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EPIDEMIOLOGY AND RISK FACTORS OF SUICIDE IN SULAYMANIYAH, KURDISTAN REGION: A RETROSPECTIVE CROSS-SECTIONAL STUDY FROM A MEDICOLEGAL PERSPECTIVE

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Abstract: Suicide remains a major global public health concern and is the third leading cause of death among young people. In Iraq, particularly in the Kurdistan Region, the cumulative impact of prolonged conflict, political instability, economic hardship, systemic corruption, and weak mental health infrastructure leads to an increased risk of suicide. This study aimed to investigate the epidemiological patterns and risk factors associated with suicide among the Kurdish population in Sulaymaniyah Governorate, Kurdistan Region of Iraq. A retrospective cross-sectional study was conducted at the Sulaymaniyah Forensic Institute, including 91 confirmed suicide cases recorded between January 1 and December 31, 2020. Sociodemographic and contextual data were collected through qualitative interviews with family members of the committers and supplemented with forensic and legal records. Statistical analysis was used to identify associations between variables such as sex, age, suicide method, and psychiatric history. The mean age of the committers was 29.7 ± 14.5 years, with the majority being men (58.2%) and aged 26–44 years (35.2%). The majority of the committers were single (71.4%) from rural areas (59.3%) and had experienced significant social problems (78%), while only 37.4% had a documented psychiatric diagnosis. The most common methods of suicide were firearm use among men (50.9%) and self-immolation among women (50%). A significant association was observed between sex and suicide method (p=0.015) and between age group and psychiatric illness (p=0.021), while location of residence was not significantly associated with psychiatric history (p=0.8). Suicide in the Kurdistan Region disproportionately affects young adults and reflects a complex interplay of social, psychological, and structural factors. These findings highlight the urgent need for suicide prevention strategies, increased mental health services, and targeted interventions for vulnerable groups.
Keywords: Self-harm, suicide, epidemiology, risk factors, incidence, Kurdistan region

INTRODUCTION

Suicidal behaviours represent a global public health concern that is characterized by the deliberate act of ending one's life through an intentional act of self-inflicted harm (Ahmed & Heun, 2024). While suicide attempts indicate non-fatal self-injurious acts with an intent to die, completed suicides constitute a far more alarming issue that claims, approximately 800,000 lives annually, averaging one death every 40 seconds. Strikingly 77% of these fatalities occurrences in low- and middle-income countries (WHO, 2023; Younis & Lafta, 2023) A recent systematic review explored the epidemiology of self-immolation in Iraq and revealed that self-immolation constituted 26.4% of all burn admissions, Notably this rate was higher in Kurdistan region (36.8%) that in Iraq's central and southern part (16.0%) (Ahmed, 2023; Ahmed & Heun, 2024). This elevated rate underscores the unique socio-political and cultural context of the Kurdish region, particularly

Sulaymaniyah, which has endured decades of armed conflict, displacement, genocide (notably the Anfal campaign), chemical attacks, and long-standing marginalization (Seidi et al., 2022). These massive traumas have left lasting effect on the mental health of the population, contributing to an increased risk of suicide. The region's complex history and ongoing struggles with economic instability and inadequate mental health infrastructure make it a critical area for focused research.

In addition to its global impact, suicide disproportionately affects indigenous populations worldwide. Factors such as disconnection from cultural roots, socioeconomic deprivation, and limit access to mental health services exacerbate suicide risks in these communities (Ahmed & Heun, 2023). In such population up to 45% of individuals who die by suicide have had contact with primary care provider within a month prior to their death (Raue, 2024). These data emphasize the need for timely identification and culturally adapted intervention.

Multiple risk factors have been identified in association with suicide, including family history of suicide, childhood abuse or neglect, previous suicide attempt, mental illness (especially depression and bipolar disorder), alcohol/substance misuse, physical illness/chronic pain, feelings of hopelessness/impulsiveness/aggressiveness, social isolation, barriers to accessing mental health treatment, significant losses (such as the death of a loved one, relationship breakdowns, social disconnection, unemployment, or financial hardship), stigma and reluctance to seek help (Ahmed & Heun, 2023; Hawton et al., 2013).

Globally, common methods of suicide include pesticide ingestion, hanging, and firearms. In Kurdistan Region of Iraq (KRI) contextual variation are evident. For instance, in a study conducted in Erbil, the capital city of Iraqi Kurdistan, it was found that firearms were the preferred method for 85.2% of military personnel while burning was the primary method for 41.1% of housewives (Malkhasian & Amin, 2019). Although self-immolation is rare in developed countries, accounting for <1% of cases remains a major concern in low-income regions. in countries such as Iran and India, self-immolation represents a considerable portion, reaching approximately 70% and 34%, respectively, of suicide cases, according to World Health Organization (WHO) statistics (Hassanipour et al., 2019).

In 2019, the global age-standardized suicide rate was 9.0 per 100 000 population with wide variation across countries from fewer than 2 over 80 deaths per 100.000 (WHO, 2023). While in Iraq, in 2019, there were over 590 reported deaths by suicide and 1,112 suicide attempts. Astonishingly, 80% of these cases involved women, resulting in an average of one suicide death per day and three suicide attempts per day. However, the cultural and religious beliefs surrounding suicide in Iraq often lead to underreporting, as families reluctant to disclose suicide as a cause of death due to stigma and concern over social honour (Abas et al., 2023). In addition, because it is a stigmatized cause of death, suicide is often miscoded or omitted from official statistics which complicates accurate epidemiological assessment. The assignment of the underlying cause of death is limited by the information provided on death certificates, and variability in coding practices needs to be addressed. Therefore, this study aimed to investigate the epidemiology and risk factors of suicide among the Kurdish population in Sulaymaniyah province.

METHODS

Study design and setting

This retrospective cross-sectional study was conducted on 91 confirmed suicide cases recorded at the Sulaimani Medicolegal Institute which provides forensic coverage for the entire Sulaymaniyah province including Chamchamal, Penjween, Sharbazher, Mawat, Raparin, Halabja, in Kurdistan region of Iraq. The Kurdistan Region of Iraq has its own independent government and parliament, and consists of four main provinces: Erbil (the capital), Sulaymaniyah, Dohuk, and Halabja. According to the latest official census conducted and announced on November 25, 2024, the population of the region was 6,668,370 which accounts for 14.03% of Iraq's total population (964media, 2024). The political system of the Kurdistan Region differs from that of the rest of Iraq; the Kurdish people have their own official language (Kurdish) and are predominantly Muslim and Zoroastrian in religion. This study covered cases from January 1st to December 31st, 2020.

Data collection and suicide confirmation

A comprehensive, multi-source approach was used to confirm the suicide cases. Each case underwent post-mortem examination by forensic experts at the Sulaymaniyah Forensic Institute. Confirming suicide required agreement on multiple data sources, including: autopsy findings, crime scene investigation reports provided by the police, psychiatric evaluation records (if available), and judicial decisions issued by the relevant judicial authorities. In-depth face-to-face interviews were conducted with the committers' guardian/family members using a validated standard questionnaire to gather relevant sociodemographic data, including committers' age, sex, residency, educational status, occupation, social problems, and history of psychiatric issues. Information on psychiatric problems was also recorded from medico-legal reports and family interviews. However, the data were documented in a general manner (i.e., as "psychiatric disorder") without specifying the exact diagnostic categories (e.g., depression, anxiety, schizophrenia).

Also, season, time, place, cause, and method of death were investigated. Furthermore, for cases involving specific methods of suicide, detailed information was carefully investigated. For instance, in cases involving gunshot wounds, factors such as the number of bullets, the location of the wound, evidence of any defensive actions, and the distance from which the bullet was fired were meticulously evaluated. These criteria were

applied to distinguish suicide cases from other instances involving gunshot wounds. For cases involving alternative methods of suicide, specific tests were employed to establish the definitive classification of suicidal intent, ensuring accurate identification of the cases.

Family Interviews

In addition to medico-legal records, information was obtained through structured interviews with the first-degree relatives of suicide cases. The interviews aimed to gather contextual information about psychosocial stressors and psychiatric history. The questionnaire was designed based on previous literature on suicide risk factors (Abbas et al., 2018; WHO, 2014) and adapted to the local context. Domains covered in the interviews included:

- **Family problems** (e.g., marital conflict, domestic violence, divorce, family disapproval)
- **Economic difficulties** (e.g., unemployment, debt, financial stress)
- **Educational or occupational problems** (e.g., academic failure, school drop-out, work-related stress)
- **Interpersonal and social issues** (e.g., bullying, social isolation, peer or community conflict)
- **Other stressors** (e.g., migration-related stress, displacement, legal problems)

Inclusion and exclusion Criteria

Suicide cases were selected based on reports of crime investigators and autopsy findings along with psychiatric observation treatment and final decision from related court as a feedback, postmortem examination was conducted for every case in Sulaimani Medicolegal Institute. Cases were excluded if families declined to disclose information due to stigma or concern over social dignity or if the data were insufficient to confirm suicidal intent.

Ethical considerations

The Ethical and Scientific Committees of Sulaimani Medicolegal Institute, approved and supported the study protocol (Number 6 on 3rd. June, 2024). Patients/guardian(s) verbal and written consent were obtained before the study commencement. The study design and work were adequately explained to them, and they felt free to leave the study without giving any reason.

Statistical analysis

All statistical analyses were performed using IBM SPSS Statistics, version 25.0 (IBM Corporation, Armonk, NY, USA). Descriptive statistics were used to summarize sociodemographic characteristics and variables associated with suicide. Categorical variables were reported as frequencies and percentages, while continuous variables (such as age) were expressed as means with standard deviations. The chi-square (χ^2) test was used to examine associations between key categorical variables, including the relationship between sex and suicide method, and between age group or residence and the presence of psychiatric problems. Fisher's exact test was used where the expected frequencies in contingency tables were too small to meet the assumptions of the chi-square test. All significant associations were presented in tabular format and the corresponding p-values were reported. Variables that were not statistically significant were also included and discussed appropriately.

RESULTS

The sociodemographic data of suicidal committers shows a mean age of 29.7 ± 14.5 years. Most patients were males (58.2%), among the age group of 26 - 44 years (35.2%), unmarried (71.4%), from rural areas (54%), graduated from secondary school (31%), were students (26%), had a social problem (71%), but without psychiatric problem (57%) (Table 1).

Social Problems: Family interviews revealed that more than half of the suicide cases (n=52, 57.1%) were reported to have experienced significant social problems prior to death. The most frequently reported category was family-related conflicts (n=23, 25.3%), including marital disputes, domestic violence, and parental disapproval. Economic difficulties such as unemployment and financial stress accounted for 14 cases (15.4%). Interpersonal and community conflicts, including social isolation and peer disputes, were reported in 9 cases (9.9%), while educational or occupational problems such as academic failure or work-related stress were reported in 6 cases (6.6%). These problems were more commonly documented among male suicide cases (39.6%) compared to females (17.6%) (Figure 1).

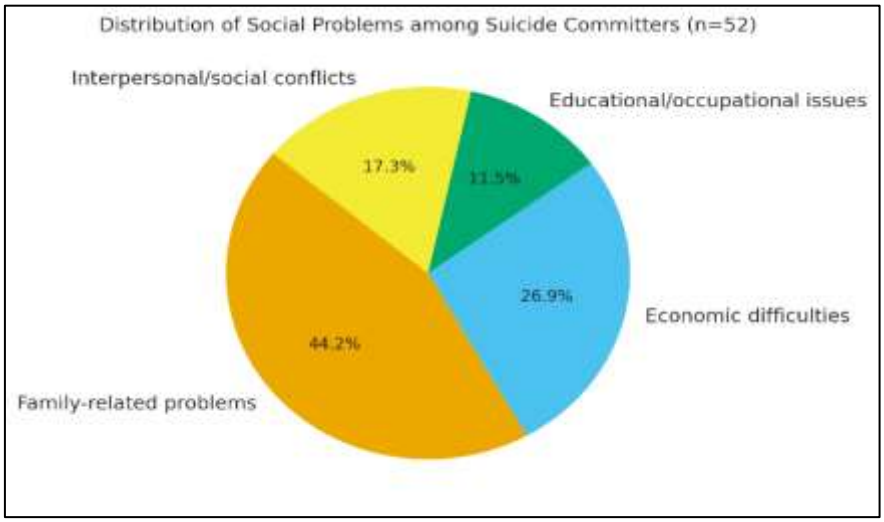

Figure 1. Distribution of social problems among suicide committers

Table 1. General characteristics of studied committers.

Characteristics		**Frequency**	**%**
Sex	Male	53	58.2
	Female	38	41.8
Age (Years)	< 18	20	22.0
	18 – 25	25	27.5
	26 – 44	32	35.2
	≥ 45	14	15.4
Marital status	Married	26	28.6
	Single	65	71.4
Residency	Urban	35	38.5
	Rural	54	59.3
	Shelter	2.0	2.2
Education level	Illiterate	19	20.9
	Primary school graduate	27	29.7
	Secondary school graduate	31	34.1
	University graduate	14	15.4
Occupation status	Student	26	28.6
	Housewife	18	19.8
	Free work	19	20.9
	Military	4.0	4.4
	Jobless	24	26.4
Social problem	Yes	71	78.0
	No	20	22.0
Psychiatric problem	Yes	34	37.4
	No	57	62.6
Total		91	100

Regarding the characteristics of suicidal events, most cases were observed in winter (28%), in the morning time (49%), at home (63%), and using firearms (32%) (Table 2).

Table 2. Characteristics of suicidal events among studied committers.

Event Characteristics		**Frequency**	**%**
Season	Winter	28	30.8
	Spring	18	19.8
	Summer	24	26.4
	Autumn	21	23.1
Timing	Morning (AM)	49	53.8
	Afternoon or night (PM)	42	46.2
Place of event	Home	63	69.2
	Outside	26	28.6
	On mountain	1.0	1.1
	Graveyard	1.0	1.1
Cause of death	Firearms	32	35.2

	Burn	23	25.3
	Cutting neck	1.0	1.1
	Drowning	1.0	1.1
	Fall from height	1.0	1.1
	Hanging	31	34.1
	Poisoning	2.0	2.2
Total		91	100

With respect to the association between sex and method of death among studied committers, most females died by self-burns (50%), followed by hanging (28.9%), and firearms (13.2%). Among male committers, the most frequently used method was firearms (50.9%), followed by hanging (37.7%), then burning (7.5%), and swallowed poison (3.8%). A significant difference (p=0.015) was found between these variables in terms of the sex of committers (Table 3).

Table 3. sex differences in method of suicide among studied committers.

Method of Death	**Sex**		**Total**	**p-value**
	Male	**Female**		
Burn	4.0 (7.5)	19 (50)	23 (25.3)	0.015*
Hanging	20 (37.7)	11 (28.9)	31 (34.1)	
Firearms	27(50.9)	5.0 (13.2)	32 (35.2)	
Poison	2.0 (3.8)	0.0 (0.0)	2.0 (2.2)	
Drowning	0.0 (0.0)	1.0 (2.6)	1.0 (1.1)	
Fall from height	0.0 (0.0)	1.0 (2.6)	1.0 (1.1)	
Cutting Neck	0.0 (0.0)	1.0 (2.6)	1.0 (1.1)	
Total	53 (100)	38 (100)	91 (100)	

Data are presented as number (%). Chi-square test was used; a p-value < 0.05 was considered significant. Examining the prevalence of psychiatric problems across the age group revealed a statistically significant association. specifically, 15% of committers under 18 years old, 28% of those aged 18-25, and 43.8% of those aged 26-44 had psychiatric problems, while this figure increased to 71.4% for committers aged 45 and over (Table 4).

Table 4. Distribution of psychiatric problems among different age of suicide committers .

Psychiatric problem	Age Group (Years)				Total	p-value
	<18	18-25	26-44	≥45		
Yes	3.0 (15)	7.0 (28)	14 (43.8)	10 (71.4)	34 (37.4)	0.021*
No	17 (85)	18 (72)	17 (53.1)	4.0 (28.6)	56 (61.5)	
Missing	0.0 (0.0)	0.0 (0.0)	1.0 (3.1)	0.0 (0.0)	1.0 (1.1)	
Total	20 (100)	25 (100)	32 (100)	14 (100)	91 (100)	

Data presented as number (%), *: Significant difference using Chi-square test

Although most committers, from both rural and urban areas were not diagnosed by psychiatric disorder (57.8% and 40.35%, respectively), it is likely that many had undiagnosed mental health conditions, especially in rural areas where mental health services are limitonly 12 patients from urban areas and 21 patients from rural areas documented psychiatric issues. However, no significant difference (p=0.8) was found between committers' residency and psychiatric problems (Table 5).

Table 5. Association between psychiatric problems and residency among suicide committers

Residency	**Psychiatric problem**		**Total**	**p-value**
	No	**Yes**		
Urban	23 (40.35)	12 (35)	35 (38.5)	0.8
Rural	33 (57.8)	21 (62)	54 (59.3)	
Shelter	1.0 (1.7)	1.0 (3.0)	2.0 (2.2)	
Total	57 (100)	34 (100)	91 (100)	

DISCUSSION

This study represented the first forensic- based investigation into suicide patterns in the Sulaymaniyah providence of Kurdistan region of Iraq. Understanding the multifactorial risk factors associated with suicide is crucial for developing effective prevention and intervention strategies. Recognizing and addressing these factors ease the work towards reducing the global burden of suicide and ensuring individuals receive timely access to mental health care services. Individuals may face barriers to disclosing suicidal thoughts, and mental health professionals may not routinely screen for such risks. In light of the rising suicide rates in both Iraq and Kurdistan region and needs attention from health and social services, this study aimed to provide a detailed profile of suicide cases investigated at the Sulaimani Medicolegal Institute to informed public health responses

Regarding sex, in this study, male constituted the majority of committers (58.2%) which aligns with findings from previous research conducted in Erbil, KRI where 60.1% of suicide cases in 2019 involved males (Malkhasian & Amin, 2019). However, these findings contradict a study conducted in Sanandaj, Kurdistan province of Iran, in 2008, which reported a higher distribution of suicidal cases among females (518 among 996 cases) (Mofidi et al., 2015). One possible explanation for sex disparity is sociocultural norm where males are expected to suppress emotional vulnerability and avoid help-seeking behaviours as ideal thoughts. Conversely, females may express distress more openly and share emotional concerns with friends and family, thus potentially receiving social support that alleviating emotional burden and reduces suicide risk (Bachmann, 2016).

Furthermore, a significant association was found between sex and suicide methods ($p \leq 0.05$), while male predominantly used firearms (50.9%) and hanging (37.7%) female more commonly used self-immolation (50%). Females attempt suicide at a higher rate, but they are more likely to use methods that are less immediately lethal. This aligns with regional literature indicating that Kurdish women, especially in rural areas, may use self-burning not only as a suicide method but also as a protest against systematic sex-based oppression (Hanna & Ahmad, 2009; Tsirigotis et al., 2011). The use of lethal methods among men and less immediately fatal methods among women reflects global sexed trends in suicide (Tsirigotis et al., 2011).

The mean age of the committers in this study was 29.7 ± 14.5 years, with the highest percentage within the 26 - 44 age group (35.2%). This age group typically carries significant life responsibilities including family, employment, and financial burdens, making them more prone to emotional distress and mental disorders. These findings are consist with a research from Korean showing heightened suicide risk among young to middle-aged adults (Na et al., 2018).

Psychiatric morbidity was documented in only 37.4% of cases, although it is widely known that mental disorders are a major risk for suicide (Hawton et al., 2013). The discrepancy likely reflects underdiagnosis, stigma, and limited access to psychiatric care. A significant association was found between psychiatric illness and age group ($p \leq 0.05$), consistent with Obuobi-Donkor et al. (2021), who reported that older adults are less likely to be diagnosed with psychiatric disorders than younger groups. Interestingly, no significant difference was found between psychiatric morbidity and residency ($p \geq 0.05$), although access to services in rural areas is often limited (Ahmed & Heun, 2023). A significant number of cases experienced disturbances in their social interactions with family and colleagues, as confirmed by their first-degree relatives, these findings highlight the complexity of suicide as a multifactorial phenomenon, where social problems and interpersonal relationships play a crucial role in precipitating suicidal behaviour.

The majority of committers were single (71.4%), and this trend was particularly pronounced among women. This demographic vulnerability may reflect underlying social factors such as exposure to forced marriage or domestic violence. These findings are consist with the results of a study conducted in Norway by Naess et al. (2021), which identified single, divorced, or widowed status as significant risk factor associated with suicide. From an educational standpoint, secondary school graduates represented a higher proportion than other educational stages (34.1%), which contrasts with the findings of Mofidi et al. (2008) in Iran, where most cases were reported among high school and university students. This discrepancy could relate to differences in educational pressures, employment opportunities and cultural expectations across regions. A notable finding is that regarding occupation, the majority of committers (28.6%) were college students. This may be related to academic pressure, economic problems, cultural stress, staying in a hostile environment, social isolation due to living away from family. Previous studies have identified both low-skilled occupations (Milner et al., 2013) and university student (Lee et al., 2019; Owusu-Ansah et al., 2020) as at risk group, emphasizing the diverse vulnerabilities that must be consider.

Regarding the temporal and environmental patterns this study found that the highest number of suicide occurred during Winter (30.8%), which contrasts with the findings of another study conducted in Greece in 2019 by De la et al., who reported a higher incidence of suicides during Summer (De la Poza et al., 2019). However, it is essential to consider the contextual factors, notably the COVID-19 pandemic in 2020, which led to prolonged periods of quarantine and increased rates of depression and mental distress throughout the winter months (Sher, 2020). Additionally, the majority of suicides occurred in the morning (53.8%), with a significant proportion of cases (69.2%) taking place at home. These findings highlight the need for targeted interventions and increased awareness during specific periods, such as the morning hours, when individuals

may be particularly vulnerable, and most of the family members are not at home to keep watch on the victim and avoid them from the process.

Moreover, more than half of the committers (59.3%) resided outside of Sulaimanyah, indicating a lack of mental health clinics and limited access to quality healthcare in nearby areas surrounding Sulaimanyah city. The leading cause of suicide in this study was firearms (35.2%), followed by hanging (34.1%). Self-immolation accounted for a considerable proportion (25.3%) of the cases, with a significantly higher occurrence among females (82.6%). These findings are consistent with a study conducted in Erbil City, Iraq, in 2019, which also identified firearms as the primary method of suicide (50.4%), followed by hanging (31.5%) [9]. Conversely, a study in Kurdistan in 2009 reported self-immolation as the most prevalent method (50%) (Mofidi et al., 2008). Another study further shed light on this; actually, self-burn was in 50% of female committers. This sex-specific pattern has deep cultural implications in Kurdish society. The use of fire by women as a method of suicide is not only prevalent in Iraq but has also been documented in Iran, Turkey, and Central Asia (Campbell & Guiao, 2004). These culturally contextualized methods reflect the intersection of sex, violence, and limited agency (Campbell & Guiao, 2004).

CONCLUSION

According to the findings of this study the incidence of suicide was more frequent among young adult male committers with no psychiatric problems. self-immolation was the most common method for suicide among women, while firearm is most frequent among male committers. Sex significantly affected the selected method of suicide by the committers, whereas age significantly affected the psychiatric problems, but not the living regions. These findings contribute to a deeper understanding of suicide in the context of Kurdistan, emphasize the need for culturally sensitive, sex-responsive, and context-specific prevention strategies. Stigma, underreporting, and gaps in mental health services continue to obscure the true burden of suicide. Therefore, availability of community-based mental health services early identification of high-risk individuals, and the integration of social support mechanisms are essential. Further qualitative research is also warranted to uncover the sociocultural narratives surrounding suicide in this region and to inform more tailored interventions.

Limitations

Our study has several limitations that should be acknowledged. First, the sample size was relatively small (n=91) and covered only one year (2020), which coincided with the COVID-19 pandemic. This unique context may have introduced atypical stressors and restrictions that limit the generalizability of our findings. Second, although we attempted to collect detailed information through medico-legal reports and family interviews, toxicological data (e.g., alcohol or substance use at the time of death) were not available in our dataset. This omission may have restricted our ability to fully capture the role of substance use as a risk factor for suicide. Third, the inclusion of adolescents (≤18 years old) alongside adults, without a separate subgroup analysis, may obscure important developmental differences. Fourth, information on psychiatric problems was recorded in a general manner (e.g., “psychiatric disorder”) without precise diagnostic categories, limiting the clinical applicability of our results. Finally, the data on “social problems” were based on family interviews but were not systematically categorized into specific domains (such as financial difficulties, family conflicts, or bullying), which reduced the depth of our analysis. Despite these limitations, this study contributes valuable insights into suicide patterns in Sulaymaniyah, a context with limited prior research.

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Data Availability: The data used to support the findings of this study are available upon request from the corresponding authors or can be accessed.

Declarations

Ethics Approval and Consent to Participate ll procedures applied in studies involving human participants were conducted in accordance with the ethical standards of the institutional ethics committee and the 1964 Helsinki Declaration and its subsequent amendments or comparable ethical standards. The study was reviewed and approved by “The Ethics Committee of the College of Medicine” of Sulaymaniyah University meeting (Renewed) no. 6 at 3.06.2024. Participant confidentiality was treated as the highest priority during the data collection process. No identifying information was collected, all data were anonymized, and securely stored in an encrypted database. Participants’ responses were used solely for research purposes and were not shared with third parties.

Informed Consent: All individual participants relatives in the study provided their informed consent.

Conflict of Interes: t The authors declared no conflict of interest in this study.

REFERENCE

1. Abas, N. Q., Jaff, D., & Seidi, P. (2023). Attitudes towards people with mental health illness in the Kurdistan region of Iraq: a quantitative study. Medicine, Conflict and Survival, 39(4), 412-422. https://doi.org/10.1080/13623699.2023.2250665
2. Abbas MJ, Alhemiary N, Razaq EA, Naosh S, Hasan SM, Al-Hadithi A, et al. (2018). The Iraqi national study of suicide: report on suicide data in Iraq in 2015 and 2016. Journal of Affective Disorders, 229, 56-62. https://doi.org/10.1016/j.jad.2017.12.037
3. Ahmed, D. R. (2023). The epidemiology of self-immolation in Iraq: A systematic re-view. International Journal of Social Psychiatry, 69(7), 1551-1559.
4. https://doi.org/10.1177/00207640231168787
5. Ahmed, D. R., & Heun, R. (2023). The prevalence of psychiatric disorders among Yazidi people results from ISIS invasion and consecutive trauma: a systematic re-view. Asian Journal of Psychiatry, 88, 103703. https://doi.org/10.1016/j.ajp.2023.103703
6. Ahmed, D.R., & Heun, R. (2024). A systematic review of the epidemiology of sui-cide in Iraq and Kurdistan region. Journal of Affective Disorders, 351, 790-798.
7. https://doi.org/10.1016/j.jad.2024.02.016
8. Bachmann, S. (2018). Epidemiology of suicide and the psychiatric perspec-tive. International Journal of Environmental Research and Public Health, 15(7), 1425.
9. https://doi.org/10.3390/ijerph15071425
10. Campbell, E., & Guiao, I. (2004). Muslim culture and female self-immolation: implications for global women's health research and practice. Health Care for Women International, 25(9), 782-793. https://doi.org/10.1080/07399330490503159
11. De la Poza, E., Jódar, L., & Douklia, G. (2019). Modeling the spread of suicide in Greece. Complex Systems, 28(4), 475-489. https://doi.org/10.25088/ComplexSystems.28.4.475
12. Hanna, V. N., & Ahmad, A. (2009). Suicide in the Kurdistan region of Iraq, state of the art. Nordic Journal of Psychiatry, 63(4), 280-284. https://doi.org/10.1080/08039480802610016
13. Hassanipour, S., Kazemi, H., Ghayour, A. R., Kazemi-Najafabadi, A., Nikbakht, H. A., & Ghaem, H. (2019). Epidemiological trend of suicide in center of Iran from 2012 to 2016. Clinical Epidemiology and Global Health, 7(4), 559-563. https://doi.org/10.1016/j.cegh.2018.12.009
14. Hawton, K., Comabella, C. C., Haw, C., & Saunders, K. (2013). Risk factors for sui-cide in individuals with depression: a systematic review. Journal of Affective Disor-ders, 147(1-3), 17-28. https://doi.org/10.1016/j.jad.2013.01.004
15. Lee, D., Jung, S., Park, S., Lee, K., Kweon, Y. S., Lee, E. J., et al. (2019). Youth suicide in Korea across the educa-tional stages. Crisis41(3), 187-195. https://doi.org/10.1027/0227-5910/a000624
16. Malkhasian, A. A., & Amin, Y. K. (2019). Pattern of suicide in Kurdistan region/Iraq in the past three years and methods of recognition. The Medical Journal of Tikrit Uni-versity, 25, 64-73. http://doi.org/10.25130/mjotu.25.02.07
17. 964media (2024). Kurdistan Region population accounts for 14.03% of Iraq's total, census results reveal. https://en.964media.com/28173/
18. Milner, A., Spittal, M. J., Pirkis, J., & LaMontagne, A. D. (2013). Suicide by occupa-tion: systematic review and meta-analysis. The British Journal of Psychiatry, 203(6), 409-416.
19. https://doi.org/10.1192/bjp.bp.113.128405
20. Mofidi, N., Ghazinour, M., Salander-Renberg, E., & Richter, J. (2008). Attitudes to-wards suicide among Kurdish people in Iran. Social psychiatry and Psychiatric Epide-Miology, 43, 291-298. https://doi.org/10.1007/s00127-007-0296-7
21. Na, K. S., Oh, K. S., Lim, S. W., Ryu, S. H., Lee, J. Y., Hong, et al. (2018). Association between age and attitudes toward suicide. The European Journal of Psychiatry, 32(1), 44-51.
22. https://doi.org/10.1016/j.ejpsy.2017.08.007
23. Næss, E. O., Mehlum, L., & Qin, P. (2021). Marital status and suicide risk: temporal effect of marital breakdown and contextual difference by socioeconomic status. SSM-population Health, 15, 100853. https://doi.org/10.1016/j.ssmph.2021.100853
24. Obuobi-Donkor, G., Nkire, N., & Agyapong, V. I. (2021). Prevalence of major de-pressive disorder and correlates of thoughts of death, suicidal behaviour, and death by suicide in the geriatric population-A general review of literature. Behavioral Sci-ences, 11(11), 142.
25. https://doi.org/10.3390/bs11110142
26. Owusu-Ansah, F. E., Addae, A. A., Peasah, B. O., Oppong Asante, K., & Osafo, J. (2020). Suicide among university students: prevalence, risks and protective fac-tors. Health Psychology and Behavioral Medicine, 8(1), 220-233.
27. https://doi.org/10.1080/21642850.2020.1766978
28. Raue, P. J., Ghesquiere, A. R., & Bruce, M. L. (2014). Suicide risk in primary care: identification and management in older adults. Current Psychiatry Reports, 16, 1-8.
29. https://doi.org/10.1007/s11920-014-0466-8

30. Seidi, P. A., Abas, N. Q., Jaff, D., Dunstan, R., Soltan, L., Brumwell, A., Wilson, M., Nicholson, T., & Palmquist, A. E. (2022). Assessment of perinatal depression risk among internally displaced Yazidi Women in Iraq: a descriptive cross-sectional study. BMC Pregnancy and Childbirth, 22(1), 359. https://doi.org/10.1186/s12884-022-04658-3
31. Sher, L. (2020). The impact of the COVID-19 pandemic on suicide rates. QJM: An International Journal of Medicine, 113(10), 707-712. https://doi.org/10.1093/qjmed/hcaa202
32. Tsirigotis, K., Gruszczynski, W., & Tsirigotis, M. (2011). Sex differentiation in meth-ods of suicide attempts. Medical Science Monitor: International Medical Journal of Experimental and Clinical Research, 17(8), PH65. https://doi.org/10.12659/MSM.881887
33. World Health Organization (WHO). Preventing suicide: a global imperative. Geneva: World Health Organization; 2014.
34. World Health Organization (WHO) (2023). WHO policy brief on the health aspects of decriminalization of suicide and suicide attempts. World Health Organization.
35. Younis, M.S., & Lafta, R.K. (2023). Suicide and suicidality in Iraq: a systematic re-view. Medicine, Conflict and Survival, 39(1), 48-6 https://doi.org/10.1080/13623699.2023.2170580