

## Assessment of Magnitude of Depression Status among Elderly People in a Rural Area of Tripura

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**Abstract:** Depression is a common mental disorder and severe depression can lead to suicide. Depression is accounting for large morbidity and mortality within the elderly section of the society. This community based cross sectional study was done among 100 elderly people in Madhupur, Field practice area of Department of Community Medicine, Tripura Medical College & Dr BRAM Teaching Hospital, Tripura, to assess the magnitude of depression and to find out factors associated with depression. Multistage sampling procedure was used to select 100 household. Short form of Geriatric depression scale (GDS-15) was used to measure depression level. The prevalence of the depression among elderly population by using geriatric depression scale - 15 was found to be 78%. Among them, 89.74% were suffering from severe depression and remaining 10.26% were suffering mild depression. A significant statistical association has been observed between depression and age of the participants (p value 0.00), and marital status (p value 0.04).

**Keywords:** Elderly People, Depression, Tripura

### I. Introduction

Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. Depression can be long-lasting or recurrent, substantially impairing an individual's ability to function at work or school or cope with daily life. At its most severe, depression can lead to suicide. <sup>(1)</sup> Globally, an estimated 350 million people of all ages suffer from depression. Depression is the leading cause of disability worldwide, and is a major contributor to the overall global burden of disease. It can cause the affected person to suffer greatly and function poorly at work and in the family. At its worst, depression can lead to suicide. Over 800 000 people die due to suicide every year. <sup>(2)</sup> Depression is accounting for large morbidity and mortality within the elderly section of the society. <sup>(3)</sup> The ageing process is of course a biological reality which has its own momentum, largely beyond the scope of human. <sup>(4)</sup> According to a report of World Health Organization (WHO), the size of the elderly section of the society has shown a fast and significant growth. Therefore, making the health and fitness issue of this group one of the important issues in our health care system. <sup>(5)</sup> The proportion of the elderly population in India rose from 5.6% in 1961 to 7.5% in 2001 and it will rise to 9% by 2016. <sup>(6)</sup> The Indian elderly population is currently the second largest in the world. <sup>(7)</sup> One of the frequent and important mental disorders in the elderly population is depression. Community based studies in different geographical area of India showed depression as a common psychiatric problem among the elderly people. <sup>(8)</sup> Most of the time the elderly have difficulty in recognizing depression and/or reporting it to their care providers. This is the reason why very few of the cases are detected or treated. <sup>(9)</sup> Especially the elders living in the rural areas represent a risk group because rural areas lack resources and there is neither income security nor any systematic provision for old age. <sup>(10)</sup> In India, community-based studies on mental disorder have revealed that the prevalence of depression varies between 13% and 46% among the elderly population and assuming epidemic form. <sup>(11)</sup> Depression among the elderly population further complicates the existing morbidity conditions such as diabetes, hypertension, and Cerebrovascular accidents. It decreases the quality-of-life, functional ability, increases the mortality, and health care utilization. <sup>(12)</sup>

In Tripura, only a few studies have been conducted on prevalence of depression of the elderly. So the present study was conducted to assess the prevalence of depression among the elderly people in Madhupur, Tripura and to determine the socio-demographic factors associated with depression.

### II. Materials And Method

A community based cross sectional study was conducted in Madhupur, rural field practice area of Department of Community Medicine, Tripura Medical College & Dr. B.R.A.M Teaching Hospital from June-September 2015 (4 months). Persons aged 65 years and above residing under Madhupur Primary Health Center jurisdiction area were included in the study. The sample size was calculated considering 46% as prevalence of

depression,<sup>(4)</sup> with 10% absolute allowable error and the level of significance (or type 1 error) as 5 percent, the minimum required sample for the present study was calculated by  $4pq/L^2$  to 100.

A standardized, pre-tested and pre-designed questionnaire was used. The first part of the questionnaire were dealt with information regarding the Socio-demographic information and the second part of the questionnaire were included a short form of Geriatric Depression Scale (GDS-15) to measure the depression level. The Geriatric Depression Scale has been used in many international studies to measure depression among the elderly people. It is regarded as one of the reliable and valid depression screening tool.<sup>(13, 14)</sup> Questionnaire was translated to local language and translated back English language by two separate language experts for validation.

Multistage sampling procedure was used for the study. There are 8 Sub centers under Madhupur Primary health center. Four (4) sub centers were selected by Simple Random Sampling (lottery method). From each Sub – centers 25 households were selected by Systematic Random Sampling. In selected household if no person, aged 65 or above were found or consent was denied then we have proceeded for next household. Data were collected after obtaining written consent from the participants. Operational definition used for present study was, Normal: Geriatric Depression Score 0 – 5, Mild depression: Geriatric Depression Score 6 – 10 and severe depression: Geriatric Depression Score 6 – 10.

Data analysis was done using SPSS version 15. Frequencies, means and standard deviations were used to describe the data. Chi-Square and Fisher’s exact test were used to examine association. A *p value* < 0.05 was considered as a significant. Ethical clearance was taken from Institutional Ethical Committee of Tripura Medical College & Dr. B.R.A.M Teaching Hospital. Hapania, Tripura.

### III. Results

A total of 100 participants were studied. In the present study majority of the study participants belongs to 65 – 70 age group. The mean age of the study participants is 71.97 with  $\pm 6.36$ (SD). In the present (table no 1) study, 52% study participant were male and 48% were female. Majority of the study participants were belongs to Hindu religion (89%) and remaining 11% were from Muslim religion. Majority of the study participants studied up to primary level (67%), followed by secondary level (28%). In the present study most of the study participants (16%) were not doing any kind of job followed by house wife (16%), business (15%), retired Govt. Employees (11%). In the present study the majority (75%) of the study participants were married followed by widow (22%), unmarried (3%). Most of the participants were belonged to joint family (71%), followed by nuclear family (29%).

In the present study (table no 2) it was observed that out of 100 study participants 78 (78%) were suffering from depression. Among those study participants (78) who were suffering from depression, 70 (89.7%) were suffering from severe depression and 8 (10.3%) were suffering from mild depression.

In the present study no significant statistical association was observed between depression and gender (p value 0.78), religion (p value 0.70), education (p value 0.83), occupation (p value 0.16), type of family ( p value 0.20). But in the present study, a significant statistical association has been observed between depression and age of the participants (p value 0.00), and marital status (p value 0.04). (Table no. 3)

### Tables

**Table 1: Socio – demographic characteristics of study participants**

ocio – demographic characteristics		Frequency (N = 100)
<b>Gender</b>	Male	52
	Female	48
<b>Age ( years)</b>	65 – 70	51
	71 – 75	19
	76 – 80	18
	> 80	12
<b>Religion</b>	Hindu	89
	Muslim	11
<b>Education</b>	Primary	67
	Secondary	28
	Higher secondary	3
	Graduate & above	2
<b>Occupation</b>	Retired govt. employees	11
	business	15
	Farmer	14
	Daily wage labourer	9
	House wife	16
	No job	35

<b>Married</b>	Married	75	
	Unmarried	3	
	Widow	22	
	<b>Type of family</b>	Nuclear	29
		Joint	71

**Table 2:** Prevalence of depression among study participants

Prevalence of depression		Frequency (N=100)
<b>Depression</b>	Present	78
	Absent	22
Level of depression among study participants		Frequency ( N = 78)
<b>Level of depression</b>	Mild depression	8 (10.3%)
	Severe depression	70 (89.7%)

**Table 3:** Association between Socio – demographic characteristics and depression

Socio – demographic characteristics	Depression		p value	
	Present (%)	Absent (%)		
<b>Gender</b>	Male	40 (76.9%)	12 (23.7%)	0.78*
	Female	38 (79.2%)	10 (20.8%)	
<b>Age ( years)</b>	65 – 70	33 (64.7%)	18 (35.3%)	0.00*
	≥ 71	45 (98.84%)	4 (8.16%)	
<b>Religion</b>	Hindu	70 (78.6%)	19 (21.4%)	0.70**
	Muslim	8 (72.73%)	3 (27.27%)	
<b>Education</b>	Primary	53 (79.10%)	14 (20.90%)	0.74*
	Secondary & above	25 (75.75%)	8 (24.25%)	
<b>Occupation</b>	Retired govt. employees	10 (90.90%)	1 (9.10%)	0.16**
	business	11 (73.33%)	4 (26.67%)	
	Farmer	7 (50%)	7 (50%)	
	Daily wage labourer	8 (88.89%)	1 (11.11%)	
	House wife	13 (81.25%)	3 (18.75%)	
<b>Married</b>	No job	29 (82.86%)	6 (17.14%)	0.04**
	Married	55 (73.33%)	20 (26.67%)	
<b>Type of family</b>	Unmarried	2 (66.67%)	1 (3.33%)	0.20*
	Widow	21(95.45%)	1(4.55%)	
	Nuclear	25(86.20%)	4(13.80%)	
	Joint	53(74.65%)	18(25.35%)	

\* Chi – square test. \*\* Fishers exact test, p value < 0.05 taken as a significant.

#### IV. Discussion

The prevalence of the depression among elderly population by using geriatric depression scale - 15 in Madhupur, was found to be 78%. Among them, 89.74% were suffering from severe depression and remaining 10.26% were suffering mild depression. Studies done in Bengaluru,<sup>(15)</sup> Dharwad,<sup>(16)</sup> Surat<sup>(17)</sup> has shown a low prevalence rate of 36%, 32.4% and 39% respectively. Higher prevalence also seen in Pondicherry,<sup>(18)</sup> Punjab<sup>(19)</sup>. It may due to difference between study setting and different depression scale.

In this study prevalence among female (79.17%) was higher than male (76.93%). But no statistical association was found between depression and gender. Other studies also showed higher prevalence of depression among female.<sup>(20, 21, 22)</sup> In present study it was observed that depression increase with age. A statistical significant association was observed between depression and age. Similar kind of finding was seen in a cross sectional study done in rural South India.<sup>(23)</sup>

In this study higher prevalence was found in Hindu religion (78.65%) but no statistical significant association was found. Nandi DN et al<sup>(22)</sup> in his study find that Muslim is suffered more from depression.

Prevalence are higher seen in the study participant who were retired Govt. Employees (90.90%), nuclear family (86.20%), But no statistical association was found. But others studies found that prevalence of depression more among low educational level, nuclear family.<sup>(24, 25)</sup>

In this study depression was higher among widows (95.45%) compare to married (73.33%) and unmarried (66.67%). A statistical significant association was found depression and marital status (p value 0.04).

Similar kind of result was observed another study also. <sup>(21)</sup>

## V. Conclusion

High prevalence (78%) of depression is found among elderly population by using geriatric depression scale - 15 in Madhupur. Among them, 89.74% were suffering from severe depression and remaining 10.26% were suffering mild depression. A significant statistical association has been observed between depression and age of the participants (*p value* 0.00), and marital status (*p value* 0.04). More quantitative and qualitative study required to go more depth of the problem.

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