



## PREVALENCE OF DEPRESSION AND SOCIO-DEMOGRAPHIC PROFILE AMONG ELDERLY PATIENTS ATTENDING RURAL PRIMARY HEALTH CARE SETTING

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### ABSTRACT

**Background:** Ageing has a major impact on mental health. The prevalence of mental disorders can actually increase with age. Previous studies have demonstrated that among elderly the prevalence of mental disorders is high, with almost 20% in elderly aged 65 years and older. It was recently reported that almost one-third of people aged 95 years fulfilled criteria for a psychiatric disorder: **Materials & Methods:** The study was conducted at a primary health care centre located in rural area. Data was collected from elderly patients attending a primary health care center in a rural area & were screened for cognitive impairment by using mini mental state examination (MMSE). Patients who had MMSE score more than 24 were studied. Then socio-demographic data sheet a semi-structured Performa was applied followed by geriatric depression scale (GDS). **Results:** Majority of our sample showed moderate followed by mild level of depression. However 8 cases were found having severe depression. Majority of our participated patients abused nicotine (including smoked and/or smokeless tobacco) i.e. 51.85% (42.6%+9.3%). our study reported the significant family history of psychiatry illness in the sample. Majority of the sample belonged to the age group of 60-65 years of age with having more female participants and were married. Most of the participants were unemployed and were dependent on others for their needs. **Conclusion:** Depression in elderly is frequently under-diagnosed or ignored because depressive symptoms are taken as normal manifestations resulting from the aging process. But these symptoms may lead to loss of independence and aggravation of pre-existent pathological conditions. The aim of this study was to determine the prevalence of depression, and associated socio-demographic factors amongst older adult patients attending a primary health care centre. It helps the mental health professionals so as to achieve better results in terms of faster and accelerated recovery.

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### INTRODUCTION

Longevity is one of the major characteristics of today's world. The ageing of population is already evident in developed countries and becoming a reality in less developed countries as well. The aging process or senescence is characterized by a gradual decline in the functioning of all the body's systems. Aging is accompanied with decline in cognitive functions. Cognition includes memory, language, orientation, judgment, conducting interpersonal relationships, performing action and problem solving (Sadock, Sadock and Ruiz, 2015). Cognitive functions such as conceptual reasoning, memory, and processing speed, decline gradually over time while as vocabulary may improve with age and are resilient to aging (Wisdom, Mignogna and Collins, 2012).

To understand these cognitive changes whether normal or pathologic, biological or psychological is important. These cognitive changes in elderly can affect their day to day functioning. Ageing has a major impact on mental health. The prevalence of some mental disorders can actually increase with age. Among elderly the prevalence of mental disorders is high, with almost 20% in elderly aged 65 years and older. It was also reported that almost one-third of people aged 95 years fulfill the criteria for a psychiatric disorders: 17% had depression, 9% anxiety, and 7% a psychotic disorder (King-Kallimanis, 2009; Prévile, et al. 2008). Most studies in the elderly on mental disorders without dementia have been concerned with depression around 5% to 10% (Ernst, Angst, 1995; Beekman, et al. 1995).

These figures may be even higher in the developing world (Gureje, Kola, Afolabi, 2007). Depression in elderly is frequently under-diagnosed or ignored because depressive symptoms are taken as normal manifestations resulting from

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the aging process. But these symptoms may lead to loss of independence and aggravation of pre-existent pathological conditions (Snowdon, 2002; Rodrigues, *et al.* 2008). Depression is a disturbance in mood, and can lead to the functional impairment in any age group. Depression is the fourth leading cause of the global disease burden and by 2020, it will be second only to heart disease in its contribution in relation to disability-adjusted life years (Worley, 2006; Chapman, Perry, 2008).

In old age, depression involves biological, psychological and social factors. Risk factors for developing depression after age 65 are similar to those in younger individuals and include being female, unmarried, poor, having chronic physical illness, social isolation, loss and grief, loneliness, care-taking responsibilities and a history or family history of depression (Djernes, 2006; Vink, Aartsen, Schoevers, 2008). Several studies have shown that up to 23% of elderly patients suffer from depression or depressive symptoms (Glasser, Stearns, de Kemp, van Hout, Hott, 1994). About 5 % of elderly aged 65 and older in community settings meet research diagnostic criteria for major depression and subsyndromal depression estimated as 8% -16%. The rate of depression tends to decrease with age in developed countries while as it tends to increase with age in developing countries (Byers, *et al.* 2010; Blazer, 2009). One in five elderly with depression receives effective treatment for depression in primary care. Poor quality care leads to negative depression outcomes and serious public health problems. Depression is associated with elevation of risks of morbidity and mortality, causing an increase in the use of health services, negligence of self-care, and reduced adherence to therapeutic treatments This finding emphasizes the importance of early detection and treatment of late-life depression in primary care (Kessler, *et al.* 2010; Bunce, *et al.* 2012).

## MATERIAL AND METHODS

### Aims and Objectives

The aim of this study was to determine the prevalence of depression, and associated socio-demographic factors amongst older adult patients attending a primary health care centre.

### Methods Setting

The study was conducted at a primary health care centre located in rural area. The primary health centre mainly serves the local residents including males, females, pediatrics, adult and geriatric population. Data was collected from elderly patients attending a primary health care center in a rural area and were screened for cognitive impairment by using mini mental state examination (MMSE). Patients who had MMSE score more than 24 were studied.

### Measures

1. Socio-demographic Data Sheet: It was developed to collect information on socio-demographic profile which are relevant in the context of geriatric population. It includes variables of age, gender, marital status, family type, occupation and income.
2. Geriatric Depression Scale: It is a 30 item self report scale developed by Yesavage *et al.* (1982). All the items are rated as either 'yes' or 'no'. Each item is rated as either 1 or 0 with total score of 0-9 indicating no depression, 10-19 indicating mild depression and

20-30 indicating severe depression. This is the most widely used scale to assess depression in elderly population both for clinical and research purposes. The scale was translated in Urdu and the back translated into English for consistency with the help of subject experts (Taqui, Itrat, Qidwai, Qadri, 2007; Gantra, Zafar, Qidwai, Rozi, 2008).

**Design:** Cross sectional study

**Duration:** 8 months (March 2019- Oct 2019)

**Inclusion Criteria for patients:** patients above 60 years of age, both genders and providing informed consent.

**Exclusion Criteria for patients:** Patients with Psychotic illnesses/Dementia. Patients not giving informed consent and were too ill to be assessed.

### Procedure

All the elderly patients attending the primary health centre were approached and were explained about the nature of the study. Consenting patients who agreed to participate and provide informed consent were assessed with the inclusion and exclusion criteria. A sample of 54 elder population who met the inclusion and exclusion criteria were recruited. The socio-demographic and the clinical profile sheets were completed from the information provided by the patient, his/her caregiver and the medical records. Patients were evaluated on Geriatric Depression rating Scale.

### Statistical Analyses

Descriptive statistics like frequency, percentages were used to find the distribution of various socio-demographic variables. Data was analysed using the software package SPSS version 21.

### Ethical considerations

Written informed consent was obtained from all the patients. No invasive procedures were carried out. Patients were informed that unwillingness to participate in the study would not result in any change in treatment. Strict confidentiality was maintained.

## RESULTS

**Table 1** Socio-demographic Profile of the sample

Characteristic	Frequency	Percent	
Age	60- 65years	28	51.9
	66-70 years	19	35.2
	71-75 years	5	9.3
	76-80 years	2	3.7
Gender	Male	23	42.6
	Female	31	57.4
Marital Status	Married	33	61.1
	Remarried	3	5.6
	Divorced	5	9.3
	Widow	13	24.1
	Unemployed	36	66.7
Occupation	Unskilled worker	5	9.3
	Semiskilled worker	11	20.4
	Farmer	2	3.7
	Illiterate	37	68.5
Education level	Primary school	10	18.5
	Middle school	4	7.4
	High school	3	5.6
	0	37	68.5
Income	1-5000	8	14.8
	5001-10000	7	13.0
	10001-15000	2	3.7

Family type	Nuclear	18	33.3
	Joint	36	66.7

Table 1 shows the demographic details of the sample. Majority of the sample 28 (51.9%) belong to the age group of 60-65 years of age with having more female participants 31 (57.4%). 33 61.1% of the sample were married at the time of assessment. Most of the participants were unemployed 36 (66.7%). Most of the participants 36 (66.7%) were living in a joint family compared to only 18 (33.36%) who were living in a nuclear family. Majority of the sample 37 (68.5%) had no income & are dependent on others.

**Table 2** Physical Comorbidity of the sample

Physical Comorbidity	Frequency	Percent
Bronchial Asthma/COPD	5	9.3
Diabetes Mellitus only	3	5.6
Gastritis/Gastrointestinal Problems	2	3.7
Hypertension only	5	9.3
Hypertension and Diabetes Mellitus	7	5.6
Hypothyroidism,	1	1.9
Hypothyroidism, Hypertension and Diabetes Mellitus	5	9.3
Rheumatoid Arthritis	3	5.6
None	23	42.6

**Table 3** Substance abuse in the sample

Substance Abuse	Frequency	Percent
None	26	48.1
Nicotine smoking	23	42.6
Smokeless Tobacco (Snuff)	5	9.3

Table 3 shows the substance abuse in the sample. From the table it is evident that majority of the patients abused nicotine (including smoked and/or smokeless tobacco) i.e. 51.85% (42.6%+9.3%). However 26 (48.1%) currently did not report any kind of substance abuse.

**Table 4** level of Depression in the sample

Depression	Frequency	Percent
No	11	20.4
Mild & Moderate	35	64.81
Severe	8	14.81

Table 4 shows the level of depression in the sample. Majority of the sample 35 (64.81%) were having mild to moderate level of depression, 8 (14.81%) had severe depression and 11(20.4) had no symptoms of depression.

**Table 5** Significant Family History of psychiatry illness in the sample

Family History	Frequency	Percent	
Affective Disorder	Yes	16	29.6
	No	38	70.4
Dementia	Yes	5	9.3
	No	49	90.7
Psychosis	Yes	7	13
	No	47	87
OCD	Yes	7	13
	No	47	87
Substance Abuse	Yes	4	7.4
	No	50	92.6
Other mental Disorder	Yes	20	37
	No	34	63

Table 5 shows the significant family history of psychiatry illness in the sample. From the table it is evident that significant family history was present in the sample of 20 (37%) of other mental disorders (including anxiety disorders) followed by affective disorder 16 (29.6%). Moreover majority of participants reported 7 (13%) having psychosis and OCD of significant family history each, 5 (9.3%) sample were reported

with dementia and 4 (7.4%) sample reported with substance abuse as a family history.

## DISCUSSION

Depression is the single largest contributor to global disability (7.5%, 2015). In India, elderly population (60 years and above) constitute 8.6% of the total population (India Census 2011), which is projected to reach 19% by 2050 (World Health Organization, 2001). Thus, depression among elderly population is likely to be a major cause of disease burden in the future. Depression is one of the most common illnesses in the elderly population. Among elderly people, chronic diseases, restricted mobility, bereavement, elderly abuse, isolation, and loss of income are major risk factors for depression, in addition to common risk factors in all age groups (Murata, Kondo, Hirai, Ichida, Ojima, 2008). In our study it was found that out of 54 patients, majority of the sample 35 (64.81%) were with mild to moderate level of depression, 8 (14.81%) with severe depression that correlates with the similar study conducted by Goyal & Kajal (20014) they found Prevalence of severe depressive symptoms in 17% elderly while 60% showed mild depressive symptoms. Moreover other studies have revealed that the prevalence rates for depression in community samples of elderly in India vary from 6% to 50% (Venkoba, 1993; Nandi, *et al*, 1997). In our study majority of the patients abused nicotine (including smoked and/or smokeless tobacco) i.e. 51.85% (42.6%+9.3%). However 26 (48.1%) currently did not report any kind of substance abuse that correlates with the similar study conducted by Meltzer, Gill, Hinds, Petticrew 1996 and Farrell, *et al*. 1998

Taylor, *et al*. 2014 report a positive association between smoking and mental illness, with smoking rates increasing with the severity of the disease. Individuals with mental illness also tend to start smoking at an earlier age, smoke more heavily, and are more addicted to cigarettes than the general population. In our study it was found that majority of the sample 28 (51.9%) belong to the age group of 60-65 years of age with having more female participants 31 (57.4%). 33 (61.1%) of the sample were married at the time of assessment. Majority of the participants were unemployed 36 (66.7%) and most of them 36 (66.7%) were living in a joint family compared to 18 (33.36%) who were living in a nuclear family. Majority of the sample 37 (68.5%) had no income and were dependent on others which is consistent with other studies conducted by Padayachey, Ramlall & Chipps (2017) reported the same socio-demographic profile. In our study it was found that In our study it was found that significant family history was present in the 37% of participated patients which included affective disorders in 16 (29.6%) and 7 (13%) having psychosis and OCD each, 5 (9.3%) dementia and 4 (7.4%) with substance abuse that correlates with the similar findings in different studies Beekman, Copeland, Prince, (1999) 20 participants were categorized in other mental disorders which included anxiety disorders, somatoform disorders, fibromyalgia, chronic fatigue syndrome, sleep disorders etc

## CONCLUSION

The present study found that more than 75% elderly patients attending primary health care settings were suffering from depression, However primary health care system in low and middle income countries are not resilient enough to deal with

mental health problems. The training of health care workers at primary level will help in early identification, appropriate management & referral of elderly population with mental health issues and hence improve the quality of life.

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