



# PREVALENCE OF DEPRESSION AMONG ELDERLY DIABETES MELLITUS PATIENTS ATTENDING DIABETES CLINIC AT BANGALORE MEDICAL COLLEGE AND RESEARCH INSTITUTE

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## ABSTRACT

**Introduction:** Depression is the most common psychiatric disorder among the elderly. Diabetes will add additional burden on occurrence of depression. The study was conducted to study the prevalence of the depression among elderly diabetics who are seeking care at a tertiary care centre.

**Methods:** A cross sectional study held at a diabetes clinic of a tertiary care institute with the purposive sample of 100 subjects during the month of March 2013. The diabetic patients who were above the age of 60 years are surveyed.. WHO Geriatric Depression Scale (GDS) short form was used to collect the data.

**Results:** Prevalence of Depression among studied population 41%. Mean age of the study population 67.8 ( $\pm 6.2$ ) years with females constituting 72%. 39 % of the study population was illiterate and 33 % of them did primary schooling. There were significant association of depression with female gender, widows, illiterates, financially dependent and persons with multiple co-morbid conditions.

**Conclusion:** This study has shown that geriatric depression is highly prevalent. The results of this study emphasize the need of intervention studies which can promote the physical, mental and social health of the patient attending the diabetes clinic.

**Key words:** Depression, Diabetes Mellitus, Geriatrics

## INTRODUCTION

Aging is a natural phenomenon with series of process that begin with life and continue throughout the life cycle, ending with death<sup>1</sup>. Depression among geriatric age group is difficult to diagnose, will lead to an increase in morbidity, mortality and health care costs along with a reduction in quality of life<sup>2</sup>. India, the second largest country in the world, is presently undergoing a demographic transition with about 8% geriatric population. Among these population around 23% of the elderly are diabetics<sup>3</sup>. currently 72 million elderly persons above 60 years of age are living in India, which is

expected to increase to 179 million in 2031 and further to 301 million in 2051. This increase in the number of elderly will have a direct impact on the spending for health care services and social security<sup>4</sup>. Adding to that Diabetes Mellitus among elderly will increase the burden. Depression is likely to increase in number due to increase in life expectancy, rapidly changing social and physical environment that gives rise to psychological stress, breaking of traditional protective measures, increase in morbidity due to chronic non-communicable disease especially diabetes mellitus, and increase in medicaments and alcohol. In fact in India multitude of psychological, social, physical

health problems, a variety of depressive factors and occurrence of varying life events, greatly impact on elder’s psychological status, making them more prone to depression. Diabetes will add additional burden on occurrence of depression. Depression is often reversible with prompt recognition and appropriate treatment. With this background we have taken up the study.

**OBJECTIVES**

The study was conducted to assess prevalence of the depression among elderly diabetics who are seeking care at a tertiary care centre.

**MATERIALS AND METHODS**

A Cross Sectional Study was done between 1<sup>st</sup> March to 31<sup>st</sup> March 2013 at Diabetes clinic of Bangalore Medical College and Research Institute with the purposive sample of 100 people aged ≥ 60 years. The already diagnosed diabetic patients who were attending the diabetes clinic with the age of 60 or above years are surveyed. The information regarding their socio demographic profile was collected. WHO Geriatric Depression Scale (GDS) short form was used to collect the data<sup>5</sup>. The informed consent was taken from the each study subjects before starting the study. Data was collected by interview method and analyzed with Microsoft excel 2007 software.

**RESULTS**

Totally 100 people aged more than 60 years were surveyed. Prevalence of Depression among studied population 41%. Mean age of the study population 67.8 (±6.2) years. Females 72% , Males 28%.39 % of the study population were illiterate and 33 % of them did primary schooling. 68% of them were staying with their children, 39% were financially independent and 41% were financially dependent. Most common co-morbid condition was hypertension. There were significant association of depression with female gender, widows, illiterates, financially dependent and persons with multiple co-morbid conditions.

**DISCUSSION**

This study has shown that depression is highly prevalent in geriatric population. Depression causes excess disability and has an adverse interaction with physical health<sup>6</sup>. In our study, the depression was found to be higher in females when compared to males. This is because women, throughout their lifetime face more stressful events and also higher

sensitivity and emotional life. Hence they tend to get depressed in response to stressful life events.

**Table.1: Socio-demographic profile of the elderly diabetic patients (n=100)**

Variables	Cases
<b>Education</b>	
Illiterate	39%
Primary School	33%
High School	28%
<b>Occupation</b>	
House wife	51%
Retired	14%
Others	35%
<b>Living with</b>	
Spouse	20%
Single	12%
Children	68%
<b>Financial dependency</b>	
Dependent	42%
Partially dependent	19%
Independent	38%

**Table 2: Prevalence of Depression among Elderly Diabetics**

Depression	Male (n=28)	Female (n=72)	Total (n=100)
Yes	02(7.1)	32 (44.4)	34
No	26 (92.9)	40 (55.6)	66

Figure in parenthesis indicate column percentage

**Table.3: Factors associated with Depression**

Factors	Category	P value
Gender	Female	0.001
Marital status	Widow	0.001
Education	Illiterate	0.006
Occupation	Homemaker	0.001
Financial dependency	Dependent	0.001
Multiple co-morbid conditions	HTN,DM, thyroid problems	0.009
Living status	Single	0.083

The prevalence of depression has been found to be higher in elderly women in other studies done by Rajkumar AP<sup>7</sup>, by Poongothai S<sup>8</sup> and by Jain RK<sup>9</sup>. The overall high prevalence could be attributed to female gender, widow, illiterate, dependent status and multiple co-morbid conditions.

**CONCLUSION**

The results of this study emphasize the need of intervention studies which can promote the physical, mental and social health of the patient attending the diabetes clinic. As sample size is small, further research is required for assessing the factors influencing depression among elderly. There is a need for various levels of preventions at all levels of

health care to foresee the complications of Diabetes Mellitus.

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