different characteristics.

A predominance of females was noted in both groups, which corresponds with existing literature [2, 8, 11, 12]. Indeed, girls from preadolescence onward exhibit more suicidal ideation and make more suicide attempts than boys [4].

The lack of employment among adults was a risk factor in our study. A previous study conducted in Japan [13] revealed that unemployment is a significant risk factor among adult males. This is due to the potentially severe effects of job failure or difficulties in coping with debts [8].

At the time of their emergency consultation, 74% of patients had a history of previous suicide attempts. One study found that adults were more likely to attempt suicide (9), while other studies reported no statistically significant difference (8). However, as with adults, previous suicide attempts increase the risk of future attempts and are a significant risk factor for suicide [14].

In our study, a statistically significant difference was noted regarding addictive behaviors among suicidal adults. As indicated by the literature, older men who use drugs are at a higher risk of suicide attempts compared to younger individuals with substance use disorders [15].

In our sample, the most common psychiatric disorder among adolescents was depressive disorder. According to the literature, depressive disorder is found in 49 to 64% of individuals with suicidal behavior [16]. In the study by Consoli *et al.*, [17], 64% of adolescents hospitalized in child and adolescent psychiatry for suicide attempts were diagnosed with major depressive

episode, and a six-month follow-up study showed that major depressive disorder and hopelessness were risk factors for suicidality. Indeed, depression involves hopelessness, unbearable psychological suffering, pessimism, low self-esteem, and impulsivity, all of which increase suicidal potential [4].

However, some adolescents may commit suicide without any psychiatric symptoms or prior signs of emotional or behavioral problems [8]. It has been noted that adolescents may be more impulsive than adults and tend to focus on the immediate consequences of their behavior [18, 19]. Therefore, we must pay close attention to adolescent impulsivity [8].

In our sample, most adolescents attempted suicide following abuse and sexual maltreatment, whereas in adults, suicide attempts were related to psychiatric disorders and financial difficulties. Exposure to maltreatment is a well-documented risk factor in the literature for both suicide attempts and completed suicide [20, 21]. In a study by Séguin *et al.*, [5] on the life trajectories of young suicides, exposure to sexual and physical violence was significantly found from early childhood compared to control subjects. A meta-analysis that included longitudinal studies with a total of 8,733 participants showed that a history of sexual abuse is associated with the occurrence of suicide attempts, even after controlling for other genetic and environmental risk factors [22].

However, psychiatric disorders can exacerbate the risk of suicidal behaviors [17, 23-25] by impairing daily functioning, causing interpersonal difficulties, psychosocial distress, as well as leading to stigma, social isolation, learning difficulties, and emotional and behavioral problems. These factors place young individuals at risk during this period of development and vulnerability in their lives. Therefore, it is crucial to make an early diagnosis and implement appropriate treatment [23]. Building a therapeutic alliance with the patient and family is important for improving compliance with follow-up care.

In our case series, intentional medication overdose was the most commonly used method, consistent with the literature [2, 8, 26, 27]. It is coherent that adults are more likely to attempt suicide through overdose of psychiatric medications and herbicides, whereas adolescents are more likely to use analgesics due to their availability [2]. Therefore, evaluating analgesic abuse is necessary for adolescents at risk of suicide.

Study Limitations

The main limitation of the study is related to the small sample size. Future research would benefit from conducting cross-sectional studies with larger samples.

The second limitation arises from the challenges inherent in conducting interviews in an emergency context. A psychiatric evaluation conducted away from the immediate aftermath of a suicide attempt is crucial for a more accurate psychopathological assessment of suicidal adolescents.

V. CONCLUSION

Suicide attempts are common and represent a significant health problem. The results of this study suggest that a systematic and rigorous psychiatric evaluation of all individuals who attempt suicide is essential, and appropriate treatment of underlying psychiatric disorders should be considered. The seemingly benign nature of some suicidal gestures, in the absence of a psychiatric disorder, should not undermine the need for a psychiatric interview. Prevention remains the only effective means to avoid suicidal actions.

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