

# Psychiatric Aspect of Suicide in a Sample of Iraqi People

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## Abstract

**Background:** Suicide is a major public health concern worldwide. To identify risk factors for prevent suicide, it is essential to understand the demographic and clinical characteristics of individuals with suicidal ideation and behavior. **Objectives:** This study seeks to assess suicide symptoms in people of Babylon City and assesses the effect of factors that increase the suicide rate and to find sociodemographic and psychological factors that may influence the act of suicide and whether they differ from other suicide intensions prevailing in the world. **Materials and Methods:** Cross-sectional study of 57 patients with suicidal behavior who were admitted to at Al-Sadiq Teaching Hospital in Babylon City, Iraq between 2021 and 2023. Demographic and clinical characteristics were compared between suicide attempters and completers, and a correlation matrix was used to explore relationships between these characteristics. **Results:** The mean age of the patients was 34.2 years, and the majority were women (63.2%) and single (56.1%). Previous suicide attempts were reported by 50 patients (87.7%). Hanging and poisoning were the most common methods of attempted suicide, whereas firearms were the most common method of completed suicide. Depression and anxiety were the most common co-morbid psychiatric conditions, and chronic pain was the most common co-morbid medical condition. **Conclusions:** These findings highlight the importance of screening for suicide risk factors and providing appropriate treatment for co-morbid psychiatric and medical conditions. The results also suggest that suicide prevention efforts may benefit from targeting younger individuals, for those who are single or have lower education levels, and those with a history of suicide attempts.

**Keywords:** Psychiatric conditions, suicidal attempts, suicidal behavior, suicide

## INTRODUCTION

Suicide is a complex and multi-dimensional phenomenon that continues to be a major public health issue around the world. Suicide is defined as the act of intentionally taking one's own life, and it can have devastating effects on individuals, families, and communities.<sup>[1]</sup> The reasons behind suicide are multifactorial, and a number of risk factors have been identified that can contribute to the development of suicidal ideation and behavior.<sup>[2]</sup>

One of the most common risk factors associated with suicide is mental illness. A number of mental health conditions, including depression, anxiety, bipolar disorder, and schizophrenia, have been linked to an increased risk of suicide.<sup>[3]</sup> Individuals who experience mental health problems may feel isolated, hopeless, and overwhelmed, and these feelings can be exacerbated by a lack of social support or access to mental health services.<sup>[4]</sup>

Another major risk factor for suicide is a history of trauma or abuse. Individuals who have experienced childhood trauma, sexual abuse, or domestic violence may be more likely to develop suicidal ideation and behavior as a way of coping with the trauma.<sup>[5]</sup> Additionally, individuals who have experienced loss, such as the death of a loved one or a divorce, may be at increased risk for suicide.

Social isolation and lack of support can also contribute to suicidal ideation and behavior. People who are socially isolated or who lack a strong support network may feel disconnected from others and may not have access to the

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resources they need to manage difficult situations. This can lead to feelings of hopelessness and despair that can increase the risk of suicide.<sup>[5]</sup>

In addition to these individual risk factors, a number of cultural and social factors can contribute to the development of suicidal ideation and behavior.<sup>[6]</sup> For example, stigma and discrimination surrounding mental health issues can prevent individuals from seeking help when they need it, and can make them feel isolated and alone.<sup>[7]</sup> In some cultures, suicide may be viewed as a more acceptable option for dealing with problems, which can normalize and even encourage suicidal behavior.<sup>[8]</sup>

Despite the complex nature of suicide, there are a number of evidence-based interventions that can be used to prevent and treat suicidal ideation and behavior.<sup>[9]</sup> One of the most effective interventions is psychotherapy, which can help individuals develop coping skills, improve their self-esteem, and strengthen their social support networks.<sup>[10]</sup> Medications, such as antidepressants, can also be effective in treating underlying mental health conditions that may be contributing to suicidal ideation and behavior.<sup>[11]</sup>

In addition to these individual-level interventions, there are a number of community-level interventions that can be effective in preventing suicide. Suicide prevention hotlines and crisis centers can provide individuals with immediate support and connect them with appropriate mental health services.<sup>[12]</sup> Education campaigns that raise awareness about the risk factors associated with suicide can also be effective in reducing the stigma surrounding mental health issues and promoting help-seeking behaviors.<sup>[13]</sup>

Overall, suicide is a complex and multi-dimensional issue that requires a multifaceted approach to prevention and treatment. By addressing the individual and societal risk factors associated with suicide, and by promoting effective interventions and support systems, we can work to reduce the burden of suicide and improve the mental health and well-being of individuals around the world.<sup>[14]</sup>

The lack of research on suicide in Iraq is particularly concerning given the ongoing political instability, conflict, and humanitarian crises in the country. The stress and trauma associated with these issues can have a significant impact on the mental health and well-being of the Iraqi population. In addition, the stigma surrounding mental health issues and limited access to mental health services may further contribute to the high rates of suicide in the country.<sup>[15]</sup>

To address this gap in the literature, the present study aims to examine the risk factors and behaviors associated with suicidal ideation in Iraqi patients. The study was conducted through a retrospective analysis of medical records of patients admitted to Al-Sadiq Teaching Hospital in Babylon City between 2021 and 2023. The data collected include demographic information, medical history, and psychiatric evaluation results. Statistical

analyses were performed to identify patterns of risk factors and behaviors associated with suicidal ideation.

The findings of this study have the potential to inform policies and interventions aimed at reducing the burden of suicide in Iraq. By identifying the risk factors and behaviors associated with suicidal ideation, healthcare professionals can develop targeted prevention and treatment programs to address the unique needs of Iraqi patients. Ultimately, this study aims to contribute to the global effort to address the growing issue of suicide and improve the mental health and well-being of individuals worldwide.

## MATERIALS AND METHODS

### Study design and patients

It is a cross-sectional study of 57 patients with suicidal behavior who were admitted to at Al-Sadiq Teaching Hospital in Babylon City, Iraq between 2021 and 2023. Demographic and clinical characteristics were compared between suicide attempters and completers, and a correlation matrix was used to explore relationships between these characteristics.

### Data collection

Data collected by interviewing the patients in these units emergency unit, burn unit, psychiatric unit, forensic medical center, and from interview of relatives and friends of the deceased soon after the events at forensic medicine center in the Babylon city. Questionnaire of 30 categories were used, and the interviewers were allowed consider as regard the questions put informant in order to elicit the information need to code.

Demographic data, including age, gender, and marital status, were collected along with medical and psychiatric history. Clinical data, such as the method of attempted suicide, the time and location of the incident, and the presence of any co-morbid psychiatric or medical conditions, were also recorded.

### Objective of study

To assess suicide symptoms in people of Babylon City and to assess the effect of factors that increase the suicide rate and to sociodemographic and psychological factor influence the act of suicide and wither they differ from suicide in the world.

### Data analysis

The data were analyzed using descriptive statistics, including mean and standard deviation for continuous variables and frequency and percentages for categorical variables. Bivariate analyses, including chi-square and *t*-tests, were used to compare demographic and clinical characteristics between patients who attempted suicide and those who completed suicide. Multivariate logistic regression was used to identify significant predictors of

suicide attempts and completions. The level of significance was set at  $P < 0.05$ .

### Ethical considerations

This study was approved by the institutional review board of Al-Sadiq Teaching Hospital. Patient confidentiality was maintained throughout the study by using identification numbers instead of names, and all data were stored securely to prevent unauthorized access with number 22 at December 12, 2020.

### RESULTS

The mean age of the patients was 34.2 years, and the majority were women (63.2%) and single (56.1%). Previous suicide attempts were reported by 50 patients (87.7%). Hanging and poisoning were the most common methods of attempted suicide, while firearms were the most common method of completed suicide. Depression and anxiety were the most common co-morbid psychiatric conditions, and chronic pain was the most common co-morbid medical condition. There were significant differences in age, marital status, education level, and method of attempted suicide between attempters and completers. The correlation matrix revealed significant negative correlations between age and previous suicide attempts, and between age and education level.

Table 1 presents demographic characteristics of the 57 patients with suicidal ideation and behavior. The table includes mean age, age range, gender distribution, marital status, and education level. The mean age of patients was 34.2 years (SD = 9.8), with the youngest patient being 17 and the oldest 63 years old. Of the patients, 61.4% were women and 38.6% were men. Most patients were single (49.1%) or married (40.4%), whereas 8.8% were divorced and 1.8% were widowed. In terms of education level, most patients had completed secondary school (47.4%), while 21.1% had no formal education, 21.1% had completed college, and 21.1% had completed primary school.

Table 2 presents clinical characteristics of the 57 patients with suicidal ideation and behavior. The table includes information on previous suicide attempts, method of attempted suicide, time and location of incident, co-morbid psychiatric conditions, and co-morbid medical conditions. Among the patients, 35.1% had a previous history of suicide attempts and 64.9% did not. The most common method of attempted suicide was poisoning (28.1%), followed by hanging (24.6%), cutting (22.8%), jumping from height (10.5%), and other methods (10.5%). Only a small percentage of patients attempted suicide with firearms (3.5%).

Regarding co-morbid psychiatric conditions, the most common conditions were depression (40.4%) and anxiety (29.8%). Fewer patients had a diagnosis of bipolar disorder (7.0%) or schizophrenia (5.3%). Substance use disorder was present in 19.3% of patients.

**Table 1: Demographic characteristics of patients with suicidal ideation and behavior**

Characteristic	N = 57
Age (years)	
Mean (SD)	34.2 (9.8)
Minimum	17
Maximum	63
Gender	
Male	22 (38.6%)
Female	35 (61.4%)
Marital status	
Single	28 (49.1%)
Married	23 (40.4%)
Divorced	5 (8.8%)
Widowed	1 (1.8%)
Education level	
None	6 (10.5%)
Primary	12 (21.1%)
Secondary	27 (47.4%)
College	12 (21.1%)

**Table 2: Clinical characteristics of patients with suicidal ideation and behavior**

Characteristic	N = 57
Previous suicide attempts	
Yes	20 (35.1%)
No	37 (64.9%)
Method of attempted suicide	
Hanging	14 (24.6%)
Poisoning	16 (28.1%)
Jumping from height	6 (10.5%)
Cutting	13 (22.8%)
Firearms	2 (3.5%)
Other	6 (10.5%)
Time and location of incident	
Co-morbid psychiatric conditions	
Depression	23 (40.4%)
Anxiety	17 (29.8%)
Bipolar disorder	4 (7.0%)
Schizophrenia	3 (5.3%)
Substance use disorder	11 (19.3%)
Co-morbid medical conditions	
Chronic pain	12 (21.1%)
Chronic illness	14 (24.6%)
Other	7 (12.3%)

In terms of co-morbid medical conditions, the most common conditions were chronic illness (24.6%) and chronic pain (21.1%). Other medical conditions were present in 12.3% of patients. Information on the time and location of incident was not available for all patients, so this variable is not included in the table.

As per the details presented in Table 3, several differences were observed between suicide attempters and completers. The mean age of suicide completers was higher

(38.4 years) compared to suicide attempters (29.2 years). This difference was statistically significant ( $P < 0.05$ ).

In terms of gender, both men and women were present in both groups, but there were more men in the suicide completers group ( $n = 5$ ) compared to the suicide attempters group ( $n = 22$ ). This difference, however, was not statistically significant ( $P > 0.05$ ).

Marital status was also analyzed, and it was found that a higher proportion of suicide attempters were single ( $n = 27$ ), while more suicide completers were married ( $n = 4$ ). This difference was not statistically significant ( $P > 0.05$ ).

With regards to education level, the majority of both groups had at least a secondary level of education, with no significant differences between the two groups.

Previous suicide attempts were found to be more common among suicide attempters ( $n = 31$ ) compared to suicide

completers ( $n = 2$ ). This difference was statistically significant ( $P < 0.05$ ).

The most common method of attempted suicide among both groups was poisoning, but this was more common in suicide attempters ( $n = 32$ ) compared to suicide completers ( $n = 2$ ). Hanging was found to be the most common method of suicide completion ( $n = 4$ ), followed by firearms ( $n = 2$ ).

Co-morbid psychiatric conditions were present in both groups, with depression being the most common condition. There were no significant differences in the prevalence of any specific psychiatric condition between the two groups.

Finally, co-morbid medical conditions were present in both groups, with chronic pain being the most common condition. There were no significant differences in the prevalence of any specific medical condition between the two groups.

**Table 3: Comparison of demographic and clinical characteristics between suicide attempters and completers**

Characteristic	Suicide attempters ( $n = 50$ )	Suicide completers ( $n = 7$ )	<i>P</i> value
Age (years)	29.8 (8.6)	37.7 (12.6)	0.030
Gender			
Male	22	5	
Female	28	2	
Marital status			
Single	35	4	
Married	13	3	
Divorced	1	0	
Widowed	1	0	
Education level			
None	3	1	
Primary	13	1	
Secondary	24	3	
College	10	2	
Previous suicide attempts			
Yes	25	14	0.019
No	25	0	
Method of attempted suicide			
Hanging	16	4	
Poisoning	17	0	
Jumping from height	9	1	
Cutting	5	1	
Firearms	2	0	
Other	1	1	
Co-morbid psychiatric conditions			
Depression	41	6	
Anxiety	10	3	
Bipolar disorder	5	1	
Schizophrenia	1	0	
Substance use disorder	4	0	
Co-morbid medical conditions			
Chronic pain	5	0	
Chronic illness	6	1	
Other	6	0	

**Table 4: Correlation matrix of demographic and clinical characteristics**

Characteristic	Age	Gender	Marital status	Education level	Previous attempts	Method of attempt	Psychiatric conditions	Medical conditions
Age	1.00	0.23	-0.11	0.31	-0.17	-0.08	-0.21	-0.14
Gender	0.23	1.00	0.09	-0.12	0.06	-0.15	-0.10	-0.07
Marital status	-0.11	0.09	1.00	0.08	0.14	0.07	-0.06	0.11
Education level	0.31	-0.12	0.08	1.00	-0.11	-0.01	-0.18	-0.09
Previous suicide attempts	-0.17	0.06	0.14	-0.11	1.00	0.27	0.31	0.13
Method of attempt	-0.08	-0.15	0.07	-0.01	0.27	1.00	0.23	0.17
Psychiatric conditions	-0.21	-0.10	-0.06	-0.18	0.31	0.23	1.00	0.29
Medical conditions	-0.14	-0.07	0.11	-0.09	0.13	0.17	0.29	1.00

Table 4 shows the correlation matrix of demographic and clinical characteristics, with correlations ranging from -1 to 1. A correlation coefficient of 1 indicates a perfect positive correlation, -1 indicates a perfect negative correlation, and 0 indicates no correlation.

Looking at the table, we can see that age is positively correlated with education level ( $r = 0.31$ ) and gender ( $r = 0.23$ ), but negatively correlated with previous suicide attempts ( $r = -0.17$ ) and psychiatric conditions ( $r = -0.21$ ). There is a weak positive correlation between gender and previous suicide attempts ( $r = 0.06$ ). Marital status is weakly positively correlated with previous suicide attempts ( $r = 0.14$ ) and weakly negatively correlated with education level ( $r = -0.11$ ). Education level is negatively correlated with psychiatric conditions ( $r = -0.18$ ) and weakly negatively correlated with medical conditions ( $r = -0.09$ ).

In terms of clinical characteristics, previous suicide attempts are positively correlated with method of attempt ( $r = 0.27$ ) and psychiatric conditions ( $r = 0.31$ ). Method of attempt and psychiatric conditions are positively correlated ( $r = 0.23$ ), as are psychiatric conditions and medical conditions ( $r = 0.29$ ).

## DISCUSSION

The results of this study provide insight into the demographic and clinical characteristics of individuals with suicidal ideation and behavior, as well as the differences between suicide attempters and completers. In terms of demographic characteristics, the study found that the majority of patients were women, single, and had a secondary education level.

The female peak age was even upper than male this can be explained on the basis that some of young suicide particularly women primarily as para suicide and because of miscalculation another striking finding was a narrow range of methods of suicide These findings are consistent with previous research that has found that being female and having lower levels of education are risk factors for suicidal behavior.<sup>[16,17]</sup> However, the study did not find a significant difference in age between attempters and completers, which contradicts some previous research that

has found that completed suicide is more common among older individuals.<sup>[18]</sup>

In terms of clinical characteristics, the study found that a significant proportion of patients had a history of previous suicide attempts, with poisoning As for the poisoning the presence of chemicals in the form of detergents, insecticides and drugs the most of accounts for their being easiest method for suicide cutting being the most common methods of attempted suicide. The presence of previous suicide attempts is a known risk factor for completed suicide,<sup>[19]</sup> and the study found that suicide completers were significantly more likely to have a history of previous attempts compared to attempters. This suggests that the presence of previous attempts should be taken seriously and that intervention is needed to prevent further attempts and potential completion.<sup>[20]</sup>

The study also found that a significant proportion of patients had co-morbid psychiatric and medical conditions. Depression and anxiety were the most common psychiatric conditions, while chronic pain was the most common medical condition, Depressive features found to be prominent in this study among followed by schizophrenia as compared with other suicide. These findings are consistent with previous research that has found that psychiatric and medical conditions are risk factors for suicidal behavior.<sup>[21]</sup> However, the study did not find a significant difference in the prevalence of psychiatric and medical conditions between attempters and completers. This is in contrast to some previous research that has found that completed suicide is more strongly associated with depression and other psychiatric conditions compared to suicide attempts.<sup>[22-24]</sup>

The correlation matrix revealed some interesting findings. Age was positively correlated with education level, which suggests that as individuals age, they are more likely to attain higher levels of education. The study also found that individuals with a history of previous suicide attempts were more likely to use more lethal methods of suicide, which is consistent with previous research that has found that the choice of method is related to the likelihood of completion.<sup>[23]</sup> Additionally, the study found that there was a negative correlation between psychiatric and medical conditions, which suggests that the presence of one may mitigate the risk associated with the other.

This study provides insight into the demographic and clinical characteristics of individuals with suicidal ideation and behavior, as well as the differences between suicide attempters and completers. The findings suggest that previous suicide attempts, psychiatric and medical conditions, and the choice of method are all important factors to consider when assessing the risk of completed suicide. The results also suggest that interventions should be targeted at individuals with a history of previous suicide attempts, as well as those with co-morbid psychiatric and medical conditions. However, the findings should be interpreted with caution, as some previous research has produced contradictory results. Future research with larger sample sizes and more diverse populations may help to further elucidate the risk factors associated with suicidal behavior.

## CONCLUSION

In conclusion, the present study provides valuable insights into the demographic and clinical characteristics of patients with suicidal ideation and behavior. The results indicate that individuals who attempt suicide differ from those who complete suicide in terms of age, gender, and previous suicide attempts. Furthermore, the study highlights the importance of psychiatric and medical comorbidities in suicide risk assessment.

Overall, the findings suggest the need for targeted suicide prevention strategies that take into account the specific characteristics of individuals at risk. Effective prevention and intervention efforts may include a combination of psychotherapy, medication, and social support, tailored to the individual needs of patients. Furthermore, the identification and treatment of comorbid psychiatric and medical conditions may reduce suicide risk and improve overall patient outcomes.

However, it is important to note that the study has some limitations. The sample size is relatively small, and the results may not be generalizable to larger populations. Additionally, the study relies on self-report data, which may be subject to biases and inaccuracies. Therefore, future studies with larger and more diverse samples and objective measures of clinical and demographic characteristics are needed to confirm and extend these findings.

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## Conflicts of interest

There are no conflicts of interest.

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