FREQUENCY OF DEPRESSION WITH ASSOCIATED RISK FACTORS AMONG ELDERLY IN TWO TERTIARY CARE HOSPITALS IN RAWALPINDI

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ABSTRACT

Introduction: Depression is a disease which has assumed immense public health importance in developing countries with fast changing life styles and increasing life spans. Depression is usually under diagnosed and under treated. The elderly having depression show overall poorer social participation than those with heart disease, hypertension or diabetes.

Objective: To determine frequency of depression in elderly population visiting outpatient departments of tertiary care hospitals and to assess its various risk factors.

Study Design: Cross sectional analytical study

Place and Duration of Study: Outpatient's departments of Pak Emirates Military Hospital (PEMH) and Benazir Bhutto Hospital (BBH) from January to March 2018.

Material and Methods: Consecutive sampling was done and sample size was calculated by taking mean prevalence at 34% and Confidence interval at 95%. Data collection tool was Interview-based structured questionnaire and geriatric depression scale (GDS) which include age, sex, education, marital status, relation with spouse, having children and financial support. Frequencies and percentages were assessed and Chi-square was used for determining the association among various risk factors.

Results: Out of 347 patients, 51.6% (n=179) were depressed according to GDS. 57% (n=102) of the depressed were between 61 to 70 years. Educational status (*p*-value 0.04) and urban residence (*p*-value 0.03) were found to be associated with depression. Depression in divorced was found to be 100%. Having no children was also strongly associated with depression (*p*-value 0.01). Cross tabulation of depression with ethnicity and employment was statistically insignificant.

Conclusion: More than 50% of the elderly patients attending hospital OPD were found to be depressed according to GDS. 71% of the depressed were diagnose for the first time. Marital status, education, urban residence and having no children were significantly associated with depression while good relation with spouse was having protective effect towards depression.

Keywords: Depression, Elderly, Frequency, Geriatric Depression Scale (GDS).

INTRODUCTION

Depression is a disease which has assumed immense public health importance with fast changing life styles and increasing life spans. It is the 2nd leading cause of disability worldwide and the WHO global burden of disease study projections show that depression will be leading Disability Adjusted Life Years (DALYs) by 2020 in developing nations[1,2]. Although usually depression is under diagnosed and under treated, yet around 350 million people live with depression globally.

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Elderly are more susceptible to depression[3]. It is the most common psychiatric disorder among elderly in Pakistan that cannot be neglected[4]. Unfortunately, it is not yet perceived as the priority public health problem in this part of the world[5]. It increases the risk of cardiac disease and suicidal tendency in elderly. Depression reduces elderly's ability to rehabilitate. It is also interesting to note that elderly populations above 55 years with depression have four times higher death rate than those without depression[6,7]. 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 200 million population and dependency ratio 0.7510 has chronic disease burden attributing 42% of all deaths. The fate of elderly depression is incomplete recovery with higher relapse[3]. The elderly having depression show overall poorer social participation than those with heart disease, hypertension or diabetes[3]. 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[3]. As geriatric depression is under diagnosed so the magnitude of the problem is much greater than what is being reported[5].

Very few studies on geriatric depression have been conducted so far in Pakistan to address this issue. 34% was the mean prevalence of anxiety and depression in community setup and not among elderly[8]. A quantitative study was conducted in Karachi, Pakistan and it identified 22.9% prevalence of depression among elderly[9]. In Pakistan, female gender has been closely correlated with high prevalence of depression as compared to men. A study done in 2006 found that rate of depression among female is double i.e. 30% to that of male which is 15.7%[10]. Elderly females are more likely to suffer from depression than the males because of intergenerational gap and lack of physical and emotional support in a traditional family system by the younger generation. Besides, death of spouse can break the family system leaving elderly without support. An empirical study conducted in Karachi reported 33% of prevalence of depression which was double in females than males which was 15.7%[11,5]. This study is conducted with the objectives to determine frequency of depression among elderly, assess its predictors and to suggest recommendations for prevention.

MATERIAL AND METHODS

This cross sectional analytical study was conducted at Outpatient department of Pak Emirates Military Hospital (PEMH) and Benazir Bhutto Hospital (BBH) from January to March 2018. Taking mean prevalence of 34% from literature review with 95% confidence interval, sample of 347 was selected. Non-Probability Consecutive Sampling was used in which every subject fulfilling the inclusion criteria were included. Data collection tool was Interview-based structured questionnaire which include age, sex, education, marital status, relation with spouse, having children and financial support. A 15 questioned Geriatric Depression Scale (GDS) was used in the study[12]. Every desired answer was assigned single score. A score of more than 5 out of 15 was suggestive of depression.

Table-I: Shows descriptive analysis.

Frequency of Depression	51.6% (n=179)
Gender distribution	Females 58% (n=104)
Median Age (Range)	71 years (61-92)
Most affected Age Group	61-70 years (57%)

Table-II: Shows association of depression with various risk factors along with *p*-value.

Characteristic	Depression		*p*-value
	Yes (%)	No (%)	
Residence			
Urban	109 (56.4%)	84 (43.6%)	0.03
Rural	70 (45.5%)	84 (54.5%)	
Marital Status			
Un Married	5 (83%)	1 (7%)	0.00
Divorced	8 (100%)	0 (0%)	
Widowed	13 (72%)	5 (28%)	

Consenting elderly >60 years of age attending OPD of PEMH and BBH were included while deaf/dumb, blind, terminally ill, having known malignancy and known psychiatric patients other than depression were excluded from the study. Frequencies and percentages were assessed for descriptive analysis while Chi-square was used to determine association among various risk factors.

RESULTS

Out of 347 subjects, 51.6% (n=179) were found to be depressed according to GDS. Descriptive analysis is shown in table-I.

Females were more depressed than males and male to female ratio was 1:1.4 while median age was 71 years with range of 61-92 years. Most affected age group was 61-70 years (57%).

The bar graph showed the age and gender distribution of depression in elderly. Here we estimate that 61-70 years' age group is more effected and females were more effected than males.

Urban residence, marital status, having no child and educational status came out to be significant factors which is shown in table-II & III.

Out of 193 urban residents, 56% (n=109) were depressed while 43.6% (n=84) were non depressed (*p*-value=0.03). In marital status, 83, 100 and 72% of the unmarried, divorced and widowed were found to be depressed respectively (*p*-value=0.00) according to GDS.

Out of total of 68 persons with no child, 72% (n=49) were depressed (*p*-value=0.01) while educational status also came out to be significant predictor for depression (*p*-value=0.04) as depression status seemed to be reduced with increase in educational level.

Employment status, ethnicity, known metabolic disorder and nuclear family were not significantly associated with depression as shown in table-IV.

Table-III: Shows association of depression with various risk factors along with *p*-value.

Characteristic	Depression		*p*-value
	Yes (%)	No (%)	
Children Status			
Having Child	130 (46.6%)	149 (53.4%)	0.01
No Child	49 (72%)	19 (28%)	
Educational Status			
Illiterate	41 (59.4%)	28 (40.6%)	0.04
Middle	58 (56.3%)	45 (43.7%)	
Matric	35 (59.3%)	24 (40.7%)	
Intermediate	24(45%)	29 (55%)	
Graduation	7 (41%)	10 (59%)	
Masters & above	14 (30.4%)	32 (69.6)	

Table-IV: Shows association of depression with various risk factors along with *p*-value.

Characteristics	Depression		*p*-value
	Yes	No	
Employment Status			
Employed	86 (48%)	76 (45.2%)	0.08
Un employed	93 (52%)	92 (54.8%)	
Nuclear Family			
Yes	89 (49.7%)	71 (42%)	0.1
No	90 (50.3%)	97 (58%)	
Metabolic Disorder			
Yes	92 (51%)	82 (49%)	0.09
No	87 (49%)	86 (51%)	

DISCUSSION

Although depression is usually taken as normal response of aging but it has huge impact on elderly's health[13]. Elderly depression may become the biggest cause of disease burden among developing nations by 2020[14]. This study was carried out to determine frequency and risk factors of depression among elderly. In our study frequency of depression came out to be 51.6%. There is wide range of prevalence of depression in various studies according to the racial, sociopolitical and cultural factors.

In a previously conducted study, prevalence of depression was 29% of which 6.88% were of major depression[13]. Studies have revealed that the prevalence rates for depression in community samples of elderly in India vary from 6 to 50%[15]. The global median prevalence of depression for the elderly was 11.7%[16]. In our study, females were more effected (58%) than males. Various other studies showed same results. Depression was high in females in multiple studies as 37.5% and 57.1% as compared to males which came out to be 35.3% and 46%[17,18]. In previous studies, education level and income were main risk factors for depression among elderly. In a study conducted previously depression was high in low socioeconomic group 34%[17]. In ourstudy, living in urban areas, marital status, educational status and having no children were associated with elderly depression. A study in Pakistan also reported female gender, elderly without a spouse, low level of education, and unemployment to be independent predictors of depression[11]. Similar findings have been reported among the geriatric population in the urban slums of Mumbai[19]. In a study conducted previously the rate of depression washigher among illiterate/ semiliterate 66.7% than those having secondary/ university education 24.5%[20]. In another previous study, depression among elderly was significantly associated with illiteracy 0.015[21]. In our study, having no child was significantly associated with depression (72%) compared to those having children 28%. Similar results were seen in various other studies[21,22]. Opposite results were found in other studies[20]. In this study, poor marital relationship (72% and 100%) was significant predictor of depression which is supported by various other studies.

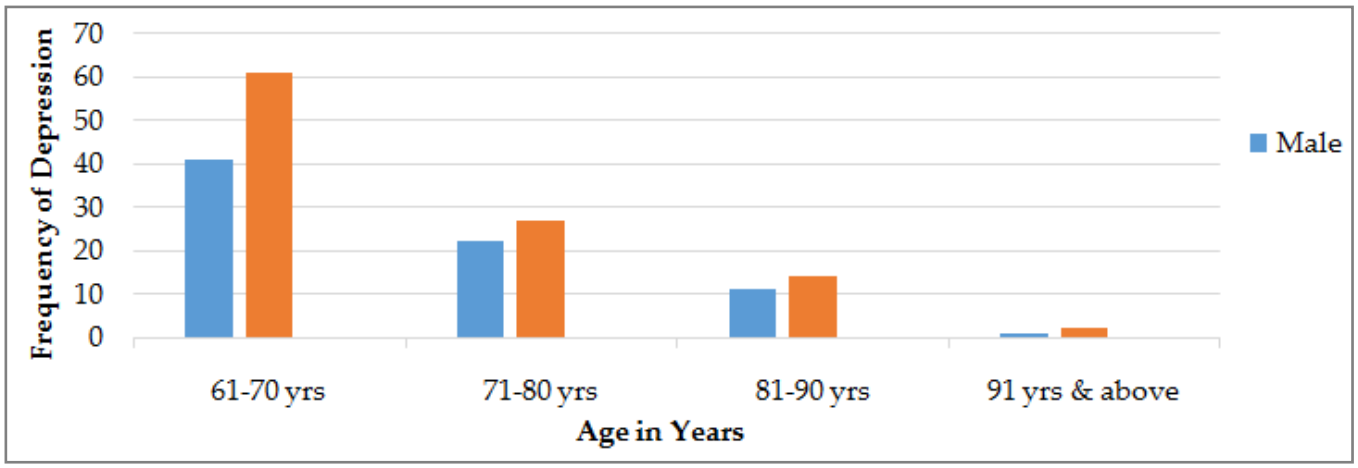

Figure: Age and gender distribution of depression in elderly.

A cross-sectional study in a tertiary care hospital in Karachi found the prevalence of depression to be 19.5% in the elderly aged 65 years and above[11]. A different finding was observed in a study where scores on GDS indicated elevated level of depression symptomology with 67.1% scoring above cut off for depression[23].

CONCLUSION

More than 50% of the elderly patients attending hospital OPD were found to be

depressed according to GDS. 71% of the depressed were diagnosed for the first time. Marital status, education, urban residence and having no children were significantly associated with depression while good relation with spouse was having protective effect towards depression.

It is recommended that in case of depression, must seek professional help as it is a treatable condition. Do not take depression as stigma because stigma fades away the confidence that depression is a treatable health issue. Planning to address depressive disorder at primary care level is required. Screening programs for early diagnosis/detection of depression must be initiated not only for effective treatment and recovery but also to avoid long DALYs. Pre marriage counselling of eligible couples must be done to avoid post marital depression syndrome. Awareness raising programs in the form of lectures, seminars and workshops highlighting the importance of this treatable public health issue must be organized even from school level.

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CONFLICT OF INTEREST

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

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