

GERIATRIC DEPRESSION IN AL-NAJAF CITY: PREVALENCE AND ASSOCIATED FACTORS

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ABSTRACT

Introduction: For at least two weeks, depressed people experience feelings of melancholy, a loss of interest, feelings of guilt or low self-esteem, problems sleeping or eating, extreme fatigue, and trouble focusing. The aim of study is to assess the prevalence of depression in elderly individual in Al-Najaf city and factors association with depression. **Patients and Method:** Al Najaf province conducted a descriptive cross-sectional senior population study (60 years and older). Data was collected from December 1st, 2022, through March 1st of 2023. The brief version of the geriatric depression scale comprised 15 yes/no questions, and participants' depression levels were categorized as mild, moderate, or severe depending on their total score. Independent variables include gender, age, occupation, education, marital status, past medical, psychiatric, and drug histories, smoking, monthly income, resident status, and crowding. Sexes above 60 can apply. Not eligible are 60-year-olds who refuse to participate or are hospitalized. **Results:** Mean age of individuals 67 ± 6 years. Most elderly in age group 60-69 years (71.9%), females (59.8%) more than males (40.2%), most of them are non-employee and married (44.7%, 65.3%), 37.69% of elderly have severe depression while 33.17% of them have mild to moderate depression. As shown in fig 2, (43, 31) elderly persons have hypertension and diabetes Mellitus respectively, significant association between severe depression and age group 60-69 years old, also severe depression occurs more in non-employee, married and primary-secondary, education significant association between severe depression and living with family, also severe depression occurs more in elderly have chronic diseases and history of treatment intake, significant association between severe depression and monthly income less than 500.000 IQD and nonsmokers. **Conclusion:** In Al-Najaf, the elderly commonly experience depression, hypertension, and Type 2 diabetes. Severe depression is more prevalent among those not in the workforce, married, with low education, low income, a history of chronic illness, and without smoking habits.

KEYWORDS: Geriatric, depression, Al-Najaf city, prevalence, associated factors.

INTRODUCTION

Depression is a common psychiatric condition characterized by sadness, lack of interest, guilt or low self-esteem, disturbed sleep or food, exhaustion, and poor attention for at least two weeks.^[1] This is according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Depression is the most common mental health illness, and its prevalence throughout all age groups poses a significant public health challenge.^[2,3] The estimated prevalence ranges from 10-55% in elderly.^[4] People tend to dismiss depression in the elderly as a normal part of the ageing process and a common response to chronic conditions, loss, and social transition.^[2] According to WHO data

from 2015.^[5] between 10 and 20 percent of the world's elderly are affected by major depressive illness. Moreover, several nations are experiencing a growth in their elderly population. There will be 390 million people aged 60 and up in the globe by 2050, with 80% of them residing in poor and middle-income countries.^[6] Financial loss, dependence on others, social exclusion, loss of self-worth, and functional limitations are all more common among the elderly than among the younger population. They have both mental and physical health problems.^[7] The already overcrowded healthcare system is further stressed by the increased demand for services from depressed seniors. According to the WHO,^[7] older adults are more likely to experience depression due to factors such as genetic predisposition, chronic disease

and disability, pain, frustration with limitations in activities of daily living (ADL), personality traits (dependent, anxious, or avoidant), and adverse life events (separation, divorce, sadness, poverty, social isolation). Numerous studies have also found associations between depression and other factors, including gender, urbanization, insomnia, social dependence, lack of a partner, educational attainment, income, substance abuse, traumatic life events, social isolation, lack of social support, cognitive decline, unemployment, and the presence of co-morbid medical conditions.^[8] Most healthcare budgets and strategies in underdeveloped nations pay little attention to depression, and their mental health services only get a little piece of the action.^[9] The aim of study is to assess the prevalence of depression in elderly individual in Al-Najaf city and factors association with depression.

METHOD

A descriptive cross-sectional research of the elderly population was carried out in 2 geriatric clinics in 2 hospitals (Alfurat AlAwasat Teaching Hospital in Kufa city and AlNajaf Alashraf Teaching Hospital) in Najaf governorate, convenient sample of 199 geriatric Iraqi population. From December 1st, 2022, through March 1st of 2023, the research gathered data. The geriatric depression scale (DS),^[10] short version, had 15 items that participants may respond to with a yes or no; participants' levels of depression were then classified as mild, moderate, or severe based on their total score. Socio-demographic factors such as sex, age, employment, education, marital status, prior medical,

psychiatric, and drug histories, smoking, monthly income, residency status, and crowding are examples of independent variables. People above the age of 60, both sexes, are welcome to apply. People over 60 who are unwilling to participate in the research or who are currently confined to a healthcare facility will not be considered. Inclusion criteria: geriatric patients (both men and women) aged 60 years old or above. Exclusion criteria: patients with known history of malignancy, chronic disease chemotherapy, or radiation therapy, functionally blind or deaf and totally dependent on another to perform daily activities. For statistical analysis, SPSS 22 is utilized, and frequency and percentage for categorical data, and mean, median, and standard deviation for continuous data. The significance level of the Chi-square test for establishing causality between variables is set at P 0.05. Ethical approval: The study was conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki. It was carried out with patients verbal and analytical approval before sample was taken. The study protocol and the subject information and consent form were reviewed and approved by a local ethics committee according to the document number 1561 (including the number and the date in 02/11/2022) to get this approval.

RESULTS

Mean age of individuals 67 ± 6 years. Most elderly in age group 60-69 years (71.9%), females (59.8%) more than males (40.2%), most of them are non-employee and married (44.7%, 65.3%), other variables distribution show in table 1.

Table 1: Distribution of patients according to study variables.

Variables		Frequency	Percentage
Age groups (years)	60-69	143	71.9
	70-79	47	23.6
	80-89	9	4.5
Gender	F	119	59.8
	M	80	40.2
Occupation	free work	25	12.6
	non-employee	89	44.7
	officer	12	6.0
Marital state	retired	73	36.7
	married	130	65.3
	separated	6	3.0
Education	unmarried	21	10.6
	widow	42	21.1
	high	65	32.7
Living place	primary	47	23.6
	secondary	61	30.7
	uneducated	26	13.1
Home statues	rural	41	20.6
	urban	158	79.4
Family living	own	144	72.4
	rent	55	27.6
Family living	alone	6	3.0
	with	193	97.0

Chronic disease	no	94	47.2
	yes	105	52.8
History of treatment	no	96	48.2
	yes	103	51.8
Physical disability	no	195	98.0
	yes	4	2.0
Monthly Income	<500	84	42.2
	500_ million	86	43.2
	>million	29	14.6
Smoking	no	117	58.8
	previous	43	21.6
	X smoke	39	19.6
Family history of psychiatry disease	no	191	96.0
	yes	8	4.0
No. of persons in family	1-3	19	9.5
	3-6	73	36.7
	>6	107	53.8

As shown in fig 1, 37.69% of elderly have severe depression while 33.17% of them have mild to moderate

depression. As shown in fig 2, (43, 31) elderly persons have hypertension and diabetes Mellitus respectively.

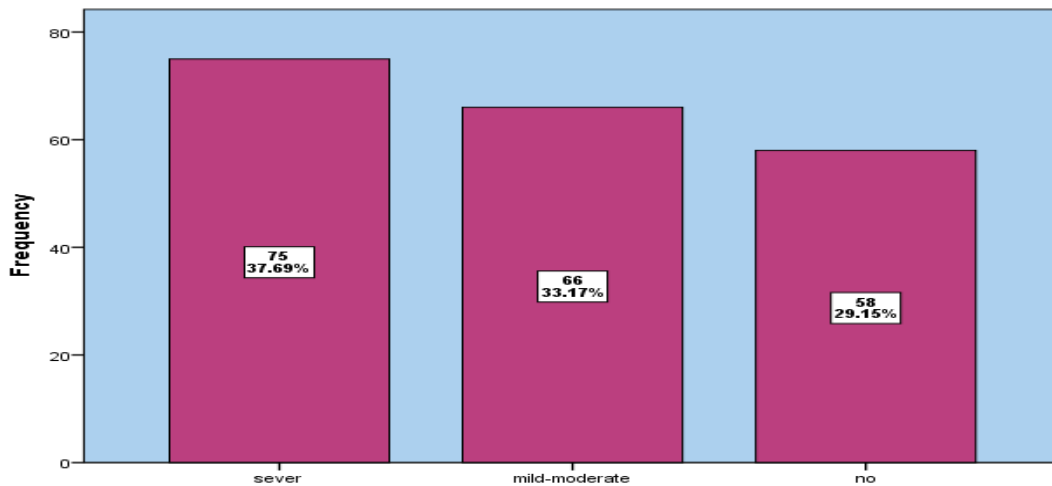


Fig. 1: Distribution of patients according to depression status.

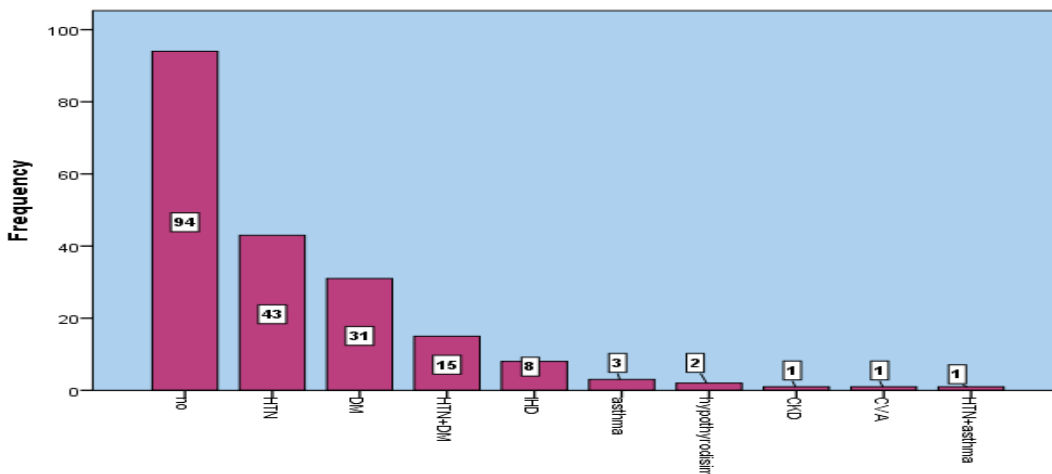


Fig. 2: distribution of patients according to chronic disease.

According to table 2, significant association between severe depression and age group 60-69 years old, also

severe depression occurs more in non-employee, married and primary-secondary education.

Table 2: Association between depression and variables.

Variables		Depression			P-value
		no	mild-moderate	severe	
	60-69	51	49	43	
		87.9%	74.2%	57.3%	
Age groups (years)	70-79	7	15	25	
		12.1%	22.7%	33.3%	0.002
	80-89	0	2	7	
		0.0%	3.0%	9.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
	Females	30	46	43	
		51.7%	69.7%	57.3%	
Gender	Males	28	20	32	0.1
		48.3%	30.3%	42.7%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
	free work	6	8	11	
		10.3%	12.1%	14.7%	
	non-employee	16	32	41	
Occupation		27.6%	48.5%	54.7%	0.011
	officer	7	4	1	
		12.1%	6.1%	1.3%	
	retired	29	22	22	
		50.0%	33.3%	29.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
	married	48	40	42	
		82.8%	60.6%	56.0%	
	separated	0	3	3	
Marital State		0.0%	4.5%	4.0%	0.042
	unmarried	5	7	9	
		8.6%	10.6%	12.0%	
	widow	5	16	21	
		8.6%	24.2%	28.0%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
	high	31	21	13	
		53.4%	31.8%	17.3%	
	primary	6	16	25	
		10.3%	24.2%	33.3%	
Education	secondary	18	20	23	0.0001
		31.0%	30.3%	30.7%	
	uneducated	3	9	14	
		5.2%	13.6%	18.7%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	

P-value \leq 0.05 (significant).

According to table 3, significant association between severe depression and living with family, old age lives with family have more depression than live alone (93.3%) of severe depression live with their family. also

severe depression occurs more in elderly have chronic diseases and history of treatment intake.

Table 3: association between depression and variables.

Variables		Depression			P-value
		no	mild-moderate	severe	
Place of living	Rural	10	13	18	0.6
		17.2%	19.7%	24.0%	
	Urban	48	53	57	
		82.8%	80.3%	76.0%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
Home status	Own	48	46	50	0.1
		82.8%	69.7%	66.7%	
	Rent	10	20	25	
		17.2%	30.3%	33.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
Living status	Alone	1	0	5	0.05
		1.7%	0.0%	6.7%	
	With	57	66	70	
		98.3%	100.0%	93.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
Chronic Disease	No	42	30	22	0.0001
		72.4%	45.5%	29.3%	
	Yes	16	36	53	
		27.6%	54.5%	70.7%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
History of Treatment	No	42	31	23	0.0001
		72.4%	47.0%	30.7%	
	Yes	16	35	52	
		27.6%	53.0%	69.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	

P-value \leq 0.05 (significant).

According to table 4, significant association between severe depression and monthly income less than 500.000 IQD and nonsmokers.

Table 4: Association between depression and variables.

Variables		Depression			P-value
		no	mild-moderate	severe	
Physical disability	No	57	66	72	0.2
		98.3%	100.0%	96.0%	
	Yes	1	0	3	
		1.7%	0.0%	4.0%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
Income monthly	<500	14	24	46	0.0001
		24.1%	36.4%	61.3%	
	>million	15	7	7	
		25.9%	10.6%	9.3%	
	500-million	29	35	22	
		50.0%	53.0%	29.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
	no	41	43	33	

		70.7%	65.2%	44.0%	
Smoking	previous	5	12	26	0.003
		8.6%	18.2%	34.7%	
	X-smoke	12	11	16	
		20.7%	16.7%	21.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
	No	57	63	71	
Psychiatry		98.3%	95.5%	94.7%	
disease	Yes	1	3	4	0.6
		1.7%	4.5%	5.3%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	
No. of persons	1-3	4	7	8	
		6.9%	10.6%	10.7%	
in family	3-6	22	23	28	
		37.9%	34.8%	37.3%	0.9
	>6	32	36	39	
		55.2%	54.5%	52.0%	
	Total	58	66	75	
		100.0%	100.0%	100.0%	

P-value ≤ 0.05 (significant).

DISCUSSION

In current study the prevalence of depression in elderly as following; 37.69% of elderly have severe depression while 33.17% of them have mild to moderate depression. This is similar to finding in study done in Ethiopia stated that prevalence of depression in this study 57.9% may be the indicative of a high burden due to depression among older adults in the community.^[8] The finding was congruent with that of a community-based cross-sectional study done in Chitradurga, India (60%),^[11] Heraklion, Greece (58.5%),^[12] Portugal (61.4%),^[13] and India (53.75%).^[14] Furthermore, the heterogeneity in the prevalence of depression among older adults could be explained by differences in study design, sampling procedure, socioeconomic-demographic characteristics, geographical location, and cultural differences. However, this study finding was higher than study done in North Indian (9.5%),^[15] Malaysian (16.5%),^[3] Tanzania 21.2%.^[16] a systematic review conducted in China (38.6%),^[9] Thailand (18.5%),^[17] Singapore 13.4%,^[18] China 32.8%,^[19] this variation might be due to social-cultural, economic disparities, and the heterogeneity in the classification of depression. Another probable reason is the difference in assessment technique; in Singapore, depression was assessed using the Geriatric Mental State (GMS) instrument.^[18] Our finding that aging was associated with DS in both men and women is consistent with several previous reports.^[20] Aging is characterized by important biological, psychological and social changes, and thus may affect DS prevalence. The association could also result from changes that often come in later life, including retirement, the death of loved ones, increased isolation, and medical problems. Groffen *et al.* reported that only current smoking, not past smoking, was associated with DS in white women in US.^[21] Current smoking was associated with increased

prevalence of DS in the Korean and Japanese female populations.^[22] On the other hand, a study in Eastern Europe found that current and past smoking was associated with DS in men but not in women.^[23] Effects of smoking on DS are complex: Nicotine has antidepressant properties, releasing dopamine in the mesolimbic reward pathway, thereby elevating mood and relieving stress.^[24] Another contribution was that our study assessed whether DS was more likely to occur in an early vs. late stage of chronic disease (i.e., within 5 years of diagnosis, or after this period) to identify when risk for depression is most elevated. Depression is a significant problem for chronic disease patients in particular, either as a pre-existing or co-existing condition, or as a consequence of chronic disease diagnosis and treatment. Several studies have reported that the associations of chronic disease with DS lasted for varying lengths of time depending on the type of chronic disease.^[25] However, few studies have focused on assessing DS among long-term chronic disease survivors in a non-medical setting.^[26] Regarding the associated factors, older adults whose educational status below college education more likely to develop depression compared to college and above. Malaysia,^[3] India (Punjab),^[27] Egypt,^[28] and Thailand.^[17] show that depressive symptoms are linked to educational attainment, and depression can be influenced by a variety of socioeconomic factors, in lower levels of educational achievement, there is no simple strategy to improve the health and economic success of a nation. Older adults with a monthly income less than 500,000 IQD were more likely to have depression. Similar to a finding of different studies reported in Asia (Myanmar).^[29] This is the finding that low-income people have more difficulty getting healthy services and care, which has been associated with higher levels of depression. McCall and

colleagues' findings in the United States supported prior studies that connected low income to a higher prevalence of depression.^[30] Many studies have examined the relationship between severe depression and family life. Living with family may protect against depression, while some say it may raise the risk, particularly in older persons. A Pinquart and Sörensen meta-analysis demonstrates the link between severe depression and family life (2007). The research indicated that elderly persons living with relatives had higher depression symptoms than those living alone. The research indicated that women and individuals in lower health were more affected.^[31] Zhang et al. (2019) evaluated family living arrangements and depression among Chinese older persons. The research indicated that older persons living with children had more depression symptoms than those living alone or with a spouse. The authors concluded that caring and disagreements with adult children may increase depression rates among older persons with children.^[32]

CONCLUSION

In the city of Al-Najaf, severe and moderate depression is common among the elderly. Hypertension and Type 2 diabetes mellitus are the most common chronic diseases among the elderly. serious depression is more common among those who are not in the workforce, who are married, and who have only completed secondary school. There is a strong correlation between having a family and being diagnosed with severe depression, and severe depression is also more common in the elderly who have a history of chronic illness and treatment. Low monthly income (less than 500,000 IQD) and not smoking is strongly correlated with clinical depression.

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