Assessment of socio-demographic and psychiatric history characteristics among the outpatient with major depressive disorder in Sulaimani city

تقييم خصائص التاريخ الاجتماعي والديموغرافي والنفسي بين مرضى العيادات الخارجية المصابين باضطراب اكتئابي كبير في مدينة السليمانية

Dr. Taha Ahmed Faraj

الخلاصة:

خلفية البحث: يصنف الاضطراب الاكتنابي الرئيس (MDD) في المرتبة الرابعة بين الأسباب الرئيسة للإعاقة في جميع أنحاء العالم، وهو أحد أكثر حالات الصحة العقلية شيوعاً، فهو يؤثر على الحالة المزاجية والسلوك بالإضافة إلى الحالة الجسدية، ويؤدي إلى إشاعة السلوك الانتحاري. أشارت الدراسات الوبائية إلى أن الاضطراب الاكتئابي الرئيس له العديد من العوامل الفردية والعائلية والاجتماعية المرتبطة بانتشاره، وقد تم تحديد العوامل الديموغرافية الاجتماعية باستمرار كعوامل مهمة في تفسير التباين في الانتشار.

الاهداف: هدفّت الدراسة إلى تقييم عواملٌ خطّر الانتشار لّخصائص التاريخُ الاجتماعي والديموغرافي والنفسي المرتبطة بالاضطراب الاكتئابي الرئيس بين مرضى العيادات الخارجية في مدينة السليمانية.

المنهجية: شملت الدراسة 329 مريضاً خارجياً مع تشخيص مسبق باضطراب اكتئابي كبير، ممن يراجعون عيادة الطب النفسي في مركز علي كمال الاستشاري في مدينة السليمانية عن طريق أخذ العينات الملائمة. تم استخدام استبيان أعده الباحث لتقييم خصائص التاريخ الاجتماعي والديموغرافي والنفسي. تم جمع البيانات من خلال طريقة المقابلة وجهاً لوجه مع تطبيق الاعتبارات الأخلاقية والتدابير الوقائية لمرض كوفيد-19. يتم إعداد هذه الدراسة من تشرين الأول/ 2021 حتى كانون الأول 2021. وتم استخدام معامل الـ spss نسخة 25 لتحليل البيانات.

النتائج: بينت النتائج ان غالبية مرضى العيادات الخارجية المصابين بالاضطرابات الذهنية كانوا من الإناث (190، 58٪) متزوجين، ولديهم مستوى تعليمي منخفض، ووضع اقتصادي غير كاف، نسبة كبيرة من الإناث (160، 64%) كانت لديهم مدة المرض 1- 4 سنوات مقارنة بـ 36٪ (72) للذكور، بالإضافة إلى أن دخول الذكور الى المستشفى أكثر بمرتين 100٪ (19) مقارنة بـ 0٪ للإناث بسبب نوبة الانتكاس. لم تكن محاولة الانتحار أي عامل خطر مرتبط بالاكتئاب الشديد (p>0.05).

الانتخار ، في عنس منظر سربيد و مسب المسيد و المراقق المراقق المراقق و الديموغرافي والنفسي بين المرضى الخارجيين المستناج: سلطت هذه الدراسة الضوء على مؤشرات الخطر لخصائص التاريخ الاجتماعي والديموغرافي والنفسي بين المرضى الخارجيين المصابين باضطراب اكتنابي مما يدل أنهم يحتاجون إلى مزيد من التدخلات المستمرة.

التوصيات: أوصَّت الدراسة بضرورة إجراء مزيّد من الدراسات المستقبلية للتحقّق في المزيد من عوامل الخطر بين مرضى العيادات الخارجية وتحديد الاستراتيجيات لتقليل تأثيرها على المرضى.

الكلمات المفتاحية: الاضطراب الاكتئابي الكبير، العيادات الخارجية، التقييم.

ABSTRACT:

Background: Major depressive disorder (MDD) ranked 4th leading cause of disability worldwide and is one of the most common mental health condition, it impacts mood, behavior as well as physical condition, and suicide behavior is common. Epidemiological studies indicated that MDD has numerous individual, family and social factors associated with its prevalence, and the socio demographic factors have consistently been identified as important factors in explaining the variability in prevalence.

Aims of the study: The study aims to assess the prevalence risk factors of socio-demographic and psychiatric history characteristics associated with major depressive disorder among outpatients in Sulaimani city.

Methodology: The study involves 329 outpatients with prior diagnosis with major depressive disorder were recruited of the psychiatric clinic in AliKamal consultation center in Sulaimani city via convenience sampling. A questionnaire constructed by the researcher was used to assess the socio-demographic and psychiatric history characteristics. The data collected through face to face interview method and the ethical considerations and preventive measures of covid-19 disease were implemented. The launches were on October 2021 until December, 2021. The SPSS-version 25 was useing for data analysis.

Results: The majority of the outpatients with MDD were females (190, %58) mostly married with low education level and insufficient economic status than males (p<0.05) large proportion of females (160, 64%) had duration of illness 1-4 year compared to 36% (72) for males, in addition males had more than two number of hospitalization 100% (19) compare to 0% in females due to relapse episode. The suicide attempt was none risk factor associated with major depressive (p>0.05).

Conclusion: This study highlights the risk indicators of socio-demographic and psychiatric history characteristics among outpatients with major depressive disorder that need more continuous interventions.

Recommendations: The study recommends that future further studies needed to investigate more risk factors among outpatients and planning strategies to minimize its effect on sufferers.

Keywords: Major depressive disorder, outpatients, assessment.

* PhD. \ Psychiatric and Mental Health \ College of Nursing \ University of Sulaimani \ Iraq.

Email: taha.faraj@univsul.edu.iq.

INTRODUCTION

The world Health Organization Global Burden of Disease survey ranked depression as the 4th leading cause of disability worldwide and predicts that by 2020 that major depressive disorder (MDD) will be second disease in terms of disability experienced by sufferers ⁽¹⁾.

Major depressive disorder is one of the most common mental health conditions, it impacts mood, behavior as well as physical condition ⁽²⁾ and suicide behavior is greatly associated with MDD ⁽³⁾. The prevalence rate ranged from 2-21% with the estimated 350 million people suffer from depression worldwide ⁽⁴⁾, and the current evidence with covid-19 pandemic reported increased prevalence rate of depression ranges from 7-48.3% with significant heterogeneity between studies ⁽⁵⁾ various theories have been presented of MDD, but none fully accounts of its development ⁽⁶⁾. The neurobiological theories include those related to altered neurotransmission, neuroendocrine dysregulation and genetic transmission ⁽⁷⁾

The psychosocial factors include psychoanalytic viewed depression with loss and anger (8), the cognitive theory points to errors of logical thinking (9) while hopelessness theory presents that the individuals inferred negative outcomes and negativity about self as key element of depression (10). Furthermore the diatheses-stress model suggests the role of stressful life events in the onset of depression (11). The prognosis of MDD can well controlled with the medications, psychotherapy and self-help strategies (12) in addition services and treatment for MDD have been identified, however the stigma associated with depression has been identified as barrier to seek treatment (13). Research studies reported the sociodemographic characteristics have consistently been identified as important factors in explaining the variability in the prevalence and incidence of MDD (14, 15). Furthermore other epidemiological studies have indicated that MDD has numerous individual, family and social factors associated with prevalence (16, 17). Additionally it has been revealed that females are at higher risk for depression; women have nearly double to triple the prevalence rate for depression compared to men (18), middle thirteen, and lower socioeconomic status, unemployment, and divorced (4) of depressed parents (1) and from urban area (13). Additionally there are complex racial and ethnic variations in somatic symptoms associated with depression due to social and cultural factors that influence how individuals seek medical attention (19). The ethicinety appears to act as a proxy measure for combination of factors which include attitude towards illness, understanding of mental health, stress, as well as community support and coping resources (1), in-depth understanding of MDD and its associated with early intervention can effectively help in the performing preventive mental health strategies as being potentially significant factors to depression have been describe in the western or other cultural context, relatinely little research regarding socio demographic and psychiatric history factors with MDD has been conducted in Iraq and the best of author knowledge no previous studies have been done in Sulaimani city in Kurdistan Region of Iraq in the field of psychiatric-Mental health Nursing. Therefore, the current study was aimed to assess the prevalence risk factor of socio-demographic and psychiatric history characteristic associated with MDD among outpatients of both gender attending psychiatric clinic in Sulaimani city, for figuring out the predictive role of such factors might persuade major depressive disorder.

METHODOLOGY

- **Study design and setting:** The current investigation was a quantitative, cross-section study that was carried out in psychiatric outpatient clinic at Alikamal consultation center which is a facility of the general teaching hospital in Sulaimani city, Kurdistan region of Iraq. The period of data collection started from October 2021 till December 2021.

- Participants:

- Sample size estimation: The epidemiology information version 7 computer program created by the center for disease control (CDC) was used for determine sample size. The data was entered to the program was 3400 sample size population which is equal to the number of patients with depressive disorder attending the psychiatric outpatient clinic in a year and the expected prevalence was set at 29.8% with a confidence interval 95% the sample size was estimated to be 329 outpatient with MDD.
- The study sample: Non-probability, convenience sampling was employed to select the sample. The sample (329) was recruited from consecutive outpatients seeking treatment and attending the psychiatric clinic.
- **Inclusion criteria:** Outpatients with previously diagnosed with major depressive disorder by consultant Psychiatrist, who aged 18 years and above, from both genders, being voluntarily accepted to participate in this research with verbal informed consent was given.
- Tool of the study: A questionnaire was constructed for data collection, which was translated to Kurdish language through a forward-back ward method. The face validity of the Kurdish version was determined through a panel of five experts and the reliability of the questionnaire was determined through Cronbach's alpha values was (0.84, p<0.01). The questionnaire consisted of the following parts:

Part I: socio demographic data included gender, age, marital status, educational level, occupation residential area, economic status and religion status.

Part II: psychiatric family history and relative kinship to third degrees.

Part III: psychiatric history data included duration of major depressive disorder, number of admissions to psychiatric hospital or department, previous suicide attempt.

- Data collection procedure: The data collected through face-to-face interview method carried out by the researcher with each selected patient. The interview guided by the items of the questionnaire. Information was still collected during the covid-19 pandemic, thus adherence to preventive measures was implemented. Also, the data collection procedure carried out according ethical guidelines.
- •Statistical Analysis: The collected data were analyzed using SPSS- software (IBM-SPSS 25.0 version). Depressive statistics were included frequencies and percentage, mean and standard deviation. The inferential statistics include Alpha Cronbach's coefficient was conducted to determine the reliability of questionnaire, and fisher exact test was used to analyze the data, and P-value < 0.05 was used as a cutoff points to declare the significance.
- Ethical consideration: The current study was permitted by the scientific and council of nursing college, ethical committee at college of the University of Sulaimani, and also, by the Sulaimani general health directorate / Alikamal consultation center.

RESULTS:

Table (1): socio-demographic characteristics of the study participants

Characteristics	male		Female		Total		P - Value			
	F	%	F	%	F	%				
Age group										
18-27	30	46%	35	54%	65	100%				
28-37	60	50%	60	50%	120	100%	P < 0.01			
38-47	18	25%	55	75%	73	100%	Significant			
48-57	16	39%	25	61%	41	100%				

58 and above	15	50%	15	50%	30	100%				
Marital status										
Single	60	67%	30	33%	90	100%				
Married	51	25%	150	75%	201	100%	P < 0.01			
Divorce	15	60%	10	40%	25	100%	Significant			
Widow	13	100%	0	0%	13	100%				
Education										
Illiterate	6	7%	75	93%	81	100%				
Primary school	18	23%	60	77%	78	100%	P < 0.05			
Intermediate school	21	46%	25	54%	46	100%	Significant			
Secondary school	24	83%	5	17%	29	100%				
Higher education	70	74%	25	26%	95	100%				
Occupation										
Gov. Employee	28	74%	10	26%	38	100%				
Private employee	45	100%	0	0%	45	100%	P < 0.05			
Non-employee	18	27%	160	73%	178	100%	Significant			
Student	32	62%	20	38%	52	100%				
Retired	16	100%	0	0%	16	100%				
Residential area										
Urban	105	44%	135	56%	240	100%	P > 0.05			
Sub-urban	24	41%	35	59%	59	100%	Not significant			
Rural	10	33%	20	67%	30	100%				
Economic status										
Sufficient	88	51%	85	49%	173	100%				
Barley sufficient	12	32%	25	68%	37	100%	P < 0.05			
In sufficient	39	33%	80	67%	119	100%	Significant			
Religion status										
Practice	88	42%	120	58%	208	100%	P > 0.05			
partial practice	21	32%	45	68%	66	100%	Not significant			
Non-practice	30	55%	25	45%	55	100%				

Fisher Exact test, P-value

The sample at base line consisted of 329 outpatients with major depressive disorder, the mean (\pm SD) age was 39.5 (\pm 11.4) years, with the youngest participant being 18 year of age and the oldest 58 year above. A large proportion of females (75%) in age group 38-47 years compared to 25% of males, more than half of the study sample were females (N=190, 58%) with the ratio male to female was (1:1.4). In terms of marital status, education and employment, the majority of females were married (n=150, 75%), illiterate (n=75, 93%) unemployed (n=160, 73%) and had insufficient economic status (n=80, 67%) compared to males (n=S, 25%; n=6.7%; n=18, 23%, n=39,33%) consequently of the same factors (P<0.05) whilst majority of males (n=60,67%) were single, higher educational status (n=70, 74%) governmental employed (n=30, 33%, n=25, 26%; n=10, 26%, n=85, 49%) consequently of the same factors (P<0.05). The characteristics of respondents are described in table 1.

Table (2): Psychiatric family history of the study sample

Psychiatric family history	Male		female		total		p-value
	F	%	F	%	F	%	P < 0.05
None	93	52%	85	48%	178	100%	significant

KUFA JOURNAL FOR NURSING SCIENCES. VOL. 11 No. 2 / 2021

First degree	9	16%	48	84%	57	100%
Second degree	21	28%	53	72%	74	100%
Third degree	16	80%	4	20%	20	100%

Fisher Exact test, P-value

Table 2 shows that without half of the sample include males (n=93, 52%) and females (n=85, 48%) have none psychiatric family history. In addition the table reveals that the second degree of psychiatric history more prevalence in females (n=53, 72%) compared to the 28% (n=21) of males (p<0.05).

Table (3): psychiatric history characteristics of study sample

Characteristics	Male		female		Total		p-value			
	F	%	F	%	F	%				
Duration of illness										
1-4 years	72	36%	130	64%	202	100%				
5-9 years	38	52%	35	48%	73	100%	P < 0.05			
10-14 years	13	46%	15	54%	28	100%	significant			
15-and above	16	61%	10	39%	26	100%				
Number of hospitalization										
None	102	37%	175	63%	277	100%				
One time	11	42%	15	58%	26	100%	P < 0.05			
Two times	19	100%	0	0%	19	100%	significant			
Three times and above	7	100%	0	0%	7	100%				
Suicidal attempt										
None	81	44%	105	56%	186	100%	P > 0.05			
One Time	28	34%	55	66%	83	100%	Non-			
Two Times	18	41%	26	59%	44	100%	significant			
Three Times and above	12	75%	4	25%	16	100%				

Fisher Exact test, P-value

It is evident in table 3 that duration of illness among participants ranged from 1 year to 15 year and above. A large proportion of the females (n=130, 64%) had duration of illness 1-4 years compared to 36% (n=72) for males. In addition the result revealed that 61% (n=16) of males had duration of illness 15 years and above compared to 39% (n=10) of females (P<0.03). In terms of number of hospitalization the result indicates that large proportion of total sample (n=277, 84.2%) had none hospitalized to psychiatric hospital, furthermore, the result shows that males more prevalent (n=7,100) compared to 0% of females regarding three times and above of hospitalization (P<0.03) due to relapse episode.

Regarding prior suicide attempts(s), the result showed that more than half of the sample (n=186, 65.5%) had none prior suicide attempted suicide, the result in table 3 showed that 66% (n=55) of females had one attempt compared to 34% (n=28) of males. This variable is not significant risk factor associated with major depressive disorder, P-value >0.05.

DISCUSSION

As socio demographic characteristics were found that the mean age slightly above midthirteen of the total sample, and for females more prevalence in age group 38-47 years (n=55, 75%) than males (n=18, 25%). Age related patterns of major depressive disorder vary a cross countries of the world ⁽¹⁷⁾. However, the result of present study similar to the findings of ^(4, 20), while this result in contrast to the findings by ⁽²¹⁾ found that the most common age among Malaysian outpatients with major depressive disorder was 44 years. Data indicate that the age related changes in the incidence of depression occur because of particular hormonal and social

changes that occur in individual lives ⁽¹⁾, and this is mostly attributed to chronicity of depression ⁽⁶⁾. Major depressive disorder seams to occur more frequently in females than males, the result of this study revealed that 60% of females more affected with MDD than males (40%) with the a ratio 1.4:1 female to male. This result goes with the finding of ^(22, 23) showed that women are 1.7 times more likely than men in lifetime history of major depressive disorder. In contrast, ⁽²⁴⁾ found that the prevalence rate of males in community-based sample with major depressive disorder in city of Sulaimani. Furthermore, the study revealed that married females (75%) found to be considerably more prevalent to males (23%). This is in agreement to the result of ^(25, 26), but this result disagreed with finding of ⁽²⁷⁾ showed that single-unmarried more prevalent among depressed outpatients. These findings suggest that married female participants are significantly more vulnerable to major depressive disorder than male. In addition, the possible reason might be due that married female participants more likely to be endowed with adverse life events which precipitating factor for depression ⁽¹⁾.

A significant relationship were obtained in this study between low education level, unemployment, insufficient economic status with major depressive disorder particularly among female participant, this finding is similar to the result of previous studies conducted by study in UK, $^{(29)}$ in India. Furthermore $^{(13)}$ confirmed current study and reported that lower socio economic class was risk factor among females with major depressive disorder. In this study the result showing that more than half none psychiatric family history (54.1%), however among those who have psychiatric family history, the first degree relative more common among females (n=48, 84%) than males (n=9, 16%) this is similarly to the result of (1) reported that a family history of depression or other psychiatric disorder may provide genetic or environmental basis for susceptibility to psychiatric condition. Moreover, (30) suggested that poor parenting and modeling contribute to the development of depressive psychiatric symptoms of effected mothers the findings of the present study pointed that more prevalence rate 61% of males in chronic course in terms of duration of illness (three times and above) and 100% of recurrence episode in terms of numbers of hospitalization (three times and above) compared to 39% and 0% of female consequently of the same factors. The finding is in contrast to a study conducted by (31) reported that among remitted major depressive disorder cases (n=746), the cumulative recurrence rate was 4.3% at 5 years, added that among current major depressive disorder cases (n=242) 12% developed a chronic depressive episode over 6 years. The finding of this study suggested that chronic course is predicted by similar risk indicators as recurrence for vulnerability characteristics among participants of this study. Risk factor of attempted suicide have been the focus of previous numerous studies especially in major depressive disorder (32, 16). The findings of the study reported that suicide attempt rates were higher among females (n=55, 66%) than males (n=28, 34%) whilst males had higher rates in two times above than females, similarly to result of study by (33) reported that the person-based suicide attempt rates were higher among females. However this factor is nonsignificantly (P>0.05) associated with major depressive disorder the possible reason might relate to methodology and further studies are needed.

CONCLUSION

The presence study showed a high prevalence rate of major depressive disorder among female's outpatients with low socio economic class than males. The recurrent and chronicity course mostly occur in males. In addition this study highlighted the risk of indicators in socio-demographic and psychiatric history characteristics among the outpatients with major depressive disorder that need more continues and maintenance interventions and follow up from mental health professionals.

RECOMMENDATION

The study recommended that the major depressive disorder remains important mental health problem which needs further studies to investigate more risk factors among outpatients, planning strategies to minimize their effect on suffers by mental health professional and follow- up is mandatory

- Financial Disclosure: there is no financial disclosure
- Conflict of interest: none to declare.

REFERENCES:

- **1.** McKeever A, Agius M, Mohr P. A. (2017). Review of the Epidemiology of Major Depressive Disorder and of its consequences for Society and the individual. *Psychiatr Danub*. 2017 Sep; 29 (Suppl 3):222-231. PMID: 28953767.
- **2.** Johnson Jacquelyn (2021) Depression (major depressive disorder), health line media Red Ventures Company.
- **3.** Al-Maani MA. Suicidal Ideation among Patients Suffering Depression. *Middle East Journal of Psychiatry and Alzheimers*. 2015 Mar; 84 (1696):1-3.
- **4.** Abdulkarim, A. M., & Muhsin, S. S. (2021). An Investigation of the severity levels and risk factors of Suicidal ideation among patients with major depressive disorder in Sulaimani City, Iraq/Kurdistan. *Pakistan Journal of Medical and Health Sciences*, 15 (3), 1048-1051.
- **5.** Notivol, J., Santabárbara, J., Lasheras, I., Lipnicki, D. M., Pérez-Moreno, M., López-Antón, R., ... & Gracia-García, P. (2021). Prevalence of anxiety in the COVID-19 pandemic: An updated meta-analysis of community-based studies. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 109, 110207.
- **6.** Boyd, B. D., Albert, K. M., Potter, G. G., Kang, H., & Taylor, W. D. (2019). Brain network functional connectivity and cognitive performance in major depressive disorder. *Journal of psychiatric research*, 110, 51-56.
- 7. Fabian Renee (2018) is depression genetic, Talks space online.
- **8.** McLeod, S. A. (2015). Psychological theories of depression. Simply Psychology.
- **9.** Disner, S. G., Beevers, C. G., Haigh, E. A., & Beck, A. T. (2011). Neural mechanisms of the cognitive model of depression. *Nature Reviews Neuroscience*, 12 (8), 467-477.
- **10.** Cherry, K. (2018). The big five personality traits: 5 major factors of personality. Retrieved August, 11, 2018.
- **11.** Nemade, R. Reiss, N. And Dombeck, M (2018). Interpersonal Therapy for Major Depression. Mental Help. Net https://www.mentalhelp.net/articles/interpersonal-therapy-formajor-depression.
- **12.** Boyd, B., Saleh, A., Potter, G. G., McQuoid, D. R., Turner, R., MacFall, J. R., & Taylor, W. D. (2017). Effects of early life stress on depression, cognitive performance and brain morphology. *Psychological medicine*, 47(1), 171-181.
- **13.** Moeini, B., Bashirian, S., Soltanian, A.R. (2019). Prevalence of depression and its associated sociodemographic factors among Iranian female adolescents in secondary schools. *BMC Psychol* 7, 25. https://doi.org/10.1186/s40359-019-0298-8.
- **14.** Lu, S., Wang, L., Dai, Z., Peng, H., Tan, L., Ding, Y., He, Z., ... & Li, L. (2014). Overlapping and segregated resting-state functional connectivity in patients with major depressive disorder with and without childhood neglect. *Human brain mapping*, 35(4), 1154-1166.
- **15.** Puri, M., Badillo, M., Islam, F., & Hall, E. (2014). Major Depressive Disorder: A Case of an Adolescent Female with Russell-Silver Syndrome. *Journal of Child and Adolescent Behavior*, 1-3.
- **16.** Reutfors, J. (2013). Epidemiological studies of suicide in patients with psychiatric illness. Inst för medicin, Solna/Dept of Medicine, Solna.

KUFA JOURNAL FOR NURSING SCIENCES.VOL.11 No. 2 / 2021

- **17.** Fortinash K. M. & Worret P. A., (Eds). (2012), Psychiatric Mental Health Nursing (5th ed.). St. Louis, MO: Elsivier/Mosby.
- **18.** Li, G., Mei, J., You, J. (2019). Sociodemographic characteristics associated with adolescent depression in urban and rural areas of Hubei province: a cross-sectional analysis. *BMC Psychiatry*, 19, 3 (2019). 86 https://doi.org/10.1186/s12888-019-2380-4.
- **19.** Bagayogo, I. P., Interian, A., & Escobar, J. I. (2013). Transcultural aspects of somatic symptoms in the context of depressive disorders. *Cultural psychiatry*, 33, 64-74.
- **20.** Yousafzai, A. W., & Siddiqui, M. N. (2007). Association of lower self-esteem with depression: A case control study. *Journal of Postgraduate Medical Institute*, 21(3).
- **21.** Fong, C. L., Shah, S. A., & Maniam, T. (2012). Predictors of suicidal ideation among depressed inpatients in a Malaysian sample. *Suicidology online*, 3.
- **22.** Hasin, D. S. Knox, J., Scodes, J., Wall, M., Witkiewitz, K., Kranzler, H. R., Falk, D., ... & (2019). Reduction in non-abstinent WHO drinking risk levels and depression/anxiety disorders: 3-year follow-up results in the US general population. *Drug and alcohol dependence*, 197, 228-235.
- **23.** Qadir SA (2019) effectiveness of psycho-educational program on Eating Behavior problems Among patients with major depressive disorder in Sulaimani city, *PhD Dissertation in Sulaimani University*, Sulaimani, Iraq.
- **24.** Faraj, T. A., & Muhsin, S. S. (2020). Assessment of the Levels of Hopelessness among the Patients with Major Depressive Disorder in Sulaimani City. *Erbil Journal of Nursing and Midwifery*, 3(1), 68-74.
- **25.** Ahmad D (2017) Assessment of self-esteem and feeling of loneness in patients with major depressive at mental health center in Sulaimani city, MSC university of Sulaimani, Sulaimani city.
- **26.** Saeed, B. (2017). Suicidal ideation among a group of depressed outpatients. *Zanco Journal of Medical Sciences (Zanco J Med Sci)*, 21(3), 1907 1914. https://doi.org/10.15218/zjms.2017.050.
- **27.** Basha EA, Mengistu BT, Engidaw NA, Wubetu AD, Haile AB. 2021 Suicidal Ideation and Its Associated Factors Among Patients with Major Depressive Disorder at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia. *Neuropsychiatr Dis Treat*. 21; 17: 1571-1577. DOI: 10.2147/NDT.S311514. PMID: 34045859; PMCID: PMC8149284.
- **28.** Wang, J., Lloyd-Evans, B., Marston, L. (2020). Epidemiology of loneliness in a cohort of UK mental health community crisis service users. *Soc Psychiatry Psychiatr Epidemiol*. 55, 811–822. https://doi.org/10.1007/s00127-019-01734-6.
- **29.** Ahmad, A., Altaf, M., & Jan, K. (2016). Loneliness, Self Esteem and Depression among Elderly People of Kashmir. *The International Journal of Indian Psychology*, 3 (4), 147-153.
- **30.** Burke, L. (2003). The impact of maternal depression on familial relationships. *International review of psychiatry*, 15(3), 243-255.
- **31.** Ten Have M, de Graaf R, van Dorsselaer S, (2018). Recurrence and chronicity of major depressive disorder and their risk indicators in a population cohort. *Acta Psychiatrica Scandinavica*. Jun; 137 (6): 503-515. DOI: 10.1111/acps.12874. PMID: 29577236.
- **32.** Scheirber Jennifer and Culpepper Larry (2021) suicidal ideation and behavior in adults, editor: Roy-Byrne.
- **33.** Sokero, P. (2006). Suicidal ideation and attempts among psychiatric patients with major depressive disorder. *National Public Health Institute*. http://ethesis.helsinki.fi/julkaisut/laa/kliin/vk/sokero/tiiviste.html.