Prevalence and Predictors of Depression amongst Elderly

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Abstract
Objective: To determine prevalence of depression in elderly and identify predictors of depression in elderly.  
Patients & Methods: This cross-sectional study was conducted at Holy Family Hospital Rawalpindi from October 2013 to December 2013 among elderly coming to outdoor patient department. Patients and their attendants of age 64 or above were included in the study. Two hundred and nine males and females were selected by consecutive sampling technique. Questionnaire included socio demographic profile and Geriatric Depression Scale (GDS) containing characteristics like age, sex, income, education, marital relation, care giving, suicidal ideas, sleep, having children or not and financial support. Analysis was done by utilizing SPSS16. The results were recorded as frequencies. Chi-square test and Fisher’s exact test were applied to the data for calculation of association. p-value <.05 was considered statistically significant.  
Results: A sample of 209 males and females was studied and depression was found to be prevalent among 28.71%. There was no statistically significant relationship between education, intimacy, sleep, having children or not, financial support and depression (p-value > 0.05).The analysis showed that there was a significant relationship between gender, people ever diagnosed for depression in life, persons having suicidal ideas at least once in life, poor marital relationship, monthly income and care of elderly  
Conclusion: High prevalence of depression was found among elderly community and diversity exists in predicting factors.  
Keywords: Depression, Elderly, Pakistan, Prevalence.

Introduction
In developing countries depression is a disease of immense public health importance. By the year 2020 depression will be the significant cause of Disability Adjusted life years in developing world. Elderly are more susceptible to it. Prevalence of depression is found to be 12% by EURODEP consortium of studies using the GMS-AGECAT (Geriatric Mental State Examination-Automated Geriatric Examination for Computer –Assisted Taxonomy) system algorithm. Family history of depression played as a risk factor for depression in old age. Persons having history of depression in any relative or early episodes of depression are more likely to have depression in old age. Depending upon the symptoms, depression can be minor or major; however it is a common problem for elderly people. Even in developed countries depression is undertreated and under diagnosed. In middle and high income communities depression prevails more in elder than in adolescents. Due to scientific development and public health awareness life expectancy is increased over the years with more people in elderly phase than before. There is a simultaneous fall in fertility rate. This resulted into a shift leading to increased number of geriatric population. Pakistan with 180 million population and dependency ratio 0.75 has chronic disease burden attributing 42% of all deaths. In primary care setup depression is under diagnosed and undertreated. The fate of elderly depression is incomplete recovery with higher relapse. The elderly having depression show overall poorer functioning than those with heart disease, hypertension or diabetes. Weaker health system with no specific elderly clinics, declining social moral standards, lack of old age benefits, mechanical life, decreased harmony with nature, competitive life style, disposable culture and injustice all throw the individuals into valley of depression, sometimes for all the life years to follow. India showed point prevalence between 13 to 25%. Many studies in Pakistan showed high level of prevalence of anxiety and depression. Mirza and Jenkins declared mean prevalence of anxiety and depression in community studies to be 34 to 66%. This study was conducted to determine prevalence of depression in elderly and to identify predictors of depression in elderly.
Patients and Methods

A cross sectional study was conducted among elderly coming to outdoor patient department of Holy Family Hospital Rawalpindi (HFH). Patients here come from different walks of life with a diverse family background and social status. All the subjects, patients and their attendants of age 64 or above were included in the study. Subjects were selected by consecutive sampling technique. Interviews were conducted by trained workers with the help of an NGO, AUO. Informed consent was taken and strict confidentiality was ensured. Questionnaire included socio demographic profile and GDS. A pilot study was conducted on 30 subjects after translating the scale in Urdu for better understanding of most of the subjects. The demographic profile and questionnaire contained the characteristics like age, sex, education, intimacy, suicidal ideas, sleep, quality of marital relation, family income, having children or not, care giver and financial support. Joint family is defined as having two to three nuclear families in it while nuclear family is a unit having parents and their dependent children. A single married or unmarried person was taken as a nuclear family. Geriatric Depression Scale consists of 15 items each having response yes or no. The cut off score for depression was 10 and above. Analysis was done by utilizing SPSS 16. Descriptive statistics were recorded as frequencies. Chi-square test and Fisher’s exact test were applied to the data to calculate the association. P value of less than 0.05 was considered as statistically significant value.

Results

In a sample of 209 subjects 56.5% (n=118) were males and 43.5% (n=91) were females. 12.6% (n=25) were illiterate, 3.5%(n=7) could read or write,5.5% (n=11) had primary education,11.1% (n=22) educated upto middle class, 53.8% (107) were matriculate or inter, 12.9% (n=27) were graduate or above.55.1% (n=113) were having some intimate relationship that is close, familiar, and affectionate personal relationship but other 42.9%(n=88) did not have such kind of relationship. 71.5%(n=123) have noticed a fall in total number of sleeping hours over the time,4.3%(n=9) have noticed an increase in sleeping hours and 19.1%(n=40) did not notice any change. About 32.7% (n=32) of married couples had happy marital relationship while 67.3% (n=66) had a poor relationship. About 48.3% (n=100) had income below Rs 10,000 per month, 17.9% (n=37) had income between Rs.10,000 and 30,000 per month and 33.8% (n=70) had monthly income Rs 30,000 or above 40.2% (n=84) were self supported and 59.8 % (n=125) had financial support from other sources. Among the subjects studied 97.3% (n=183) had children and 2.7% (n=12) did not have. 60.8%(n=127) had a care giver but 39.2%(n=82) did not have. Prevalence of depression was more common among females 49.4% (n=45) as compared to males12.7 % (n=15).

Depression was found among 28.71 % cases; 13.3%( n=26) were at least once diagnosed as depressed and 86.7%(n=169) were never diagnosed as depressed, 30.8% (n=60) of respondents were found to have suicidal ideas once or for more times in their whole lives and 69.2% (n=135) never had such ideas. The analysis shows that there was no statistically significant relationship between education, intimacy, sleep, having children or having not, financial support and depression (P-value > 0.05). The analysis also shows that there was a significant relationship between gender, who were diagnosed for depression in life, persons having suicidal ideas at least once in life, poor marital relationship, monthly income between Rs10,000 to 30,000,elderly having no care giver and depression (P-value < 0.05).(Table.1)

Discussion

Though depression is often considered to be normal response of aging but it has a strong impact on elderly health. 17 Epidemiological transition and aging has lead to an increased prevalence of geriatric depression. 18 Elderly depression may be the 2nd biggest cause of burden of diseases in developing world in 2020.1 The present study was conducted to determine prevalence and predictors of
depression in elderly. In our study depression was found in 28.71% cases. There has been diversity in prevalence of depression in different studies depending upon the cultural, social and racial factors. In another study conducted previously prevalence of depression was 29.36%; out of which 22.48% were mildly depressed and 6.88% had major depression.17 A different finding was observed in a study where scores on GDS indicated elevated level of depression with 67.1% scoring above cut off for depression.18 Other studies conducted determined the prevalence as 31.7%18, 47.5%,20,12.94%,21 21.7%22, 41.1% and 45.8% in urban and rural community respectively.23 The median prevalence rate of depressive disorders in the world for the elderly population was determined to be 10.3%. The median prevalence rate of depression among the elderly Indian population was determined to be 21.9%.24 In our study depression was more common among females (49.4%) as compared to males (12.7%). Other studies in different regions of world showed similar results. Females (31.39%) were more affected than males (25.93%).17 Depression was high in females in multiple studies as [37.5%,18 57.1% as compared to males 35.3%,23 46% as compared to males 36.7%].25 Geriatric depression was significantly associated with female sex.23 Few studies showed no significant association between depression and gender.26,21 In studies conducted previously, income and education level proved to be major predictors for depression in elderly. In our study depression was more prevalent among those with family income between Rs 10,000 to Rs 30,000. It may due to the fact that middle class is more concerned about improving their life standards as compared to the poor one. However Mumford DB et al found an inverse relationship between socio-economic condition and depression which being higher in low socioeconomic condition (60.93%).16 In a study conducted previously depression was high in low socioeconomic group 34%.18 In another study depression was significantly associated with income.19 Depression was significantly associated with social problems p<0.00120 in a study conducted in Khartoum State. Socioeconomic condition, education, household income and intellect were included in step 1 as covariates, and accounted for 19% of the variance in depression.20,27 When analyzed according to educational status, significant differences were found between different groups. Low educational status reduces quality of life and increases level of depression.28 In a study conducted in urban area of Maharashtra India illiterate were more depressed (16.46%) than literate (15.71%) though the association was not significant.21 In another study geriatric depression was significantly associated with illiteracy in an urban set up (p value 0.015).23 Many studies also analyzed the rate of depression high in those who live alone and it was found that depression was three times more in elderly with social problems such as inability to visit friends and relatives, being worried about children, feeling lonely, having no friends (p< 0.001).20 In a systematic review done on 74 community-based mental health surveys on depression in geriatric population, living alone was found to be a modifiable risk factor.27 In our study depression was more common among those having children (31.6%) compared to those not having (16.6%). Similar results were observed in a study where elders living with their off springs have depression (68.4%) as compared to who lived in elderly homes (36.4%).25 However contrast findings were observed in other studies.21,23 Depression was more common in individual who are facing poor marital relationship (15.5%) than those who were enjoying happy marital relation (15.1%) in this study and this has been supported by many other studies.

Conclusion

High prevalence of depression was found among elderly community and diversity exists in predicting factors. There is a strong need for regular and systemic counselling of elderly. Community and non government organization in collaboration with public health system can play a vital role to combat the problem.

Conflict of interest

This study has no conflict of interest to declare by any author.

References

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