Original Contribution/Clinical Investigation

Depression in the older people: A perspective from Kurdistan of Iraq

Shene Fria Faiq *(1)*
Saman Anwar Faraj *(1)*
Asso Amin *(2)*
Adam Robinow *(3)*
Sarah Loftus *(3)*
Teshk Shawis *(3)*

(1) Department of family medicine, College of Medicine, University of Sulaimany. Sulaimany, Iraq
(2) Department of Medicine, College of Medicine, University of Sulaimany. Sulaimany, Iraq
(3) Department of Care of the Elderly, Colchester Hospital University Foundation Trust, Colchester, UK

Correspondence:
Dr Teshk Shawis,
Department of Care of the Elderly,
Colchester Hospital University Foundation Trust,
Colchester, UK
Email: *Teshk.Shawis@colchesterhospital.nhs.uk*

ABSTRACT

Introduction: Elderly populations are increasing world-wide. In the next few decades such increase will be more prominent in the developing world including Middle Eastern countries. Rate of morbidity is very much age related including depression. Impact of depression on health services is enormous world-wide. No data is available about how common depression is in Kurdistan and its correlates with gender, age, education level, economical status, marital status, housing, alcohol use, functional status and history of chronic medical illnesses.

Aim: To determine the prevalence of depression among elderly people in Kurdistan and identify any relation between depression in that population and gender, age, education level, Economical status, marital status, housing, alcohol use, functional status and history of chronic medical illnesses.

Method: The Geriatric Depression Scale -15(GDS-15) was translated to Kurdish and used for assessment of elderly patients, those above the age of 65. The researchers collected data via direct face to face interviews with the patient. 650 elderly subjects were questioned between January and June 2014.

Results: 64.2% of the study population scored at least 5 as per geriatric depression scale which is very significant. 22.8% had a score indicating they suffered moderate to severe depression. These findings had not been found in other similar studies in other countries. It was found to be statistically significantly that incidence of depression was higher in those who were older, female, had a higher level of education, from low socioeconomic status, unmarried and with chronic illness, a finding which is found in other studies

Key words: elderly, depression, Kurdistan

Introduction

There is an increasing elderly population and as a result an increase in the number of elderly patients with significant morbidity putting a strain on health services. This is thought to be due to the decline in global fertility and family size as well as the decline of mortality in older populations. A community is regarded as relatively old when the percentage of the population aged 65 and above exceeds 10%(1).

In the year 2000 only some of the developed countries experienced population aging, but it is expected that by the year 2030 it will be experienced by all developed countries (2).

Currently depression has a prevalence of 5-10% in the community, and is now a major health problem in the elderly population(3). Whether due to differences in how people view mental health in different generations, most of the elderly patients who present with mood symptoms often present to their primary care practitioners as opposed to mental health professionals(4). It is now becoming such a prevalent illness that it is expected to be the largest cause of disability by 2030(5).

Symptoms experienced by patients with depression have been categorised in the ICD-10, with the key symptoms being a persistent sadness or low mood throughout most of the day, anhedonia, and fatigue(6). In order to diagnose someone with depression, they must also have 2 of the following symptoms; disturbed sleep, lack of concentration, low self-esteem, reduced or increased appetite, recurrent thoughts of death or suicide, agitation or retardation, and guilt.

Several risk factors have been noted to play a role in the aetiology of depression. Genetic factors have a major influence, as described by a paper which showed an estimated heritability of 37% in twin studies and family studies indicate a two- to threefold increase in lifetime risk of developing major depressive disorder among first-degree relatives(7, 8). However genetic factors are less likely to play a role in late-onset depression than in early onset depression. Here social circumstances may be a larger cause, with issues such as marital status, adverse life events, unemployment and impaired social support(9). Consistent with this perspective, numerous social relationship domains show an inverse association with depression and depressive symptoms(10). Studies have shown that whilst being single puts people at a higher risk of depression in women than men, being married leads to a higher risk of depression in men than women(11). Notable factors that are more prevalent in the elderly population than the younger population are chronic pain and medical illness. This is because older adults will be more likely to have substantial co-morbidities and may find these illnesses more psychologically distressing as they can lead to increased disability, decreased independence and a disruption of social networks. This is particularly the case for patients who have cerebrovascular disease, Parkinson's disease, epilepsy, and cancer.

Later life depression is a major health problem because it is associated with an increased risk of morbidity as shown above, increased risk of suicide, increased impairment be it physical cognitive or social, and greater self-neglect. Because of these, there is an increased mortality associated with depression in the elderly. Data shows there are two peaks for ages at high risk of suicide, which are 25-30 year olds and the elderly population(12).

When looking in more depth at prevalence rates of depression in the elderly, it has been found that whilst major depression was rarer (1.8%), minor depression is more common (9.8%)(13). However it has also been found that the levels of detection and treatment of depression are low in the elderly, which is partly due to patient's refusal to speak freely about their depressive symptoms as a result of stigmatised beliefs, the fact that somatic symptoms are less useful to diagnose depression in the elderly than in the young, and partly to a lack of access to specialised mental health resources(14). There are several tools to screen for depression in the elderly population such as the Hamilton Rating Scale for Depression, the Geriatric Depression Scale and the Zung Self-Rating Depression Scale, however the most reliable and valid measure of geriatric depression is the GDS, with a specificity of 94%(15). There are two versions of the GDS, one which is 30 questions long and the other with 15 questions which was used in this study. Scores ranged from 0 to 15, with scores of 0-4 showing normal result, 5-9 indicating mild depression, and 10-15 indicating moderate to severe depression.

Aims

1) To determine the prevalence of depression among elderly people in Kurdistan.
2) To study the correlates of depression in late life:
Gender, Age, Education level, Economical status, Marital status, Housing, Alcohol use, Functional status and History of chronic medical illnesses

Patients and Methods

This is a cross-sectional study of non-institutionalized participants, aged 65 or more years old, which is based on multistage random sampling in three main governorates of Kurdistan, Sulaimani, Hawler and Duhok.

Data was collected from January 2014 to June 2014 in face to face household surveys of 650 residents of urban and rural areas.

The structured interview included assessment of socio-demographic characteristics, mental and physical health, functional status, drug history, and living arrangements.

Inclusion criteria:
1. Aged 65 years and above.
2. Those who speak Kurdish.

Exclusion criteria:
1. Patients who had other psychological problems.
2. Those who had dementia.
3. Those who speak Arabic. (those who do not speak Kurdish)

The study was approved by the scientific and the ethical committee of the University of Sulaimani.The interviews were conducted by the researchers directly.

Verbal consent was taken from the participant.

Assessment of depression was done using GDS-15.

Scoring of the GDS-15 ranges from 0-15. Indicating the grade of the depression from no depression to mild, moderate and severe depression.

We translated the GDS-15 into Kurdish, then retranslated it to English, then compared them to ensure fewer grammar errors.

Statistical analysis

Data concerning different variables were entered into an Excel office spreadsheet. Data analysis was done by using SPSS (version 20 software) computer program. The mean values, SD of the measurements were calculated. To test the relationship between different variables, comparisons were made using Chi-square testing. All P- values were based on 2-sided tests, and $p < 0.05$ was considered statistically significant.

Results

The mean + SD age of study population was 71.5 + 6.8 years. About 73.3% of them were below 75 years and 25.7% 75 years old and above. The majority of the study population were male (61.2%) and mostly people were married(68.9%). More than half of the study population were living in Sulaimani (53.5%), with the remainder living in Hawler and Duhok. Eighty seven percent of the study population were living in an urban area. In this study, most of the participants had 5 children and more (64.5%).

The majority of the study population lived in their own homes in the community (96.6%), with only 10.1% of participants living by themselves. Only 27.8% of the study population were in employment, with moderate economic status dominating (51.5%).

56.0% in this study were ex-smokers with 21.2% had never smoked. Most study participants (83.3%) were mobilised without any aids, 14.1% walked with a stick, and only 2.6% used other aids. About 6.1% of them had a history of drinking alcohol and 75.5% used medications for chronic diseases. Across the whole study 67.2% used 1-2 medications and 32.4% used 3 medications and above. The percentages of a positive history of diabetes, hypertension, stroke, ischemic heart disease, chronic obstructive pulmonary disease, Parkinson's disease, and other diseases were 26.2%, 46.6%, 6.5%, 10.8%, 11.2%, 7.4%, 30.5% respectively. The mean duration of disease in the study population was 2.3 + 0.7 years. The mean times of attacks of disease were 1.7 + 1.3. Despite multiple co-morbidities about 72% of the population had no history of hospital admission.

The results show that most of the study population had mild depression (41.4%), Table 1.

Table 1: Depression scale according to the severity of depression

Sex	Depression scale			Total
	No depression	Mild	Moderate to severe	
Male	176 44.2%	157 39.4%	65 16.3%	398 100.0%
Female	57 22.6%	112 44.4%	83 32.9%	252 100.0%

Although most of the study population who were selected from both the community and nursing homes had depression (scored 5 - 15), the relationship between place of abode and depression was still statistically not significant (P> 0.05). The relationship between area of residence and depression scale was also studied and the association was statistically significant (P=0.031). Most of the study population in Sulaimani, Duhok, and Hawler had depression (scored 5 - 15), but the highest percentage was in Duhok 73.9%.

The relationship between gender and depression scale was statistically highly significant (P<0.01). Females had a higher percentage of depression (77.4%) than males (55.8%).

The association between gender and depression scale, according to the severity of depression, was also studied. The relationship was found statistically highly significant (P<0.01), i.e. females also had higher percentages of both (mild) and (moderate to severe) depression (44.4% and 32.9%) than males (39.4% and 16.3%) respectively, Table 2.

Table 2: Gender and grade of depression

Sex	Depression scale			Total
	No depression	Mild	Moderate to severe	
Male	176 44.2%	157 39.4%	65 16.3%	398 100.0%
Female	57 22.6%	112 44.4%	83 32.9%	252 100.0%

Chi= 39.70, df= 2, P value= 0.000

Discussion

This cross sectional study demonstrates that there is a high prevalence of depression in the elderly, with 64.2% of participants affected, the majority of whom were suffering mild depression (41.4%) and just under a third (22.8%) moderately to severely depressed. Given the majority of the study population were male (61.2%) and the rate of depression in women was found to be significantly higher (77.4% vs 55.8%, P-value 0.001), this may even be a disproportionately low figure. Whilst this supports the hypothesis the notion that depression is a mounting issue, it is even more than would be expected. Furthermore, none of those identified as depressed had a pre-existing diagnosis of depression. Such high percentage might be the possibility of Geriatrics Depression scale questioning only has specificity and sensitivity in diagnosing depression if asked in English to an English speaking subjects with western social values and standard of education in society. However the questionnaire in this study was transplanted to Kurdish and the subjects were all Kurdish with middle-eastern social values and standard of education. Whether the subjects understood the reasoning for Geriatric Depression Scale questions when asked would have made a difference.

According to a systematic review of community-based studies on depression in later life from The Netherlands, higher percentages of depression were demonstrated in women(16). The overall prevalence rates were also markedly lower than found in this study, with the average at 13.5% and a range of 0.4-35%.9 Given the review noted correlation of low socio-economic situation with depression and the discrepancy of prevalence between these studies, it is reasonable to hypothesize that there may have been higher incidence of such risk factors in this study population(16).

A review from Brazil, a more comparable developing country, showed that depression was more prevalent in the younger elderly (aged 65-74) with no pronounced difference between the sexes(17). As our study's participants were mostly under 75, with a mean age of 71.5, this might be one explanation for its finding such high levels of depression.

Compared to the study in Brazil, the prevalence of depression in Kurdistan was actually higher in late elderly age group (75 years and over) (74.3%) compared to early elderly age group (60.7%), P-value=0.002. Additionally, a similar study in The Netherlands revealed that the late elderly age group is at higher risk for developing depression(18).

That being said, the proportion of participants with mild vs moderate and severe depression is supported by an Iranian study of elderly people in a nursing home in Tehran that revealed higher rates of mild depression (50%) compared to moderate and severe depression (29.5% and 10.7% respectively)(19). This data has been mirrored in other cases, where a study in Canada also revealed more prevalent rates of mild depression compared to major depression (2.6% and 4% respectively)(20).

A study in Lebanon showed that elderly people with dementia were more likely to be depressed, with a prevalence of 41.2% compared to 14.5% in those without cognitive impairment(21). Though this study did not specifically comment on dementia, and given the low proportion that were from a nursing home it might be assumed to be low, it would be interesting to have this data. Nevertheless this supports the evidence that disease is a risk factor for depression, as shown in our study with higher rates of depression in those with COPD, Parkinson's, hypertension, diabetes, hospital admission within a year, reduced mobility and polypharmacy (with statistical significance shown for all but COPD).

An interesting point was that smoking did not correlate with mood, and those who drank alcohol had less risk of developing depression in our study (P-value 0.036). There is no data in this study and limited data in general on whether there is any correlation between religion and depression, but it may be a factor and even implicated in the link with alcohol, particularly in this study given the population is predominantly Muslim.

Residential and nursing home residents generally have poorer health than those in their own homes and so by this reasoning would be more at risk of depression. Supporting this, a study from Turkey exposed that depression among the elderly population living in nursing homes was indeed more prevalent than for those living at their own home, 41% and 29% respectively(22). However living in nursing home in this study did not increase the chance of depression (P-value 0.654), though this may be due to smaller number of nursing home participants.

The prevalence of depression among elderly Pakistanis in a similar cross-sectional study found higher rates of depression among those with multiple diseases, financial problems and taking numerous medications(23). A study in Brazil has concurred with this point, showing depression is significantly more common in the presence of medical diseases, poor functional capacity, and hospital admissions in the last 12

Table 3

	Depression scale		Total number of patients
	0-4	5-15	
Age			Chi= 9.95, df=1, P value= 0.002
65-74	190 (39.3%)	293 (60.7%)	483
≥ 75	43 (25.7%)	124 (74.3%)	167
Level of education			Chi= 40.24, df= 5, P value= 0.001
Illiterate	88 (25.6%)	256 (74.4%)	344
Primary	47 (41.6%)	66 (58.4%)	113
Secondary	27 (50.9%)	26 (49.1%)	53
Institute	23 (47.9%)	25 (52.1%)	48
University	39 (58.2%)	28 (41.8%)	67
Higher	9 (36.0%)	16 (64.0%)	25
Economic status			Chi= 50.10, df= 2, P value= 0.0001
Low	13 (11.7%)	98 (88.3%)	111
Moderate	115 (34.3%)	220 (65.7%)	335
High	105 (51.5%)	99 (48.5%)	204
Marital status			Chi= 24.25, df= 3, P value= 0.0001
Married	188 (42.0%)	260 (58.0%)	448
Unmarried	45 (22.3%)	157 (77.7%)	202
Mobility			Chi= 15.02, df= 2, P value= 0.001
Uses aids	24 (22.2%)	84 (77.8%)	108
Does not use aids	209 (38.8%)	330 (61.2%)	539
Diabetes			*Chi= 14.97, df= 1, P value= 0.001*
Present	40 (23.5%)	130 (76.5%)	170
Absent	192 (40.1%)	287 (59.9%)	479
Hypertension			*Chi= 23.57, df= 1, P value= 0.001*
Present	79 (26.1%)	224 (73.9%)	303
Absent	154 (44.4%)	193 (55.6%)	347
COPD			*Chi= 4.47, df= 1, P value= 0.034*
Yes	18 (24.7%)	55 (75.3%)	73
No	215 (37.3%)	362 (62.7%)	577
Parkinson's disease			*Chi= 14.57, df= 1, P value= 0.001*
Yes	5 (10.4%)	43 (89.6%)	48
No	228 (37.9%)	374 (62.1%)	602

months.10 Furthermore, in a big Saudi study involving 7,970 people, depressive symptoms were found in about 40% and was also shown to be strongly associated with poor functional capacity and multiple medical diseases with polypharmacy(24). Additionally higher prevalence of depression was seen in those with poor housing conditions, poor educational status, living in remote areas, the unemployed, divorced or widowed and women(24). This study highlighted that the single, widowed, divorced, those with poor economic status, the illiterate and interestingly also the highly educated, are more likely to develop depression. Further to this, those who rented houses rather than owned them were found to have a higher prevalence.

Conclusion

This study highlights the fact that depression is a common condition in the elderly population of Kurdistan. Life expectancy in Kurdistan is already increasing and it will continue to do so as part of world-wide increase in the elderly population. Among the health problems of this age, affective disorders are becoming apparently common. In order to cope with these changes, improvement in or even establishment of health care services to this age group is an essential health strategy focus that needs to be on both under and post graduate training in care of the elderly mental health and public awareness about depression in the elderly. Health systems must be designed to meet the needs of the population served.

References

1. Gavrilov L.A., Heuveline P., Aging of Population, The Encyclopedia of Population. New York, Macmillan Reference USA, 2003
2. United Nations, Department of Economic and Social Affairs, Population Division (2015), World Population Ageing, 2015
3. Pinquart M, Duberstein PR, Lyness JM. Effects of psychotherapy and other behavioral interventions on clinically depressed older adults: A meta-analysis. Aging and Mental Health. 2007;11:645-657.
4. Unützer J, Katon W, Sullivan M, Miranda J. Treating Depressed Older Adults in Primary Care: Narrowing the Gap between Efficacy and Effectiveness. The Milbank Quarterly. 1999;77(2):225-256.
5. Mathers C, Loncar D. Projections of Global Mortality and Burden of Disease from 2002 to 2030. PLoS Medicine. 2006;3(11):e442.
6. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic criteria for research [Internet]. 10th ed. Geneva: world health organisation; 2017 [cited 1 February 2017]. Available from: http://www.who.int/classifications/icd/en/GRNBOOK.pdf
7. Sullivan P, Neale M, Kendler K. Genetic Epidemiology of Major Depression: Review and Meta-Analysis. American Journal of Psychiatry. 2000;157(10):1552-1562.
8. Lohoff F. Overview of the Genetics of Major Depressive Disorder. Current Psychiatry Reports. 2010;12(6):539-546.
9. Barger S, Messerli-Bürgy N, Barth J. Social relationship correlates of major depressive disorder and depressive symptoms in Switzerland: nationally representative cross sectional study. BMC Public Health. 2014;14(1).
10. Cacioppo J, Hawkley L, Ernst J, Burleson M, Berntson G, Nouriani B et al. Loneliness within a nomological net: An evolutionary perspective. Journal of Research in Personality. 2006;40(6):1054-1085.
11. Umberson D, Montez JK. Social Relationships and Health: A Flashpoint for Health Policy. Journal of health and social behavior. 2010;51(Suppl):S54-S66.
12. Conwell Y, Van Orden K, Caine ED. Suicide in Older Adults. The Psychiatric clinics of North America. 2011;34(2):451-468. doi:10.1016/j.psc.2011.02.002.
13. Beekman A T, Copeland J R, Prince M J, Review of community prevalence of depression in later life, The British Journal of Psychiatry Apr 1999, 174 (4) 307-311; DOI: 10.1192/bjp.174.4.307
14. Lyness J, Cox C, Curry J, Conwell Y, King D, Caine E. Older Age and the Underreporting of Depressive Symptoms. Journal of the American Geriatrics Society. 1995;43(3):216-221.
15. Yesavage J, Brink T, Rose T, Lum O, Huang V, Adey M et al. Development and validation of a geriatric depression screening scale: A preliminary report. Journal of Psychiatric Research. 1982;17(1):37-49.
16. Beekman AT, Copeland JR, Prince MJ. Review of community prevalence of depression in later life. The British Journal of Psychiatry 1999; 174:307-311.
17. Luis BS, Baxter S, Gerada GF, Fabio G. Depression morbidity in later life: Prevalence and correlates in a developing country. The American Journal of Geriatric Psychiatry 2007;15 (9): 790-799.
18. Licht-Strunk E, van der Kooij KG, van Schaik DJ F, van Marwijk HWJ, van Hout HPJ, de Haan M. and Beekman ATF. Prevalence of depression in older patients consulting their general practitioner in The Netherlands. Int. J. Geriat. Psychiatry 2005; 20: 1013-1019.
19. Nazemi L, Skoog I, Karlsson I, Hosseni S, Hosseni M, Hosseinzadeh MJ, Mohammadi MR, Pouransari Z, Chamari M, Baikpour M. Depression, prevalence and some risk factors in elderly Nursing Homes in Tehran, Iran. Iran Journal of Public Health 2013; 42(6): 559-569.
20. Østbye T, Kristjansson B, Hill G, Newman SC, Brouwer RN, McDowell I. Prevalence and predictors of depression in elderly Canadians: The Canadian study of Health and Aging. Chronic diseases in Canada 2005; 26(4): 93-99.
21. El Asmar K, Chaaya M, Phung KTT, Atweh S, Ghosn H, Khoury RM, Prince M, Waldemar G, Anxiety among older adults in Lebanon: preliminary data from Beirut and Mount. Alzheimer's & Dementia: The Journal of the Alzheimer's Association, 2014; 10(4): 595-P595
22. Tsuang MT, Faraone SV. The genetics of mood disorders. Baltimore MD: Johns Hopkins University Press; 1990.
23. Ganatra HA, Zafar SN, Qidwai W, Rozi S. Prevalence and predictors of depression among an elderly population of Pakistan. Ageing and Mental Health 2008; 12(3): 349-356.
24. Al-shammari SA, Al-Subaie A. Prevalence and correlates of depression among Saudi elderly. International Journal of Geriatric Psychiatry 1999; 14(9): 739-747.