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**Riyadh Shiltagh Al-Rudaini**  
Nutrition Research Institute,  
Public Health Directorate,  
Ministry of Health, Iraq

**Rana Faeq Saud**  
National Center for Training  
and Human Development,  
Ministry of Health, Iraq

**Faris Al-Lami**  
College of Medicine, University  
of Baghdad, Ministry of  
Higher Education, Iraq

**Corresponding Author:**  
**Riyadh Shiltagh Al-Rudaini**  
Nutrition Research Institute,  
Public Health Directorate,  
Ministry of Health, Iraq

## Investigating suicidal behavior among patients attending psychosocial units in primary healthcare centers in Iraq

**Riyadh Shiltagh Al-Rudaini, Rana Faeq Saud and Faris Al-Lami**

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### Abstract

**Background:** Suicidal behavior is a major global public health problem, and understanding its epidemiology is crucial for prevention strategies. This study aimed to estimate the prevalence and identify associated factors among patients attending Psychosocial Units (PSUs) within Iraqi Primary Healthcare Centers (PHCCs).

**Methods:** A cross-sectional study design was used. Data was collected from all individuals who attended PSUs in Iraqi PHCCs between 1 January and 31 December 2021. A standardized form collected information on demographics, circumstances surrounding suicidal attempts, and past mental health history.

**Results:** A total of 280 patients reported suicidal attempts, representing 1% of PSU attendees and an incidence rate of 3/10,000 people. In particular, 87% were women, with a concentration in young people (60%) and young adults (34.3%). Sociodemographic characteristics revealed that 56% were unmarried, 54% had low education levels, and 68.6% were housewives. Alarmingly, 93% did not have a prior psychiatric evaluation and 97.1% had no history of hospitalization. Furthermore, 82.9% reported no family history of suicide attempts. Interestingly, 51.4% reported a first attempt, with 94.3% occurring at home. Drug intoxication (48.6%) and self-harm (22.9%) were the most common methods, with 34.3% using multiple methods. A significant finding was that 77% refused hospital admission. The study identified acute emotional distress, particularly violence, as the main reason for the attempts (63%), followed by socioeconomic and psychological factors.

**Conclusion:** Suicidal behavior is a concern in Iraqi communities, with limited access to mental health services for those struggling. Strengthening PSUs and improving access to psychosocial interventions within PHCCs are crucial to prevention efforts.

**Keywords:** Investigating, suicidal behavior, PHCs and Iraq

### Introduction

Suicidal behavior is a major public health problem and one of the leading causes of injury and death worldwide. It poses a major challenge for healthcare systems, policymakers, and researchers due to its devastating consequences and the need for effective prevention strategies. Understanding the epidemiology of suicidal behavior is crucial to the development of targeted interventions and policies to reduce its incidence and associated morbidity and mortality <sup>[1]</sup>.

Iraq, a country in the Middle East, has faced numerous challenges in recent decades, including armed conflicts, political instability, and economic hardships. These factors have had a profound impact on the mental health of its population, leading to an increased risk of suicidal behavior. Psychosocial Units (PSU) in Primary Healthcare Centers (PHCCs) play a crucial role in providing mental health services and support to people at risk of suicidal behavior. Therefore, studying the incidence and factors related to suicidal behavior among patients attending these PSU in PHCCs in Iraq is of utmost importance for effective policy-making and prevention efforts <sup>[2]</sup>.

This study aims to estimate the incidence of suicidal behavior among patients attending PSU in PHCCs in Iraq and to identify the factors associated with this behavior. By examining the prevalence and determinants of suicidal behavior, this research will contribute to the existing

knowledge base and inform evidence-based interventions and policies aimed at reducing the burden of suicide in Iraq. The incidence of suicidal behavior refers to the number of new cases of suicidal behavior that occur within a specific population over a given period of time. Estimating the incidence of suicidal behavior is essential to understand the magnitude of the problem and its trends, which can help policymakers, allocate resources, and develop targeted prevention strategies. Using the focus on patients attending PSU in PHCC, this study will provide valuable information on the incidence of suicidal behavior among individuals seeking mental health services in Iraq.

Identifying factors related to suicidal behavior is crucial for developing effective prevention strategies and providing appropriate support to people at risk. Numerous risk factors have been associated with suicidal behavior, including mental health disorders, previous suicide attempts, substance abuse, social isolation, and access to lethal means. By examining factors related to suicidal behavior among patients attending PSU in PHCC, this study will shed light on specific risk factors prevalent in this population and guide the development of tailored interventions<sup>[3]</sup>.

The context of Iraq adds complexity to the study of suicidal behavior. The country has experienced prolonged armed conflicts, political instability, and economic challenges that had a profound impact on the mental health of its population. The psychological trauma resulting from these experiences, coupled with limited access to mental health services, has contributed to an increased risk of suicidal behavior among Iraqi. Therefore, understanding the specific factors related to suicidal behavior in this context is crucial to addressing the unique challenges facing the population and developing culturally sensitive prevention strategies<sup>[2]</sup>.

#### The objectives of the study

- To estimate the incidence of suicidal attempts among people attending Psychosocial Units (PSU) in Primary Healthcare Centers (PHCCs), Iraq, 2021.
- Investigate the predictive factors for suicidal behavior and attempts among patients attending (PSU) in (PHCC), Iraq, 2021.

#### Methods

**Study design and setting:** This study used a cross-sectional design to retrieve data on all individual PSUs attending PHCCs in Iraq during the period 1 January to 31 December 2021.

#### Study population

In this study, a case refers to any person 15 years of age or older who attends the PSUs in the PHCCs in Iraq during the study period.

#### Inclusion criteria

- Individuals 15 years or older.
- Attending the PSUs in the PHCCs in Iraq during the study period.

#### Exclusion criteria

- Individuals under 15 years old.
- Does not attend the PSUs in PHCCs in Iraq during the study period.

#### Data Collection

A form was developed specifically for this study to gather information on socio-demographics, circumstances, and

predictive factors for suicidal behavior and attempts, as well as a history of psychiatric evaluation or admission to a psychiatric hospital. The form was designed to collect both quantitative and qualitative data, allowing for a comprehensive analysis of factors associated with suicidal behavior.

The data collection process involved the collaboration of trained healthcare professionals working in the PSUs. These professionals were responsible for administering the form to patients attending PHCC and ensuring the accuracy and completeness of the data collected. To maintain confidentiality, patient identifiers were removed from the data before they were transferred to the mental health section of the Iraq Ministry of Health for analysis.

The variables included in the data collection form were carefully selected based on previous research and expert opinions. Sociodemographic variables included age, sex, marital status, educational level, employment status, and residence. These variables were considered important because they are associated with suicidal behavior in previous studies.

Additionally, the form included variables related to the circumstances and predictive factors for suicidal behavior and attempts. These variables included the presence of a mental health disorder, history of self-harm, history of suicide attempts, family history of suicide, substance abuse, access to lethal means, recent life events, social support, and help-seeking behavior. These variables were chosen to provide a comprehensive understanding of the factors that can contribute to suicidal behavior among the study population.

#### Data Management and Analysis

Once the data collection phase was completed, the compiled data was transferred to a secure database for analysis. Data were cleaned and inconsistencies or missing values were checked. Descriptive statistics were used to summarize the sociodemographic characteristics of the study population, circumstances, and predictive factors for suicidal behavior and attempts, in addition to a history of psychiatric evaluation or admission to a psychiatric hospital. The distribution of categorical variables was analyzed by calculating frequencies and percentages for each category.

#### Ethical Considerations

This study was carried out according to ethical principles and guidelines. All necessary ethical considerations were addressed before the research began. Data were identified and stored securely to protect participants' identities. The data collected through questionnaires was entered and analyzed by the Mental Health Section of the Department of Non-communicable Diseases (NCD) within the Iraqi Ministry of Health (MoH). The Statistical Package for Social Sciences (SPSS) version 26 was utilized for data analysis. The data were summarized using descriptive statistics. The distribution of categorical variables was analyzed by calculating frequencies and percentages for each category.

#### Data availability

Due to ethical considerations and privacy concerns, individual participant data cannot be publicly shared.

#### Results and Discussion

The present study aimed to investigate the characteristics and patterns of suicidal attempts reported in the PSU.

The total number of patients with suicidal attempts reported in the PSU was 280, representing 1% of all participants in the PSU. This suggests that suicidal attempts are not uncommon in the population seeking psychiatric assistance. The incidence rate of suicidal attempts was found to be 3 /per 100,000 of the population. Although this rate may seem relatively low, it is important to note that these figures represent only reported cases and may not capture the full extent of the problem. Many people may not seek help or report their suicidal attempts, which could lead to an underestimation of the true incidence rate.

Table 1 shows the following. The study revealed significant gender differences in suicidal attempts, with approximately 87% of attempts made by women. This finding is consistent with previous research, which has consistently shown that women are more likely to engage in nonfatal suicidal behaviors compared to men <sup>[4]</sup>. The reasons underlying this gender disparity in suicidal attempts are complex and multifaceted and can be influenced by a variety of social, cultural, and psychological factors. More research is needed to better understand these gender differences and develop targeted interventions.

Regarding age groups, the study found that 60% of suicidal attempts were made by young people, while 34.3% were made by young adults. This highlights the vulnerability of younger age groups to suicidal ideation and attempts <sup>[5]</sup>. Young people often face unique challenges, such as academic pressure, relationship difficulties, and identity formation, which can contribute to increased emotional distress and increased risk of suicidal attempts. Early detection and prevention strategies targeting this age group are crucial in reducing the burden of suicide in young populations.

Marital status and education level were also found to be associated with suicidal attempts. More than half (56%) of those who attempted suicide were unmarried, suggesting that social and economic factors can contribute to the risk of suicidal behavior. Unmarried individuals can experience social isolation and lack of support, which can increase their vulnerability to suicidal thoughts and attempts <sup>[6]</sup>. Furthermore, 54% of the patients had low educational levels, indicating a possible link between educational attainment and suicidal behavior. Low education may be associated with limited employment opportunities, financial difficulties, and increased stress levels, all of which can contribute to the development of suicidal ideation and attempts <sup>[7]</sup>.

Interestingly, most of the people who attempted suicide were housewives (68.6%). This finding highlights the potential impact of traditional gender roles and social expectations on mental health. Housewives may face various stressors, including domestic responsibilities, financial dependence, and limited social interactions, which can increase their risk of developing emotional distress and suicidal ideation <sup>[8]</sup>.

Table 2 shows the following. Regarding the circumstances surrounding suicide attempts, the study found that 51.4% of attempts occurred for the first time, indicating that a considerable proportion of people may be experiencing acute crises or sudden onset of emotional distress. This highlights the importance of crisis intervention and immediate support for people at risk of suicide. Furthermore, the finding that 94.3% of attempts occurred at home emphasizes the need for targeted interventions within

the domestic environment, such as family-based interventions and promoting safe home environments <sup>[9]</sup>.

The most frequent suicidal attempts reported in this study were drug intoxication (48.6%) and self-burn (22.9%). 34.3% of the individuals reported multiple methods. These findings are consistent with previous research, which has identified drug overdose and self-harm as common methods of suicidal attempts <sup>[9]</sup>. Understanding the specific methods used in suicidal attempts can inform prevention efforts, such as restricting access to lethal means and providing education on alternative coping strategies.

Interestingly, a considerable proportion (77%) of patients who attempted suicide refused hospital admission. This suggests that individuals may have varying preferences and perceptions about the most appropriate form of care after a suicide attempt. Mental health professionals should participate in collaborative decision-making with patients and consider their preferences and needs when planning treatment <sup>[10]</sup>.

Table 3 shows the following. A concerning finding from this study is that most of the individuals who attempted suicide (93%) had not received a psychiatric assessment before the attempt. This suggests a significant gap in mental health services and the need for improved access to psychiatric care. The lack of evaluation and intervention may contribute to the persistence of suicidal thoughts and the occurrence of suicide attempts <sup>[11]</sup>.

Furthermore, only a small percentage (2.9%) of people who attempted suicide had been admitted to a psychiatric hospital. This indicates that most suicide attempts were treated patiently. Reluctance to seek or accept hospital admission may be influenced by various factors, including fear of stigma, lack of awareness of available services, and financial constraints <sup>[12]</sup>.

A significant proportion (82.9%) of people who attempted suicide had no family history of suicide or attempted suicide. This finding suggests that family factors may have a limited influence on the appearance of suicidal behavior in this population. However, it is important to note that the absence of a family history does not negate the impact of other risk factors, such as individual psychological distress and environmental stressors <sup>[13]</sup>.

Table 4 shows the following. Finally, the main reason reported for suicide attempts in this study was acute emotional distress, including violence (63%). This indicates the importance of emotional regulation difficulties and interpersonal conflicts in contributing to suicidal behavior. Furthermore, socioeconomic and psychological problems were reported as reasons for the remaining suicide attempts. These findings highlight the multifaceted nature of suicidal behavior and the need for comprehensive interventions that address both individual and environmental factors <sup>[14]</sup>.

### **In conclusions and recommendations**

Suicide behavior in Iraq is a pressing issue that requires urgent attention. The lack of resources and awareness of mental health has led many people struggling with suicidal behaviors to not receive the necessary psychosocial treatment. However, this article has highlighted the potential of empowering PSUs in addressing this problem and providing effective control and preventive measures.

Throughout this study, we have examined the prevalence of suicide behavior in Iraq and the challenges faced in managing this problem. We have also explored the concept

of PSUs and their potential role in addressing the psychosocial needs of people at risk of suicide.

One of the main findings of this article is the need to increase awareness and education about suicide behavior in Iraq. Many people, both within the community and among healthcare professionals, lack the understanding and knowledge required to identify and address suicidal behaviors. This lack of awareness contributes to the underutilization of available resources and the failure to provide appropriate psychosocial management. Therefore, it is crucial to invest in educational programs aimed at both the general population and healthcare professionals to improve their understanding of suicide behavior and its underlying factors.

Empowering PSUs can play a pivotal role in addressing gaps in suicide prevention and management. These units can act as a central hub for people seeking help, providing a variety of services such as counseling, crisis intervention, and referrals to appropriate mental health professionals. By strengthening the capacity of PSUs, people at risk of suicide can receive the necessary support and care, reducing the likelihood of self-harm and promoting overall well-being.

Furthermore, the integration of PSUs into the existing healthcare system is essential for the successful implementation of suicide prevention strategies. Collaboration between PSUs and other healthcare providers, including primary care physicians, psychiatrists, and social workers, can ensure a comprehensive approach to the prevention of suicide. This collaboration can facilitate the early identification of people at risk, prompt referral to

appropriate services, and ensure continuity of care throughout the treatment process.

In addition to providing psychosocial support, PSUs can also contribute to preventive measures by addressing the underlying factors that contribute to suicidal behaviors. These factors may include social isolation, economic hardship, interpersonal conflicts, and access to means of self-harm. By offering targeted interventions and community-based programs, PSUs can address these risk factors and promote protective factors, such as social support networks, resilience, and coping skills.

However, it is important to recognize the potential challenges and barriers that can arise in the implementation and maintenance of PSUs in Iraq. Limited resources, including funding, trained personnel, and infrastructure, can pose significant obstacles to the establishment and effective functioning of these units. Therefore, policymakers and stakeholders must prioritize mental health and allocate sufficient resources to support the development and maintenance of PSUs.

Furthermore, stigma surrounding mental health and suicide is a prevalent issue in our community. Many people avoid seeking help for fear of judgment and discrimination. Therefore, destigmatization efforts must be an integral part of any suicide prevention strategy. Public awareness campaigns, community engagement, and education initiatives can help challenge negative attitudes and beliefs surrounding mental health, encouraging people to seek help without fear of stigma.

**Table 1:** Distribution of the study sample by basic characteristics

Variable	Category	n. (280)	%
Age group (year)	15-29	168	60.0
	30-44	96	34.3
	45-59	6	2.1
	60 +	10	3.6
Sex	Male	32	11.4
	Female	248	88.6
Marital status	Married	94	33.6
	None	186	66.4
Education level	Primary school or none	152	54.3
	Secondary school	96	34.3
	College graduate or more	32	11.4
Currently work	Yes	24	8.6
	No	32	11.4
	Student	32	11.4
	House wife	192	68.6
Alcohol or substance abuse	Yes	16	5.6
	No	268	94.4

**Table 2:** Distribution of the study sample by attempted suicide characteristics

Variable	Category	n. (280)	%
Number of the suicide attempts	1	144	51.4
	2	48	17.1
	3+	88	31.4
Date of the suicide attempts (year)	2017	144	51.4
	2016	128	45.7
	2015	8	2.9
location of the suicide attempts	At home	264	94.3
	Outside home	16	5.7
Method used in the suicide attempts	Drug toxicity	136	48.6
	Burn	64	22.9
	Chemical toxicity	40	14.3
	Fall from high	24	8.6

	Hangings	16	5.7
Multiple methods used	Yes	96	34.3
	No	184	65.7
Hospital admission	Agreed to enter the hospital	64	22.9
	Refused to enter the hospital	216	77.1
Days of admission	1	16	25.0
	2	22	34.4
	3+	26	40.6
Currently seeking help from	PHC	216	76.0
	hospital	68	24.0

**Table 3:** Distribution of the study sample by history of psychological problems

Variable	Category	n. (280)	%
History of psychiatrist assessment	Yes	48	17.1
	No	232	82.9
History of psychiatrist hospital admission	Yes	8	2.9
	No	272	97.1
Family history of suicide or suicide attempts	Yes	48	17.1
	No	232	82.9
Relationship to family history	Parents	52	18.3
	Brother	28	9.9
	Uncle	18	6.3
	Aunt	12	4.2
	Other relation	174	61.3

**Table 4:** Reason & complication of the suicide attempts

Variable	Category	n. (280)	%
Symptoms that suffer	depression	224	80.0
	anxiety	56	20.0
Disease that suffer	psychological problems	168	60.0
	Chronic physical illness	80	28.6
	Physical disability	32	11.4
Reason of the attempted suicide	Acute emotional distress	112	40.0
	Socioeconomic deterioration	104	37.1
	violence	64	22.9
Complication of the suicide attempts	Psychological effects	218	76.7
	Distortion & disability	66	23.3

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**Conflict of interest**

Author Ahmad Sh. Al-Juboori and coauthors Rana Faeq Saud and Riyadh Sh. Al-Rudaini declares that there is no conflict of interest in the publication of this article.

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