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Prevalence and Clinical Characteristics of Depression among Elderly Patients Attending Primary Health Care Centers in Diyala Governorate

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Abstract

Background: Depression is one of the most common mood conditions among the elderly, which is linked to severe consequences such as difficulty in concentration and mood disturbances, followed by a lack of interest in social activities, apathy, pessimism, and changes in appetite and sleep.

Aim of the study: To determine the prevalence and clinical characteristics of depression and the associated factors among 60-year-olds and over.

Methodology: A descriptive cross-sectional study conducted on a group of 218 patients attending selected primary health care centers (PHCC) in Diyala governorate from Al-Khales and Baquba first sectors from first of September 2020 till first of April 2021. A direct interview was conducted by the researcher. Depression in the studied group was measured using the Arabic version of the short form of Geriatric Depression Scale (GDS). Socio-demographical factors were also inquired about in this study.

Results: The prevalence of depression among the study participants was 63.3%. There was a statistically significant association between depression and gender (higher in females 69.2%), marital status (in widowed 84.8%), current residence (93.3% in those living alone), and source of monthly income (78.1% in those on financial assistance), medical illnesses (70.2%), and past history of depression (71.3%).

Conclusions: Depressive symptoms are prevalent among elderly patients attending primary health centers in Diyala Governorate and are associated with female gender, being a widow, living alone, financial insecurity and chronic illnesses.

Keywords: Depression, Elderly, Primary Health Care Centers, Diyala governorate.

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Introduction:

Aging is a dynamic and progressive process, and it appears to affect multiple physiological factors in the body. As a consequence of these changes, the body responses to many stressors begins to decline, making individuals more prone to illnesses, accidents although, impairments, and death (1). Aging can result in a variety of negative effects, including impairments in cognitive and functional abilities, decline of autonomy, also, independence, lack of social responsibility, lethargy, emotional distress, feelings of helplessness, and despair (2). According to the World Health Organization, depression is characterized by sadness, changes in eating and sleeping schedules, restlessness, lethargy, and unpleasant emotions, as well as a progressive loss of interest in social contacts (3). To be diagnosed with major depression a person's symptoms must fit the criteria's outlined in the and loss of interest in their typical activities must have continued for at least two weeks (4).

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Such emotions must also be associated with at least five additional familiar depressive symptoms, such as an alteration in appetite, weight change, insomnia, excessive or poor sleep, exhaustion, feelings of inadequacy, guilt,
loss of hope, lack of focus that may interfere with daily activities, movements that are especially sluggish or frantic, thoughts of death and dying, suicidal thoughts, or an attempt of suicide (5). The patient's initial meeting with the public health system occurs in the primary medical facility so finding out about the socioeconomic and health conditions of the elderly people in the community in addition to performing a depression evaluation can be performed (5). Studies on depression in older adults and related factors are still infrequent in middle- and low-income countries, which justifies the need for more research on this issue (6).

Methods:

This is a descriptive, cross-sectional study conducted on 218 patients who attended four PHCs in Diyala governorate which include:
(Al-Khales Sector): Habhab PHC and Alkhales PHC
(Baquba Sector 1st): Al Tahrer first PHC and Al Tahrer second PHC

These centers were chosen randomly, and the study was conducted during the period from first of September 2020 - first of April 2021. Patients 60 years of age or older who attended the above PHCs were enrolled in this study.

Exclusion criteria: Those who complained of cognitive impairment.

The researcher designed a study questionnaire to collect personal data of elderly participants, Geriatric Depression Scale Yesavage, et al [7]. The researcher has filled the questionnaire by direct interview with 218 elderly patients. It included: Socio-demographic data: age above 60 years (60-69, 70-79, above 80 years old), gender (male, female), marital status (unmarried, married, widowed, separated), source of monthly income (retirement salary, private work, financial assistance, governmental assistance), residency (urban, rural), current residence (Alone, with family), previous history of depressive and chronic illness disorder. And The GDS (SF) consists of 15 questions requiring "yes" or "no" answers. One point is scored for each bolded answer (negative answer) and zero point for the positive one. A score of 5 or more suggests depression. All the necessary official permissions were obtained from the ethical committee of the Iraqi Board for Medical Specializations in Psychiatry, and the Diyala Directorate of Health, prior to data collection.

The data was analyzed using the Statistical Package for Social Sciences (SPSS) version 25. The Chi-square test was used and logistic regression analysis was applied. A level of P – value less than 0.05 was considered significant.

Results

A total of 218 older adults were recruited for this study. Participant's age ranged from 60 to 89 years with a mean of 67.9 ±5.63 years, with 84 (38.5%) being in the age group of ≥ 70 years (Figure 3.1).

Regarding gender, proportion of females was higher than males (61% versus 39%), with female to male ratio of 1.56:1. More than half of the participants 116 (53.2%) live in urban areas, 124 (56.9%) were married, and 203 (93.1%) their current residence was with family, while the remaining 15 (6.9%) living alone. Retirement salary was the source of monthly income for 103 (47.2%). Regarding history of medical illnesses, 161 (73.9%) of the participants had a history of DM, HT, HF, or joint pain, and HT was the most frequent medical illness in 112 (51.4%) followed by DM in 67 (30.7%). Previous history of depression was reported by 129 (59.2%) of the respondents (Table 1).

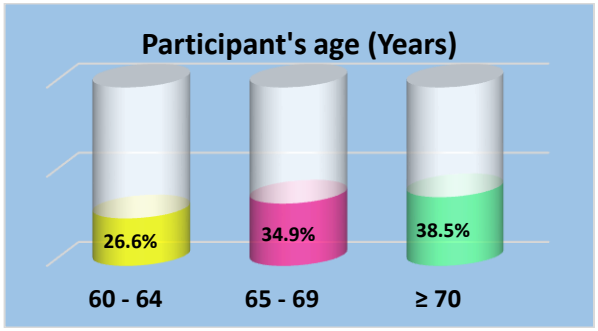

Figure 3.1: Distribution of the participants by age

Table 1: Distribution of the participants by certain socio-demographic and clinical characteristics

Characteristics	No. (n= 218)	Percentage (%)
Gender		
Male	85	39.0
Female	133	61.0
Residence		
Urban	116	53.2
Rural	102	46.8
Marital Status		
Unmarried	7	3.2
Married	124	56.9
Widowed	79	36.2
Separated	8	3.7
Current Residence		
Alone	15	6.9
With Family	203	93.1
Source of Monthly Income		
Retirement Salary	103	47.2
Private Work	25	11.5
Financial Assistance	73	33.5
Governmental Assistance	17	7.8
Medical Illnesses		
Yes	161	73.9
No	57	26.1
History of Depression		
Yes	129	59.2
No	89	40.9

Responses to GDS item 15

Concerning results of the participants' responses about the questions of GDS, the highest proportion of score one (83%) was to the question that says "Have you dropped many of your activities and interests" followed by (82.1%) towards the question that says "Are you afraid that something bad is going to happen to you". The highest percentage of score zero (85.8%) was reported when the participants were asked "Do you think it is wonderful to be alive now" followed by (79.4%) towards "Do you feel that your situation is hopeless" (Table 2).

Table 2: Distribution of the participant's responses to the questions of GDS

Questions	Responses - No. (%)	
	Score 0 (for positive answer)	Score 1 (for negative answer)
1. Are you basically satisfied with your life?	124 (56.9)	94 (43.1)
2. Have you dropped many of your activities and interests?	37 (17.0)	181 (83.0)
3. Do you feel that your life is empty?	105 (48.2)	113 (51.8)
4. Do you often get bored?	61 (30.0)	157 (70.0)
5. Are you in good spirits most of the time?	158 (72.5)	60 (27.5)
6. Are you afraid that something bad is going to happen to you?	41 (18.8)	177 (81.2)
7. Do you feel happy most of the time?	79 (36.2)	139 (63.8)
8. Do you often feel helpless?	83 (38.0)	135 (62.2)
9. Do you prefer to stay at home, rather than going out and doing things?	123 (56.4)	95 (43.6)
10. Do you feel that you have more problems with memory than most?	64 (29.4)	154 (70.6)
11. Do you think it is wonderful to be alive now?	187 (85.8)	31 (14.2)
12. Do you feel worthless the way you are now?	122 (56.0)	96 (44.0)
13. Do you feel full of energy?	80 (36.7)	138 (63.3)
14. Do you feel that your situation is hopeless?	173 (79.4)	45 (20.6)
15. Do you think that most people are better off than you are?	114 (52.3)	104 (47.7)

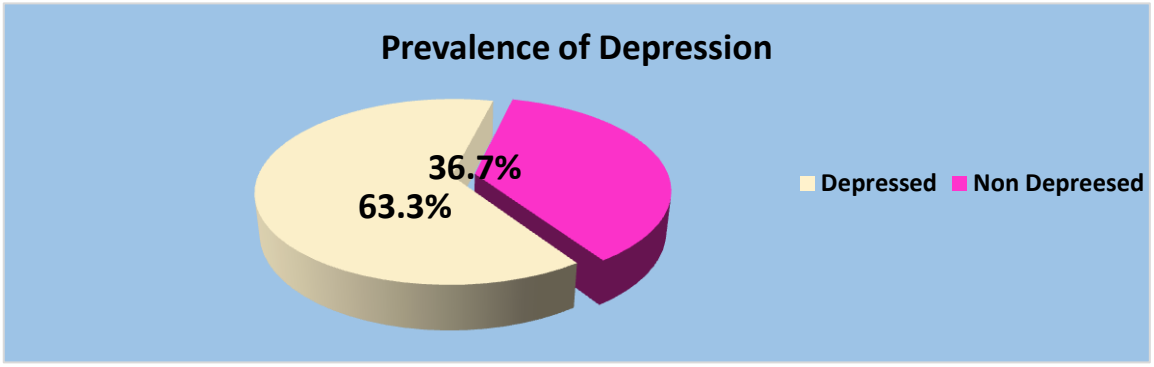

Figure 2: Distribution of depression among the study participants

The distribution of study participants by depression and certain socio-demographic characteristics showed that there was a statistically significant association between depression and gender, marital status, current residence, and source of monthly income. Depression was significantly higher among females (69.2%, P= 0.024), widowed 67 (84.8%, P= 0.001), those living alone (93.3%, P= 0.012), and those on financial or governmental assistances (78.1% and 76.5%, P= 0.003). Depression had no significant association with age (P= 0.807) and residency (P= 0.334) (Table 3)

Table 3: Distribution of the participants by depression and certain socio-demographic characteristics

Socio-demographic variables	Categories	Depression		Total (%) n= 218	P- Value
		Yes (%) n= 138	No (%) n= 80		
Age (Years)	60 - 64	37 (63.8)	21 (36.2)	58 (26.6)	0.807
	65 - 69	46 (60.5)	30 (39.5)	76 (34.9)	
	≥ 70	55 (65.5)	29 (34.5)	84 (38.5)	
Gender	Male	46 (54.1)	39 (45.9)	85 (39.0)	0.024
	Female	92 (69.2)	41 (30.8)	133 (61.0)	
Residence	Urban	70 (60.3)	46 (39.7)	116 (53.2)	0.334
	Rural	68 (66.7)	34 (33.3)	102 (46.8)	
Marital Status	Unmarried	3 (42.9)	4 (57.1)	7 (3.2)	0.001
	Married	62 (50)	62 (50)	124 (56.9)	
	Widowed	67 (84.8)	12 (15.2)	79 (36.2)	
	Separated	6 (75.0)	2 (25.0)	8 (3.7)	
Current Residence	Alone	14 (93.3)	1 (6.7)	15 (6.9)	0.012
	With Family	124 (61.1)	79 (38.9)	203 (93.1)	
Source of Monthly Income	Retirement Salary	55 (53.4)	48 (46.6)	103 (47.2)	0.003
	Private Work	13 (52.0)	12 (48.0)	25 (11.5)	
	Financial Assistance	57 (78.1)	16 (21.9)	73 (33.5)	
	Governmental Assistance	13 (76.5)	4 (23.5)	17 (7.8)	

It was clear that depression was significantly higher among the participants who had a history of medical illnesses (70.2%, P= 0.001), and those who had a past history of depression (71.3%, P= 0.002) (Table 4).

Table 4: Distribution of the participants by depression and certain clinical characteristics

Medical History	Responses	Depression		Total (%) n= 218	P-Value
		Yes (%) n= 138	No (%) n= 80		
Chronic Illnesses	Yes	113 (70.2)	48 (29.8)	161 (73.9)	0.001
	No	25 (43.9)	32 (56.1)	57 (26.1)	
Past history of depression	Yes	92 (71.3)	37 (28.7)	129 (58.9)	0.002
	No	46 (51.1)	44 (48.9)	90 (41.1)	

By logistic regression analysis, a significant, independent and un-confounded risk factors for depression were having past history of depression (OR= 3.114), having a history of medical illnesses (OR= 2.281), and living alone (OR= 2.123) (Table 5).

Table 5: Determinants of depression by logistic regression analysis

Factors	Odds ratio	95% C.I.		P - Value
		lower	upper	
Past history of depression	3.114	1.802	3.952	0.001
History of Medical Illnesses	2.281	1.066	4.177	0.004
Living Alone	2.123	1.379	3.865	0.001

Discussion

The prevalence of depression in old age was found to be 63.3% in this study. This result is close to those of studies from Mosul / Iraq (65.3%) (8), Saudi Arabia 63.7% (9), Princeton / USA 60% (10), Greece 61% (11), Egypt 62.7% (12). It is higher than those reported by studies from South Africa 50% (13), Malaysia 37.3% (14), Michigan / USA 39.5% (15), Taiwan 40.4% (16), Iran 23.6% (17), and Brazil 30.4% (18). The high prevalence of depression in the current study can be attributed to the harsh living conditions and socioeconomic disadvantages to which the elderly in Iraq are exposed. They are experiencing such hardships as limited income and inaccessibility to social and health services which they need. In the context of the study, we found that socio-demographic factors such gender, residence, marital status, age, income, and health problems, along with a record of past depression, contribute to the prevalence of depression in the elderly. The prevalence of depression was highest in those who are 70 years or older and lowest in those between 60-64 year, but was not significantly so. This result is similar to those of a study from Saudi Arabia (9), which may be due to the better accessibility of the younger elderly to PHCs to seek medical care (8). Moreover, the older elderly are more susceptible to the impact of their chronic illness like osteoarthritis, chronic respiratory illnesses, skin diseases, visual and hearing impairment, and cognitive decline like dementia which enhances their depression (19).Gender was significantly associated with the prevalence of depression, similar to the results of a study from the USA which attributed this association to the differences in coping mechanisms with negative life events (10). This result may also be explained by epidemiological and psychosocial factors, such as higher female susceptibility to social disadvantages due to poorer social roles, social constraints, financial considerations, low social support, higher rate of widowhood, and estrogen deprivation (11). It was found that the widowed group has the highest prevalence of depression similar to the finding of a study from South African. This may be attributed to the loss of a significant person, with social and personal consequences (13). Widowed elderly women also experience income loss and changes to their living environment. The scenario is even worse in developing nations because most of elderly women are financially dependent on their spouses. Men who experience the loss of their spouse often re-marry while widowed woman tend not to, so men are less depressed than women (14). Living alone was significantly associated with depression in our study compared to those living with their families, which may be due to the psychological and social support that the family provides in difficult situations to decrease stress on the elderly and minimize social isolation (15). A significant association was found between depression and the source of income, with those receiving financial assistance having more depression more frequently than others, which may reflect that a steady income ensures less stress about the future. This was also demonstrated by a study from West Virginia / USA which suggested that a secure income source might be related to the sense of autonomy and independence (17). The rate of elderly depression is greater in lower socioeconomic strata, due to a number of causes, such as a malnourishment, inadequate housing, declining health, and inadequate medical care (20). Elderly people are also more susceptible to various medical conditions like DM, HT, angina, rheumatoid arthritis, and cerebrovascular accidents. These chronic conditions were included in our questionnaire. Having one or more of those conditions was significantly associated with a higher prevalence of depression probably due to the associated comorbidities and disabilities, being dependent on someone else as a caregiver, and frequent hospitalization along with the financial hardships. This was also reported by a study from Taiwan (16). Furthermore, these illnesses limit mobility and daily activities with the negative consequences of multiple medications (17). The

difficulty of coping with debility and refractory illnesses, the perceived decline in quality of life, and associated social stigma leads to a "psychological burden" in the elderly who are chronically ill (21). A diagnosis of depression previously made by psychiatrist, was associated with a higher prevalence of depression in the study group, similar to the findings of the study conducted in Mosul in 2017 (8). Older people with depression who have experienced an episode earlier in life or a family history of depression have a higher prevalence of depression later in life, as early depressive episodes increase the relapse and intensity of the illness (22).

Conclusion: Depressive symptoms are prevalent among elderly patients attending primary health centers in Diyala Governorate and are associated with female gender, being a widow, living alone, financial insecurity and chronic illnesses.

Authors' declaration:

Conflicts of Interest: None.-

We hereby confirm that all the Figures and Tables in the manuscript are mine. Besides, the Figures and images, which are not mine have been given permission for re-publication attached with the manuscript.

Authors' contribution:

Abeer Y. Fadhil: Students

Mushtaq T. Hashim: Supervisor

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إنتشار الكآبة والصفات السريرية لدى كبار السن الذين يراجعون المراكز الصحية الاولية في محافظة ديالى -2020 2021

الدكتورة عبير ياسين فاضل: بكلوريوس في الطب و الجراحة العام, طالبة دراسات عليا,البورد العراقي في الطب النفسي
الأستاذ الدكتور مشتاق طالب هاشم: استاذ في الطب النفسي,

الخلفية: يعد الإكتئاب من الحالات المزاجية الأكثر شيوعًا بين كبار السن والذي يتم ربطه بعواقب وخيمة مثل صعوبة التركيز واضطرابات المزاج، يليه قلة الإهتمام بالأنشطة الإجتماعية واللامبالاة والتشاؤم وتغيرات في الشهية والنوم.
الهدف من الدراسة: لتحديد مدى انتشار الإكتئاب والعوامل المصاحبة له بين كبار السن ممن أعمارهم 60 عاما فأكثر.
المنهجية: دراسة وصفية تحليلية مستعرضة تم إجرائها على 218 مراجع من مراكز صحية متعدده تعود إلى قطاعي بعقوبه الأول والخالص. تم جمع العينة من مراجعي هذه المراكز الصحية ممن أعمارهم 60 عاما وأكثر، إبتداء من الأول من أيلول 2020 حتى الأول من نيسان 2021 وكان العدد الإجمالي للحالات 218 مريضا. تم استخدام مقياس الكآبة لكبار السن باللغة العربية، كما تم الإستفسار عن العوامل الإجتماعية والسكانية لغرض الدراسة.
النتائج: وجد أن معدل إنتشار الإكتئاب بين المشاركين في الدراسة بلغ 63.3٪. كان هناك ارتباط ذي دلالة إحصائية بين الإكتئاب والاناث بنسبة 69.2%، (84.8% في الارامل)، والإقامة الحالية (93.3% للمقيمين بمفردهم)، ومصدر الدخل الشهري (78.1% للذين يعتمد مصدر دخلهم الشهري على المساعدات من الآخرين)، وللمصابين بالأمراض (70.2%) والمصابين بالاكتئاب سابقا 71.3%.
الإستنتاجات: وجدت الدراسة أن أعراض الكآبة شائعة بين كبار السن من المراجعين للمراكز الصحية الأولية في محافظة ديالى.
الكلمات المفتاحية: إكتئاب، كبار السن، مراكز الرعاية الصحية الأولية، محافظة ديالى، الشيخوخة.