





Suicidal Ideation Among Persons With Psychiatric Disorders: A Cross-Sectional Study at Outpatient Clinics in Iraq

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ABSTRACT

Background and Aims: Mental illness is an important risk factor for suicidal ideation. However, little has been known about the burden and associated factors of suicidal ideation among persons with psychiatric disorders in Iraq. We aim to investigate the rate and the associated demographic and clinical factors of suicidal ideation among persons with mental illness in Iraq. **Methods:** Data were collected from 388 persons with mental disorders from psychiatric outpatient clinics in Baghdad in 2023 for this cross-sectional study. The instrument contained socio-demographic and clinical variables, and the *Columbia-Suicide Severity Rating Scale* (C-SSRS). A descriptive analysis was conducted using the Chi-square test to determine the relationships in which a significance level of 0.05 was considered.

Results: Among the 388 respondents, 67% were males, and about half of the patients were younger than 40 years old. Affective (49.8%) and psychotic disorders (17.5%) were the most common mental disorders. The prevalence of suicidal ideation was 37.1% in the last year. The majority of suicidal ideation fell into a low severity range on the C-SSRS, particularly for patients who had no prior history of suicidal behavior. Suicidal ideation was significantly associated with female gender, crowded accommodations experiencing recent psychological trauma, presence of a family history of mental disorder, and family history of suicidal behavior

Conclusions: Suicidal ideation was present in more than one-third of persons with psychiatric disorders. Policy-level implications could be warranted during regular appointments of psychiatric patients to identify risky individuals in outpatient settings.

1 | Introduction

Suicidal ideation is considered a subtype of suicidal behavior that may progress to suicide [1, 2]. The classical notion about suicidal behavior including suicidal ideation can be influenced by social, personal, religious factors, and psychiatric disorders [2, 3]. Suicidal behavior involves a hierarchy of feelings from

the thinking that "life is not worth living" to more drastic ideation and suicide planning, where suicidal ideation precedes other behaviors [3]. According to Lim et al.'s [4] meta-analysis, the aggregate lifetime and 12-month prevalence of suicidal ideation were 18% and 14.2% worldwide, respectively among children and adolescents [4]. It has been found that mental disorders (affective disorders, alcohol & substance abuse, and

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schizophrenia in particular) are major risk factors for suicide attempts and suicides in addition to other social, biological cultural, and environmental influencers [5, 6]. The risk factors of suicidal behavior are considered to be more prevalent among women and young single and unemployed persons even though there is significant cross-national variability [3, 5].

Suicidal ideation could be broken down into two forms: passive and active. Passive suicide ideas imply a desire to die without a specific plan to carry out death. Active suicide idea implies an existing desire to die accompanied by a plan for how to carry out death. Although passive ideation can leave time for interventions, it can suddenly become active. Suicidal ideation, active or passive, contains a dynamic mix of ambivalent thoughts and feelings along a continuum of gravity [7]. One-third (34%) of lifetime suicide ideas evolve into suicide plans and 72% of those with a plan attempt suicide, the other 26% of those attempting suicide had no plan. Most planned and unplanned suicide attempts occur within the first year after the onset of suicidal ideation [8].

Although suicidal ideation is a vital risk factor for suicide it has been poorly researched in Iraq. The Iraq National Study of Suicide examined suicide deaths revealing a crude rate of suicide per 100,000 population was 1.09 in 2015 and 1.31 in 2016 [9]. However, there are no available national or epidemiological studies about suicide ideas apart from a few published studies mostly limited to non-clinical samples. Such scarcity may be attributed to the existing social stigma towards mental disorders in general and suicide in particular [10, 11]. Additionally, suicidal ideas and death wishes are usually overlapped and difficult to differentiate leading to methodological error. Hence careful mental state assessment by psychiatrists is crucial to probe the study target of ideas. The Islamic doctrine prohibits killing or intentionally harming oneself as stated by the Holy Quran and Nobel Hadith [12, 13]. Therefore, such prohibition can curb suicide and suicide attempts at the stage of suicidal ideas and may modify suicidal ideas into death wishes to avoid the guilt feeling of disobeying Allah. Moreover, some authors attributed the low rates of suicide and suicide behavior to this prohibition especially in Arab Muslim countries compared to Western countries [9, 14–16]. Based on the complex nature and interaction among multiple factors, studies are warranted to identify the direction and strength of associations. However, little is known about the rate and associated factors of suicidal ideation in Iraq especially among persons with psychiatric disorders. Therefore, we aimed to determine the rate and associated factors of suicidal ideation among persons with psychiatric disorders emphasizing the early detection.

2 | Methods

2.1 | Data Collection

This prospective cross-sectional study was conducted among patients attending outpatient clinic of the *Ibn-Rushd Psychiatric Hospital* (IRPH) and the *Medical City General Hospital* (MCGH) located in Baghdad. Both hospitals follow the walk-in policy despite being tertiary mental health stations. The IRPH was established in 1968 with 70 beds for the admission of patients

with acute psychiatric disorders, outpatient consultation clinics and psychosocial therapy. The MCGH is a 10-floor general hospital with different medical specialties, including a psychiatric inpatient ward and outpatient consultation clinic. IRPH has about 28,000 and MCGH has more than 12,000 outpatients in a year. We planned to recruit around 400 participants through purposive sampling from both clinics with collaboration of the attending consultant psychiatrists and at the convenience of the patients. Data were collected from June to December 2023 by face-to-face interviews by the second author under training and supervision of the research team. Each patient was interviewed after being diagnosed by the attending consultant psychiatrist according to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* criteria in the adjacent room.

2.2 | Inclusion Criteria

Any patient within the age range of 18–64 years old, fair insight, and provided consent was included for the study.

2.3 | Exclusion Criteria

We excluded non-communicable patients due to severe psychotic or manic symptoms, and cognitive or intellectual impairment from the study.

2.4 | Instrument

The instrument for this study contained questions in two sections. The first section included socio-demographic and clinical characteristics such as; age, gender, marital status, educational status, occupation, income, house condition, and accommodation. The parameters were sub categorized into three or four items according to the agreed upon statistical and social facts together with the participants' subjective views. The description of house conditions were calculated either comfortable less than four individuals in 100 square meters, or crowded for more than four individuals for the same size, while the parameter of accommodation was categorized into three items; living alone, living within a nuclear family where the married participants live with their spouse and children, or single participants living with their parents and siblings only. The extended family was considered where the married participants live with their in-laws family and the single participants live with second degree relatives such as uncles, aunts and grandparents, together with their original family members.

The second is the validated Arabic version of the *Columbia-Suicide Severity Rating Scale* (C-SSRS) screen version designed to measure the severity of suicidal ideation [17]. It was valued on a 5-point scale which, 1 = wish to be dead ("Have you wished you were dead or wished you could go to sleep and not wake up?"), 2 = non-specific active suicidal ideation ("Have you had any ideation of killing yourself?"), 3 = suicidal ideation with methods ("Have you been thinking about how you might do this?"), 4 = suicidal intent ("Have you had these ideation and had some intention of acting on them?"), and 5 = suicidal intent with plan ("Have you started to

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work out or worked out the details of how to kill yourself?") ("Do you intend to carry out this plan?"). Those who answer no to all questions will score Zero risk factor while mild risk is for those who answer yes to Questions 1 and 2, moderate for those who answer yes to Questions 3–6, and high risk for those who answer yes to all questions [18].

2.5 | Data Analysis

We entered the collected data into Microsoft Excel 2016 and then imported it into the Statistical Package for the Social Science (SPSS v26). We conducted a descriptive analysis using the *Chi-square* test to determine the significance of relationships among the variables. Traditionally, we used a significance level of 0.05 to determine statistical significance.

2.6 | Ethical Approval

The study protocol was approved by the Scientific and Ethical Committee of the Iraqi Council of Psychiatry, Ministry of Higher Education and Scientific Research (No.: 763/26/4/2023). Additionally, formal approval was obtained from the two hospital directories. Informed written consent was taken before starting the interview. Participants received a full explanation of the study goal and were assured that their data would be kept anonymous and they could decline to complete the study at any point.

3 | Results

3.1 | Sociodemography

We obtained responses from 388 patients with a response rate of 96%. Among the participants 67% were males, 50.3% were in the age range of 40–64 years, 47.4% were married, 19.6% possessed university degrees, and 55.2% did not have regular jobs (Table 1). 51.5%, 25.3%, and 23.1% of the patients had a low (monthly income of \leq 500,000 (ID), moderate (500,000–1,000,000 ID), and high (\geq 1,000,000 ID) income respectively (1 US dollar = 1306.18 ID) [19]. 35.8% described their houses as "overcrowded", and 57.2% of the population dwell in extended family units (Table 1).

3.2 | Clinical Variables

Among the patients, 49.8% had affective disorders, 17.5% had psychotic illnesses, 11% had alcohol and substance misuse issues, 10.5% had personality disorders, 7.2% had anxiety disorders, and 3.8% had psychiatric co-morbidities (Table 2). In addition, 21.9% of the patients were diagnosed with chronic medical conditions, 6.4% had a familial background of a suicidal behavior, and 34.3% of the patients had a positive family history of mental illnesses.

3.3 | Rate and Factors of Suicidal Ideation

A total of 37.1% of the participants had (active and passive) suicidal ideation within the last year, and 32.9% were exposed to

TABLE 1 | Socio-demographic characteristics of the respondents (n = 388).

Demographic			
characteristics	Category	n	%
Age (years)	18-39	193	49.7
	40-64	195	50.3
Gender	Male	260	67.0
	Female	128	33.0
Marital status	Single	137	35.3
	Married	184	47.4
	Divorced	10	2.6
	Widows	57	14.7
Education	Primary	189	48.7
	Secondary	123	31.7
	University	76	19.6
Occupation	Employed	174	44.8
	Unemployed	214	55.2
Income	Low	200	51.5
	Moderate	98	25.3
	High	90	23.1
House condition	Comfortable	249	64.2
	Crowded	139	35.8
Accommodation	Lives alone	19	4.9
	Nuclear family	147	37.9
	Extended family	222	57.2
Total		388	100

psychological trauma within the last 6 months (Table 2). Female patients (45.3% vs. 33.1%; p = 0.019), patients living in nuclear families (p = 0.023) and crowded houses (p = 0.003) have significantly higher rates of suicidal ideation (Table 3). Suicidal ideation was higher among patients who experienced psychological trauma (p = 0.019), a family history of suicidal behavior (p = 0.004), a family history of mental disorders (p < 0.001), and the presence of chronic medical illness (p = 0.003) (Table 4). 53% of the subjects exhibited low-intensity suicide ideas (scored zero) whereas 17% scored 1, 16% scored 2, and 14% scored 3 (Figure 1). A total of 86% of the patients with a positive history of suicidal behavior recorded a severity score of 3, while 62% of patients with no history of suicidal behavior scored zero. Patients with a history of positive suicidal behavior who scored 0, 1, and 2 represented 2%, 5%, and 7%, respectively (Figure 2).

4 | Discussion

4.1 | Major Findings of the Study

The demographic profile reflects the cultural context where young married men with low or moderate education, living within small or extended families prevailed over others

TABLE 2 | Clinical variables of the respondents (n = 388).

	, ,	
Clinical variables	n	%
Suicidal ideas within the last 12 months		
Yes	144	37.1
No	244	62.8
Psychological trauma within the last 6 months		
Yes	128	32.9
No	260	67.0
Mental disorders		
Anxiety disorders	28	7.2
Alcohol & substance abuse	43	11
Personality disorders	41	10.5
Psychotic disorders	68	17.5
Affective disorders	193	49.8
Co-morbidity of psychiatric disorders	15	3.8
Chronic medical disorders		
Yes	85	21.9
No	303	78.1
Family history of suicidal behavior		
Yes	25	6.4
No	363	93.5
Family history of mental disorder		
Yes	133	34.3
No	255	65.7
Total	388	100

resembling the demographic profiles of patients who attended the same hospitals noted in previous studies [19-21]. Female gender was associated with suicide ideations in consistency with international reports and previous local studies, which may be explained by the higher incidence of depression and anxiety affecting females in addition to the social and cultural stressful conditions such as domestic violence and gender disparities [5, 9, 22-24]. Another significant demographic variable was the adverse living conditions, like poor, crowded housing, which can lead to increased psychiatric morbidities, particularly depression and associated suicidal ideations [15, 16]. Affective and psychotic disorders were the major mental health morbidities which can be explained by the fact that patients with severe mental disorders tend to seek psychiatric consultations from reputable psychiatric clinics in Baghdad like IRPH and MCGH [20, 21]. The ratio of alcohol and substance abuse, 11% is higher than what was reported by the Iraq Mental Health Survey during 2006-7 [22] and in some previous studies ushering a mounting number of such problems [20, 21, 23]. In the current study, more than one-third (37.1%) of the patients had suicidal ideation which is similar to a previous study revealing a rate of 35.8% among a non-clinical sample of thousand women [24] and lower than a study with a rate 64.4% among patients with the major depressive disorder [25]. The prevalence skewed

prone to depression and anxiety in addition to the biological effect of hormonal disturbances increasing their vulnerability, and they can remain undetected [26]. Mental, and medical disorders and a family history of suicidal behavior and mental disorders were significantly associated with suicidal ideation in agreement with much literature keeping in mind that both mental disorders and a positive history of suicidal behavior act as a strong parameter for the development of suicidal ideation particularly in affective disorders: major depression and bipolar disorders [16, 27-29]. The presence of psychological trauma together with affective disorders results in a mixture of risks for future suicide acting as perpetuating factors. Low education level, unemployment, low income, and poor accommodation quality i.e.; crowded houses may act as an indirect risk to poor psychological health leading to or exacerbating suicidal ideation revealed by the highest score on the severity level [5, 16, 30]. A positive family history of suicide played a significant role in developing suicidal ideation and scored high on severity levels keeping in mind the biological risk factors as sharing genetic makeup for mental disorders and suicidal behavior. Furthermore, being exposed to psychological trauma such as the loss of a loved one, internal displacement, and acts of violence leads to active and severe suicidal ideation and comes in agreement with several previous studies [8, 15, 31, 32]. Our finding referred to the protective effect of social support manifested by the very low rate of solitary living style, reflecting stronger family bonds and social lifestyles than individuals, which is the cultural and religious characteristics of Arab Muslim communities, including Iraq [3, 14]. Social and family support is not the only mitigating factor for psychological distress, it encourages professional help-seeking for mental disorders and suicidality as ushered by many authors [29-31]. Although 14% of the participants harbor suicidal idea of the highest severity level assessed by the C-SSRS, more than half of the participants' suicidal ideas are at the lowest severity scores keeping them within a safety threshold. When inquired about their suicidal intents, most participants attributed their refrains from suicide conduct to the religious inhibition describing such acts as "Haram": an Islamic taboo, they would "do it" otherwise. The Islamic faith prevents individuals from permitting themselves to decide between life and death considering the act of suicide as a grave transgression. Moreover, it promotes ethical behavior that helps them effectively navigate challenging life situations and encourages resilience, many studies confirmed the protective role of Islamic beliefs [9, 13, 14, 16]. In the same context, the most severe suicide ideations were accommodated by patients who had a history of suicidal behavior or a family history of suicide signifying the complex interactions of genetics, family milieu, and the perseveration of active suicidal ideation manifested by previous suicidal behavior: attempts, self-harm for which they can be considered as patients at a heightened risk of suicide warranted careful treatment and follow up together with urgent intervention strategy. In addition to this, traumatic childhood, stressful life events, impulsivity, and feelings of hopelessness are frequently encountered among psychiatric patients experiencing suicidal ideation keeping in mind the sizable ratio of psychological traumas among the participants which is not surprising finding in Iraq being exposed to wars, conflicts, and violence during the last decades affecting mental well-being of the affected populace [16, 24, 30]. The dual action of suicidal

more toward females, believed to be related to being more

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TABLE 3 | The association of suicidal ideation with demographic variables (n = 388).

Demographic variables	Yes to suicidal ideation		No to suici		
	n	% ^a	n	%ª	p value
Age (years)					
18-39	72	37.3	121	62.7	0.939
39-64	72	36.9	123	63.1	
Gender					
Male	86	33.1	174	66.9	0.019
Female	58	45.3	70	54.7	
Education					
Primary	70	37.0	119	63.0	0.792
Secondary	48	39.0	75	61.0	
University	26	34.2	50	65.8	
Marital status					
Single	44	32.1	93	67.9	0.065
Married	68	37.0	116	63.0	
Divorced	7	70.0	3	30.0	
Widow	25	43.9	32	56.1	
Occupation					
Employed	14	8.0	160	92.0	0.073
Unemployed	42	19.6	172	80.4	
Income					
Low	110	37.9	180	62.1	0.566
Average	26	18.2	36	52.3	
High	21	16.1	28	35.3	
House condition					
Comfortable	79	31.7	170	68.3	0.003
Crowded	65	46.8	74	53.2	
Accommodation					
Live alone	104	34.3	199	65.7	0.023
Nuclear family	6	75.0	2	25.0	
Extended family	34	44.2	43	55.8	

^aBased on row total.

ideation and prior suicide attempts were indicators of initial and later unplanned suicide attempts, hence focusing on the domains (biological, psychological, or social) is a substantial step in assessing suicide proneness [31, 32]. It is important to encourage epidemiological large-scale studies and robust reporting of suicidal ideas and behaviors among different population sectors especially in Arab and Muslim-majority countries including Iraq to mend the data gap and provide a structural base for engineering effective preventive measures.

4.2 | Implications of the Study Results

Suicidal ideation is linked to various mental disorders. However, they may go unnoticed during mental health evaluations if the emotional symptoms are not clearly expressed. Therefore, it is important for mental health professionals to actively inquire about suicidal intentions, regardless of the specific diagnosis. Patients with a history of suicidal behavior and other risk factors should be closely monitored, as they are at higher risk of engaging in self-harming behaviors. Research examining the extent and factors associated with suicidal ideation in Islamic societies is deserving of acknowledgment and has important implications for mental healthcare policy and the development of effective prevention measures. Furthermore, our findings suggest that there is a need for future studies to investigate the underlying risk factors for suicidal ideation, as they can have serious consequences resulting in suicide. Vulnerable groups like women under social stressors and people affected by major psychological traumas should be monitored and advised to seek psychiatric consultations, which are available freely at state hospitals in Iraq.

TABLE 4 | The association of suicidal ideation with clinical variables.

Clinical variables	Suicidal ideation				
	Yes		No		
	n	%ª	n	%ª	p value
Mental disorders					
Affective disorders	78	40.4	115	79.8	0.07
Psychotic disorders	63	32.6	130	67.4	
Anxiety disorders	8	28.6	20	71.4	
Alcohol & Substance abuse	24	18.2	23	34.2	
Personality disorders	24	17.9	32	41.1	
Psychological trauma within the last 6 months					
Yes	70	44.0	89	56.0	0.019
No	74	32.3	155	67.7	
Medical illness					
Yes	20	23.5	65	76.5	0.003
No	124	40.9	179	59.1	
Family history of suicidal behavior					
Yes	16	64	9	36	0.004
No	128	35.3	235	64.7	
Family history of mental illness					
Yes	11	8.3	122	91.7	0.001
No	133	52.2	122	47.8	

^aBased on row total.

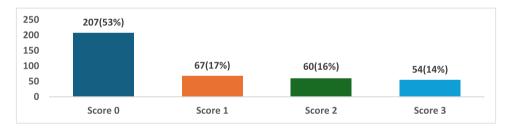


FIGURE 1 | Severity levels of suicidal ideation measured by the C-SSRS.

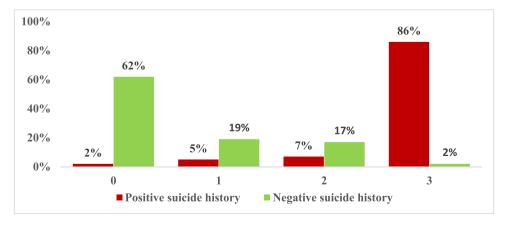


FIGURE 2 | The severity of suicidal idea according to a history of suicidal behavior is measured by the C-SSRS.

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4.3 | Limitations of the Study

To the best of our knowledge, this study is the first from Iraq that focuses on the rate of suicidal ideation and measures their severity in a clinical sample from a psychiatric outpatient center. This study was constrained by several factors. Firstly, due to the study design, we are unable to establish a cause-effect association for this study. Secondly, we only assessed suicidal ideation excluding the other forms of suicidal behaviors like suicide plans, attempts, and suicides. Thirdly, samples were chosen purposively which may restrict the generalization of the study results. Fourthly, interviews were conducted in an outdoor crowded setting where patients may be less comfortable in disclosing suicidal ideation. Non-intentional methodological biases are not uncommon in cross-sectional studies, especially in our poorly facilitated study settings, which can affect the credibility of findings; however, we tried our best to restrict the biases to a minimum.

5 | Conclusions

To the best of our knowledge, this is the first study that assesses the magnitude of suicidal ideation among Iraqi patients with mental disorders. However, future large-scale studies are warranted to identify the burden more precisely. The study revealed that more than one-third of the persons with psychiatric disorders had suicidal ideation. Among the demographic factors, insufficient educational attainment, joblessness, inadequate income, and substandard housing conditions might indirectly contribute to or worsen the risk of poor mental well-being leading to suicidal ideation. The severity of suicidal ideation was at low levels in most of the cases while a high degree of severity was connected to a familial history of suicidal behavior. Regular screening for suicidal ideation during psychiatric consultations in outpatient settings could be a potential strategy for identifying risky individuals. Policy-level implications could be warranted during regular appointments of psychiatric patients to identify risky individuals in outpatient settings.

Author Contributions

Maha Sulaiman Younis: conceptualization, methodology, supervision, writing – original draft, writing – review and editing. Marwa Mohamed Kamal: data curation, formal analysis, writing – original draft, writing – review and editing. S. M. Yasir Arafat: writing – original draft, writing – review and editing. All authors: read and approved the final version of the manuscript.

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The authors have nothing to report.

Conflicts of Interest

Arafat, S.M. Yasir is an Editorial Board member of Health Science Reports and a co-author of this article. To minimize bias, they were excluded from all editorial decision-making related to the acceptance of this article for publication.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request. The corresponding author had full access to all of the data in this study and takes complete

responsibility for the integrity of the data and the accuracy of the data analysis.

Transparency Statement

The lead author Maha Sulaiman Younis affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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