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An investigation of the Severity levels of Loneliness suicidal ideation among Patients with Major Depressive Disorder in Sulaimani City/Iraq Kurdistan

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Abstract

Background: Major depressive disorder has become one of the most common mental disorders worldwide. Loneliness considers significant psychological distress associated with depression and suicidality. It is important to be detected and interviewed for patient safety. **Aim:** This study aims to find the prevalence rates the severity levels of loneliness and to identify risk factors among community-based patients with major depressive disorder. **Methods:** A total of 250 patients with major depressive disorder were recruited from a psychiatric clinic in Ali Kamal Consolation Centre in Sulaimani city included in this cross-sectional study. The data were collected from September 2020 to March 2021 through the utilization of interviews guided by the items of the questionnaire. The ULLA loneliness scale, Beck suicide ideation inventory, Beck depression inventory, sociodemographic, and psychiatric history characteristics were included in the questionnaire. The SPSS version 25 was used for data analysis. **Results:** All the studied patients with major depressive disorder mean age ± SD was 38.7 ± 12.4 years, 60% of females had a feeling of loneliness. The most significant proportion of the patients had (62.8%) a frequent level of loneliness, with 43.2% mild form of depression and 64.4% had a moderate level of suicidal ideation. It is evident in this study that more than half (51.5%) of patients with suicidal attempts had a feeling of loneliness, which was significantly higher than the rate (27.8%) among those with no history of suicidal attempt ($p < 0.0.1$). **Conclusion:** Suicidal Patients with major depressive disorder had experience feelings of loneliness at a frequent level. The severe level of loneliness was a predictor of the severity level of depression and suicidal ideation. **Recommendation:** Regular evaluation of loneliness and depression can help to detect patients at risk of suicidal behavior and encourage greater social engagement in daily life activities for patients with depression.

Introduction

Major depressive disorder has become one of the most common mental disorders worldwide ***[1]*** with high incidence two and provenance rates ranged from 2 to 21% throughout a lifetime ***[3]***. The severity level of depression increasing with a high level of stressors ***[4]***. The lack of intimate, confiding relationships with significant others and social loss is stressful life events, most likely influence the development and recurrence

of depression through the psychological and ultimately biological experience of stress. Unsuccessful adaptation stress may result in social isolation and, consequently, loneliness ***[5]***. A further point, loneliness and depression were distinct, though correlated, neither was the cause of the other, both were stable, they shared some common casual origins ***[5]***.

Moreover, loneliness considers a significant source of psychological distress and has been associated with many adverse mental health outcomes, suicidality, low life satisfaction, and low self-esteem in depression ***[7,8,9,10]*** However; loneliness poses one of the most critical determinants of depressive symptoms; it is related to the interpersonal skill deficits in depression ***[11]***. The feeling of loneliness is a negative state, and unpleasant feelings result when people do not have the quality of social relationships to satisfy a human need in their life ***[12]***. It also has been understood as a painful underseal phenomenon that has an evolutionary basis ***[13]*** that occurs when there is an emotional discrepancy between the desired and actual relationship and the social isolation increases the feeling of loneliness ***[14,15]***.

Moreover, loneliness leads to fear, anxiety, depressive thinking and increases the tendency of negative thinking, decreases self-confidence and on others, such as a negative state can, in turn, lead to depression, it is also called a hidden killer, especially for elderly people ***[16]*** Therefore, it is important to intervene at the right time to prevent loneliness so that mental health will be protected. There are little empirical data on the epidemiology of loneliness. However, the prevalence of loneliness experienced form 10-15% in the general population a cross-age in United Kingdom ***[17]***. It is quite a common phenomenon for all age groups ***[18]***. In aging, data indicate that the overall prevalence of loneliness among the oldest people in Bangladesh is 54.3%, of which 41% felt sometimes, and 13.7% had a feeling of always loneliness ***[19]***. Others reported that loneliness among the general population was 11.5-43% in developed countries ***[16]***.

The feeling of loneliness is highly prevalent in people with mental disorders than in the general population ***[20]***. Studies indicate that loneliness predicts increased morbidity and mortality and increases the severity level of depression symptoms ***[21,22,23,24]***. Other studies found that more than 50% of people with depression are feeling lonely all or most of the time. Furthermore, loneliness is associated with suicidal ideation and self-harm ***[25,26,13,27]***.

Although loneliness is a distressing problem for many patients with major depressive disorder, relatively little research on feeling loneliness has been conducted, and the best authors knowledge on the previous study have been studied loneliness among community- patients with major depressive disorder in psychiatric mental health nursing in Sulaimaniyah city /Iraq, Kurdistan. Thus, identifying the prevalence rates of severity levels of loneliness and suicidal ideation in patients with the major depressive disorder will be evidence for mental health nursing professionals to plan and implement interventions. Therefore, this study aimed to determine the prevalence rates of severity levels of loneliness and identify the suicidal ideation in community-based patients with major depressive disorder in Sulaimaniyah City, Kurdistan Region, Iraq.

Materials and methods

A. Study design and Setting

A quantitative, cross-sectional study was carried out in a psychiatric clinic at Ali Kamal consultation center, a general teaching hospital in Sulaimaniyah City, Iraq, Kurdistan. The psychiatric clinic is the only governmental daily-based outpatient clinic in Sulaimaniyah City, which provides mental health treatment services to all outpatients with different types of mental illness. The period of data collection started from September 2020 till March 2021.

B. Sample size estimation

The Epi info7 computer program created by the center for disease control (CDC) was used for estimating the sample size. The information was entered the program was a 2400 sample size population which is equal to the number of the patients with depressive disorder attending the psychiatric clinic in a year, and the expected prevalence was set at 21.8%. The absolute precision was set at 5%, and the confidence interval was set at 95%. Accordingly, the estimated size was 236 patients. However, the sample size increased to 250 patients to improve the generalization and the power of the study.

C. The Study Sample

Two hundred fifty outpatients with major depressive disorder were included in this study. The sample was recruited from consecutive patients attending the psychiatric clinic.

D. Inclusion and exclusion criteria

Outpatients being previously diagnosed with major depressive disorder by Consultant psychiatric, males and females, ages 18 years old and above, on the regular treatment prescribed by a psychiatrist working in the clinic. Patients with psychotic episodes and with a medical condition, also pregnant mothers and non on a postpartum period in the current assessment of this study were excluded.

E. The study tool

A questionnaire was developed as an instrumental tool for data collection and composed of five parts. The first part is related to sociodemographic characteristics; the second part is related to psychiatric history. The third part includes the UCLA loneliness scale. It consists of 20 questions that measure how the individual feels disconnected from others. Each question is rated on a 4-point Likert scale (never=1, rarely=2, sometimes=3, always=4) some questions (No., 1,5,6,9,10,15,16,19,20) rated on the reversed score to indicate a state of loneliness. The responses to the sum score ranging from 20 to 80 and a higher score indicate a greater degree of loneliness. The scoring interpretations were average (20-40), frequent (41-60), always (61-80). The fourth part includes Beck's suicidal ideation scale. It consists of 19 items, and each item is rated on a 3-point Likert scale (0-2). The total scale score ranged from 0-38. The severity of ideations rates on three categories, mild (0-12) indicates nonspecific active thoughts presents, moderate (13-25) presence of active suicidal ideation without an intentional plan with any method, severe (26-38) presence of active ideation plan 10. The fifth part studied measured severity levels of depression by using Beck's depression inventory. This inventory consists of 21 multiple choice statements that evaluate key symptoms of depression with a 4-point rating scale; items receive a rating of zero to three to reflect the intensity and are summed linearly to create a score, which ranges from 0-63. The guidelines score for intensity includes minimal depression (0-9), mild (0-18), moderate (19-29), severe (30-63).

The questionnaire was translated to the Kurdish language through the forward-backward method. The validity and reliability of the questionnaire were determined through the computation of the intraclass correlation coefficient ($p > 0.001$). The data was collected through the face-to-face interview method conducted by the researcher with each participant to answer the questionnaire. Action for the protection of COVID-19 was taken into consideration for prevention measures.

F. Statistical analysis

The data were analyzed using SPSS version 25 software. The descriptive statistics include frequencies, percentages, mean, and FSD. The inferential statistics include chi-square (2X) Test, fishers exact-test, and binary logistic regression were used to analyze the data. A P-value of 0.05 was used as the cut-off for statistical significance and 0.001 for high statistical significance.

G. Ethical consideration

This study was permitted by the Sulaimani general Health Directorate and Ethical committee at the College of Medicine at the University of Sulaimani.

Results

Table 1 presents all the studied samples who had a feeling of loneliness. The table shows that more than one-third (37.2%) had a severe sense of loneliness and (62.8%) had a frequent level of loneliness according to the UCLA loneliness scale.

Table 1. Distribution of sample by the severity of loneliness.

Severity Level	**Feeling of loneliness**			
	Frequency	**Percent**	**Valid Percent**	**Cumulative percent**
Average 20-40	0	0	0	0
Frequent 41-60	157	62.8	62.8	62.8
Severe (always) 61-80	93	37.2	37.8	
Total	250	100.0	100.0	

Table 2 shows no significant association between feeling of loneliness with the following socio-demographic factors: age ($p = 0.879$), gender ($p = 0.957$), marital status ($p = 0.179$), educational level ($p = 0.942$), occupation ($p = 0.772$), income ($p = 0.876$), residency ($p = 0.827$), type of family ($p = 0.805$), and living status ($p = 0.339$).

It is evident in Table 3 that there was no significant association between the severity of loneliness with the duration of current illness ($p = 0.429$), and type of treatment ($p = 0.845$). Regarding the treatment results, the rate of severe loneliness was 63.2% among patients who didn't get benefit from treatment, compared with 32.2% and 38.2% among those who befitted a lot and those who somewhat got benefit respectively ($p = 0.033$). More than half (51.5%) of those with suicidal attempts had a feeling of loneliness, which was significantly higher than the rate (27.8%) among those with no history of suicidal attempts ($p < 0.001$). No significant association was detected with the other factors like alcohol consumption ($p = 0.261$), substance abuse ($p = 0.509$), and smoking ($p = 0.933$).

Table 2. The severity of loneliness by the socio-demographic factors.

	Russell Loneliness scale						
	Frequent		**Severity**		**Total**		
	No.	**(%)**	**No.**	**(%)**	**No.**	**(%)**	**p**
Age							
< 30	46	(64.8)	25	(35.2)	71	(100.0)	
30-39	40	(58.8)	28	(41.2)	68	(100.0)	
40-49	36	(63.2)	21	(36.8)	57	(100.0)	
≥ 50	35	(64.8)	19	(35.2)	54	(100.0)	0.879
Gender							
Male	63	(63.0)	37	(37.0)	100	(100.0)	
Female	94	(62.7)	56	(37.3)	150	(100.0)	0.957
Marital status							
Single	38	(64.4)	21	(35.6)	59	(100.0)	
Married	64	(67.4)	31	(32.6)	95	(100.0)	
Divorced	17	(51.5)	16	(48.5)	33	(100.0)	
Widowed	22	(52.4)	20	(47.6)	42	(100.0)	
Separated	16	(76.2)	5	(23.8)	21	(100.0)	0.179
Educational level							
Illiterate	23	(63.9)	13	(36.1)	36	(100.0)	
Read and write	15	(68.2)	7	(31.8)	22	(100.0)	
Primary	16	(57.1)	12	(42.9)	28	(100.0)	
Secondary	70	(63.6)	40	(36.4)	110	(100.0)	
Institute and college	33	(61.1)	21	(38.9)	54	(100.0)	0.942
Occupation							
Governmental employee	19	(59.4)	13	(40.6)	32	(100.0)	
Private employee	17	(63.0)	10	(37.0)	27	(100.0)	
Self-employed	26	(56.5)	20	(43.5)	46	(100.0)	
Unemployed	73	(64.0)	41	(36.0)	114	(100.0)	
Retired	11	(64.7)	6	(35.3)	17	(100.0)	
Out of work	11	(78.6)	3	(21.4)	14	(100.0)	0.772
Income							
Sufficient	32	(60.4)	21	(39.6)	53	(100.0)	
Barely sufficient	93	(62.8)	55	(37.2)	148	(100.0)	
Insufficient	32	(65.3)	17	(34.7)	49	(100.0)	0.876
Residency							
Urban	89	(61.4)	56	(38.6)	145	(100.0)	
Siub-urban	46	(65.7)	24	(34.3)	70	(100.0)	
Rural	22	(62.9)	13	(37.1)	35	(100.0)	0.827
Type of family							
Nuclear	135	(62.5)	81	(37.5)	216	(100.0)	
Extended	22	(64.7)	12	(35.3)	34	(100.0)	0.805
Living status							
Alone	11	(78.6)	3	(21.4)	14	(100.0)	
Family	134	(63.2)	78	(36.8)	212	(100.0)	
Relative	11	(50.0)	11	(50.0)	22	(100.0)	
Friends	1	(50.0)	1	(50.0)	2	(100.0)	0.339*
Total	157	(62.8)	93	(37.2)	250	(100.0)	

*Fisher's exact test

Table 3. Severity of loneliness by psychiatric history.

	Russell loneliness scale						
	Frequent		Severity		Total		
	No.	(%)	No.	(%)	No.	(%)	p
Duration of current illness							
<10	151	(63.7)	86	(36.3)	237	(100.0)	
10-20	1	(50.0)	1	(50.0)	2	(100.0)	
>20	5	(45.5)	6	(54.5)	11	(100.0)	0.429*
Type of treatment							
Drugs	110	(61.1)	70	(38.9)	180	(100.0)	
Drugs + ECT + psychotherapy	5	(83.3)	1	(16.7)	6	(100.0)	
Drugs+psychotherapy	20	(64.5)	11	(35.5)	31	(100.0)	
Drugs + ECT	21	(65.6)	11	(34.4)	32	(100.0)	
ECT + psychotherapy	1	(100.0)	0	(0.0)	1	(100.0)	0.845*
Treatment results							
Benefited a lot	82	(67.8)	39	(32.2)	121	(100.0)	
Benefited somewhat	68	(61.8)	42	(38.2)	110	(100.0)	
Never benefited	7	(36.8)	12	(63.2)	19	(100.0)	0.033
Suicidal attempt							
Yes	48	(48.5)	51	(51.5)	99	(100.0)	
No	109	(72.2)	42	(27.8)	151	(100.0)	<0.001
Alcohol consumption							
Yes	42	(68.9)	19	(31.1)	61	(100.0)	
No	115	(60.8)	74	(39.2)	189	(100.0)	0.261
Substance abuse							
Yes	10	(55.6)	8	(44.4)	18	(100.0)	
No	147	(63.4)	85	(36.6)	232	(100.0)	0.509
Smoking							
Yes	65	(63.1)	38	(36.9)	103	(100.0)	
No	92	(62.6)	55	(37.4)	147	(100.0)	0.933
Total	157	(62.8)	93	(37.2)	250	(100.0)	

*Fisher's exact test

Around two-thirds of patients with a severe feeling of loneliness had either moderate depression (25.8%) or extreme depression (41.9%) compared with 22.3% and 4.5% respectively among patients with a frequent feeling of loneliness ($p < 0.001$) (Table 4).

Table 4. Feeling loneliness by the severity of depression.

	Russell loneliness scale						
	Frequent		Severe		Total		
Depression	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**	**p**
Minimum	29	(18.5)	8	(8.6)	37	(100.0)	
Mild	86	(54.8)	22	(23.7)	108	(100.0)	
Moderate	35	(22.3)	24	(25.8)	59	(100.0)	
Extreme	7	(4.5)	39	(41.9)	46	(100.0)	< 0.001
Total	157	(100.0)	93	(100.0)	250	(100.0)	

Regarding suicidal ideation, around one quarter 24%had severe suicidal ideation levels, and the most significant proportion of patients, 64.4%, had moderate suicidal ideation (Table 5).

Table 5. Distribution of the sample by severity level of suicidal ideation.

Level	Depression			Cumulative percent
	Frequency	Percentage	Valid Percentage	
Mild	29	11.6	11.6	11.6
Moderate	161	64.4	64.4	76.
Severe	60	24.0	24.0	100.0
Total	250	100.0	100.0	

Table 6 shows that severe loneliness is a significant independent predictor of suicidal ideation OR=10.994,95% CI: lower =41.80, upper =26.651) among patients with major depressive disorder ($p > 0.001$).

Table 6. Binary logistic Regression analysis between suicidal ideation and feeling of loneliness.

Covariates	B	P	OR	Lower	Upper
Feeling of loneliness Severe Frequent	2.393	< 0.001	10.994	4.180	28.651

95% C.I. for OR

Discussion

The result of this study shows that the studied patients experience the feeling of loneliness. The prevalence rate was determined as two-third of them experience loneliness at the frequent level, and one-third experience severe levels of loneliness; also, more than half of them feeling isolated from others, and they feel alone most of the time as measured by the UCLA loneliness scale ***[28]***. These results are similar to the finding of ***[29]***, and ten found that loneliness was prevalent among people with depression. Moreover, our impact goes with the discovery of 26, 13, and 27 reported that more than 50%of people with depression are feeling lonely (Subjective loneliness) all on most of the time in the current study the result showing a high rate of the severity level of loneliness (41.9%) significantly associated with an extreme level of depression. In comparison, those patients with a frequent level of loneliness had experienced a mild level in remission of depression (54.8%). This finding indicates that loneliness may be one of the most important determinants to the severity level of depression. It may be attributed to depression-related mechanisms which produce interpersonal problems ***[30,31]***. In addition, the negative appraisal and perceived social failure may form the basis for developing depressive symptoms, which lead to impairment in social relationships and hence feeling of loneliness ***[32]***. Indeed, a high feeling of loneliness may be somewhat associated with stressors during lockdown and community closure due to limited social engagement during the COVID-19 pandemic ***[33]***.

In this study, results showing that almost all sociodemographic characteristics are non-significantly associated with the level of loneliness. This result goes with the finding of previous studies, which suggest that no age-related differences in the relationship between loneliness and depression ***[34,29]***. However, contrary to the result of this study, 35 found that feeling of loneliness was more prevalent for women than men. Also, 36 and 37 found that unemployed and unmarried had a more overall rate of loneliness than other subgroups of related factors. The results of the current study suggest that may be another differentiating factor that may endow vulnerability to the feeling of loneliness ***[29]***. Severe level of loneliness is found to be most common among participants with a history of suicide attempts ($p < 0.001$) and, also a severe feeling of loneliness is a significant independent predictor for suicidal ideation as a result of the binary regression analysis in this study, the result was in agreement. Previous studies of ***[25, 39, 10]*** found that the prevalence of suicide ideation and parasuicide increased with the degree of loneliness. Furthermore, they noted a strong association among suicide ideation,

parasuicide with the different ways of being lonely and alone, defined either subjectively (feeling of loneliness) or objective (living alone or being without friends) were observed.

Conclusion and recommendation

The result of the study showed that patients with significant depressive disorder experience feeling loneliness infrequent or severe levels. The intense level of feeling loneliness predicts greater depression severity and lower rates in remission. Also, patients with suicidal attempts had a higher rate of an extreme feeling of loneliness than those with no history of suicidal attempts. In addition, intense feeling of loneliness is a dependent predictor for the severity level of suicidal ideation in community-based patients with major depressive disorder. In the researcher point of view that negative interpersonal consequences of depression suggest the importance of early identification and treatment, as they may be long term social consequences reflecting the feeling of loneliness, thus increase pleasurable and social skills activities, may be helped alleviate depression and lower amount of loneliness and suicidal ideation among such patients.

Regular evaluation of loneliness and depression can help detect the patients at risk of suicide ideation on an attempt and encourage greater social engagement in daily life as a protective intervention against a feeling of loneliness among patients with major depressive disorder.

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