



**ORIGINAL RESEARCH PAPER**

**Psychiatry**

**SOCIO-DEMOGRAPHIC AND CLINICAL VARIABLES IN PATIENTS WITH DEPRESSION**

**KEY WORDS:**

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**ABSTRACT**

**Background:** "DEPRESSION" is one of the leading causes of morbidity among psychiatric illness. Depressive disorders beset one of five women and one of ten men at some time during their lives. Globally approx. 322 million people were affected by depression in 2015.

**Methodology:** In this study we compared 100 healthy normal individuals and 100 depressive patients, from Department of Psychiatry, Mahatma Gandhi Memorial Medical College and M.Y. Hospital, Indore. The result values of both the groups were compared by using SPSS 23 for windows were used for data analysis.

**Results:** The mean age of the study sample was 34.56 (±12.28) years. The age group 26-35 years (38%), followed by 15-25 years (28%) had the maximum number of patients. Females constituted 61% of the total patients and the rest were males (39%). 66.1% and 33.9% patients were rural and urban dwellers, respectively. 69% patients were married, while 29% patients were unmarried, 2% patients were widowed. 22% of the studied population were literate up to middle class followed by 20% up to higher secondary. Most of the patients (61%) belonged to lower socioeconomic class.

**Conclusion:** The results of the present study highlight specific individual, academic and other socio demographic and clinical variable of the subjects associated with the presence of depressive symptoms.

**INTRODUCTION**

As per Global Health Estimates 2015, globally, the proportion of the population affected with depression is estimated to be 4.4%.<sup>1</sup> Clinical studies suggest higher rates of chronicity, recurrence, and refractoriness than previously believed therefore multiple factors should be addressed in the research and clinical literature. As reported by World Health Organization, depression and heart disease will be the most common diseases on Earth by 2020.<sup>2</sup> Depression is more common among female than male, with estimated point Prevalence of unipolar depressive episodes to be 1.9% for men and 3.2% for women, and the one-year prevalence has been estimated to be 5.8% for men and 9.5% for women.<sup>3</sup> In India, an estimated 57 million people are (18% of the global estimate) affected by depression.<sup>3</sup> With current trends, India witnessing significant changes including globalization, urbanization, migration, and modernization, that is coupled with rapid demographic and epidemiological transition, which will increase depression burden to 5.7% of the total burden of disease and likely to increase in the coming years. A wide range of factors are often linked with depression in young and middle-aged groups like social, economic, cultural and psychosocial factors, especially changing life styles with lack of support systems in an environment of globalization, urbanization and migration. Depression occurs due to multiple factors like several biological, social, economic, cultural and environmental factors that operate in a maladaptive individual by complex mechanisms. Hence the study was undertaken with the following objectives.

**Objective of the study**

The objective of the study was to assess sociodemographic and clinical variables in Depression patients and healthy controls.

**Study sample**

The study was conducted in department of psychiatry, Mahatma Gandhi Memorial Medical College, after clearance obtained from institutional ethic committee of M.G.M.M.C., Indore. The duration of the study was of about

1 year from the date of approval of study. The study was carried out with a case control cross sectional design so that samples were selected from two groups—case group and control group. Patients were recruited after fulfilling the inclusion criteria, from out-patient, in-patient and emergency department. Control group consisted of healthy people from general population.

**Case group**

The case group consisted of 100 patients with depressive episode from among the indoor and outdoor patients of the Department of Psychiatry of M.G.M. Medical College, Indore. Diagnosis is confirmed by treating Psychiatrist on clinical interview fulfilling the criteria of ICD10. The severity of depressive symptoms was measured using the Hamilton Depression Rating Scale (HAM-D)

**Control group**

The subjects of the control group were selected randomly from a group of 100 individuals. The group consisted of healthy individuals not having any psychiatric diseases from different sections of the society and willing to co-operate voluntarily in this study. However, while selecting subjects, focus had been on selecting only 'age and sex matched' individuals (with respect to subjects of the case group).

**Inclusion and exclusion criteria**

The subjects—both male and female, age should be between 18 to 65 years (both inclusive) and meet ICD -10 criteria for Depression included in study. Depression pt. having psychotic symptoms / Bipolar depression patients were excluded. Female patients during pregnancy and lactation were excluded. Also excluded were those who were alcohol/ drug abuse or dependence, those who had been taking medications for any medical reasons and also those with any clinically significant abnormality evident in routine serum biochemistry. Subjects not willing to give consent were excluded from study.

**METHODS**

After applying strict inclusion and exclusion criteria

participants are included in study. Rational of study is explained to patient and relative as well as to healthy controls after taking informed consent. Diagnosis of depression is confirmed by treating Psychiatrist on clinical interview fulfilling the criteria of ICD-10. The severity of depressive symptoms was measured using the Hamilton Depression Rating Scale (HAM-D).

**Statistical analysis**

After compilation of collected data, SPSS 23.0 for Windows was used for data analysis.

**Results and observations**

**Table No. 1 Age wise Distribution Status of Studied Sample**

Age Group (years)	Group				
	Case		Control		Total
	No.	%	No.	%	
15-25	28	28	18	18	
26-35	38	38	40	40	
36-45	19	19	23	23	
46-55	10	10	13	13	
56-65	05	05	06	06	
Total	100	100	100	100	
Mean	33.62±10.90		35.43±11.11		
Std. deviation	10.90		11.11		

The mean age of case group was 33.62 ± 10.90 years while that of control group was 35.43 ± 11.11 years. As per the inclusion criteria for the participants the minimum age was 18 years and maximum age was 65 years in both groups.

**Table-2: Description of age of onset of depression (years) in study participants in depression group (case)**

	N	Minimum	Maximum	Mean	Std. Deviation
Case	100	18	61	32.66	10.27

The mean age of onset was 32.66 ± 10.27 years. Minimum age of onset was 18 years while maximum age of onset was 61 years.

**Table 3: Sex wise Distribution of Studied Sample**

Sex	Group				Total
	Case		Control		
	No.	%	No.	%	
Male	39	39	52	52	91(45.5%)
Female	61	61	48	48	109(54.5%)
Total	100	100	100	100	200

Number of female patients was higher in case group as compared to control group which was having more no. of male subject. But this difference is not statistically significant.

**Table 4 :Marital status of studied sample**

MARITAL STATUS	Group			Total
	Case	Control		
Married	Count	69	66	135
	%	69.0%	66.0%	67.5%
Unmarried	Count	29	33	62
	%	29.0%	33.0%	31.0%
Widowed	Count	2	1	3
	%	2.0%	1.0%	1.5%
Divorced	Count	0	1	1
	%	0%	1.0%	1.0%
Total	Count	100	100	200
	%	100.0%	100.0%	100.0%

**Chi Square Test = 0.658, df = 2, PValue = 0.720**

Most of the subjects of study groups were married and almost equally distributed in case (69%) and control (66%) groups. About one third cases were single. 2 % in case group and 1 % in control group participants were widowed. Divorced

participant were 1% in control group while case group had none.

**Table 5- Religion wise distribution of studied sample**

RELIGION	Count	Group		Total
		Case	Control	
Christian	Count	0	1	1
	%	0.0%	1.0%	0.5%
Hindu	Count	84	93	177
	%	84.0%	93.0%	88.5%
Muslim	Count	16	5	21
	%	16.0%	5.0%	10.5%
Sikh	Count	0	1	1
	%	0.0%	1.0%	0.5%
Total	Count	100	100	200
	%	100.0%	100.0%	100.0%

**Chi Square Test = 8.220, df = 3, PValue = 0.042**

The majority of participants in both case (84%) and control (93%) groups were Hindu by religion, while rest were muslim in distribution with more in case group (16%) as compared to control (6%) group. 1 % of control group belongs to Christian and sikh with none had in case group.

**Table-6: Education wise distribution of studied sample (Years)**

EDUCATION	Count	Group		Total
		Case	Control	
Graduate	Count	17	34	51
	%	17.0%	34.0%	25.5%
Higher Secondary	Count	20	28	48
	%	20.0%	28.0%	24.0%
High School	Count	18	12	30
	%	18.0%	12.0%	15.0%
Up to 8th	Count	22	16	38
	%	22.0%	16.0%	19.0%
Up to 5th	Count	15	9	24
	%	15.0%	9.0%	12.0%
Illiterate	Count	8	1	9
	%	8.0%	1.0%	4.5%
Total	Count	100	100	200
	%	100.0%	100.0%	100.0%

Most participants in case group were illiterate (22%) and literate till primary education (11%), control group had more percentage of graduate (33%). Middle and high school was almost evenly distributed in both groups while higher secondary educated were more in control group (34%) as compared to case (20%) group.

**Table-7: Occupation wise distribution of studied sample**

OCCUPATION	Count	Group		Total
		Case	Control	
Professional	Count	4	30	34
	%	4.0%	30.0%	17.0%
Skilled	Count	12	8	20
	%	12.0%	8.0%	10.0%
Semiskilled	Count	12	22	34
	%	12.0%	22.0%	17.0%
Unskilled	Count	13	14	27
	%	13.0%	14.0%	13.5%
Unemployed	Count	59	26	85
	%	59.0%	26.0%	42.5%
Total	Count	100	100	200
	%	100.0%	100.0%	100.0%

Most of the cases and control groups were unemployed. Approx 50% participants of cases and 25% control group were unemployed.

**TABLE- 9 – socioeconomic distribution of study sample**

Income Group	CASE	CONTROL
Low	61	28
Middle	26	22
High	13	50

Maximum no. of case group were belongs to low socioeocnomic group (61%) while in control group maximum belongs to upper socioeconomic group (50%).

**Table-10: Family Type wise distribution of studied sample**

Family Type	Group			
	Case		Control	
	No.	%	No.	%
Joint	24	24	18	18
Nuclear	76	76	82	82
Total	100	100	100	100

The case and control group had an approximately even distribution of nuclear and joint family. Approx. one fourth of case (24%) and one fifth control groups (18%) were belongs to joint family and others belongs to nuclear family.

**Table-11: Locality wise distribution of studied sample**

Locality	Group			
	Case		Control	
	No.	%	No.	%
Rural	27	27	37	37
Urban	73	73	63	63
Total	60	100	60	100

The distribution of case (73%) and control (63%) sample were urban in majority, while about one fourth sample in case groups and one third sample in control group belonged to rural background.

**Table - 12: Clinical characteristics of the depression patients (categorical variables)**

Variables	Depression patients
<b>Precipitating factor</b>	<b>Yes (N=100)</b> 71(71%)
	<b>No (N=100)</b> 29(29%)
<b>Family history</b>	<b>Not present (N=100)</b> 70 (70%)
	<b>Present (N=100)</b> 30 (30%)
<b>Past history</b>	<b>Not present (N=100)</b> 78 (78%)
	<b>Present (N=100)</b> 22 (22%)

Table - 12 shows clinical variables of patient group. Most of patients had precipitating factor (71%), had no past history (78%) and had no family history (70%).

**DISCUSSION-**

This was a cross sectional hospital based study to compare serum Ca++ and serum Mg++ levels and the socio-demographic distribution among depressive patients and their respective age and sex matched healthy controls. The mean age of case group was 33.62 ± 10.90 years while that of control group was 35.43 ± 11.11 years. The mean age of onset of depression in case group was 32.66 ± 10.27 Year. This result is consistent with previous studies stated similar mean age of onset of depression like Park et al.<sup>4</sup>, Yang et al.<sup>5</sup>, Srivastava et al.<sup>6</sup>. Among the cases maximum 38% belonged to 26-35 year age group, among control maximum 40% belonged to 26-35 age group. The patients belonging to age group 56-65, reported depression less. These results are consistent with some previous findings by TJ Wade, J Cairneyet et al. 1997<sup>7</sup>, Wade TJ et al in 2000<sup>8</sup> and Streiner DL et al. in 2006<sup>9</sup>, who found that there was a linear decrement for depressive illness after the age of 55 years.

Among all 200 participants, female participants were 109 (54.5%) and male participants were 91 (45.5%). Patten SB, Wang JL, Williams JV, et al. 2006<sup>10</sup> also reported similar results

that major depression was more common in women than in men. Our results are consistent with Niladri Deb et al. 2015<sup>11</sup>, where out of total number of subjects in control and case group, female participants were more than males.

Among all subjects, maximum 67.5% were married. Marital status wise distribution among cases and control group was equal. This result is consistent with Sharma et al. 1985<sup>12</sup>, who also found depression more common in married subjects .In cases on religion wise distribution 84% were Hindus and in control 93% were Hindu. Among Hindu subjects 47.4% were diagnosed with depression while 76.1% Muslim subjects were suffering from depression. This result is also supported by study of Nandi DN et al. 1979<sup>13</sup> who states that depressive disorder is common among Muslim region. However we could not infer from this result finding as Hindu subjects outnumbered to Muslim subjects.

In control group maximums i.e. 62% were educated higher secondary and above in contrast to case group which were 37%. Among cases maximum 45% were either illiterate or educated up to middle school in contrast to control group (26%).

In occupation, among cases maximum 59% were unemployed as compared to control group which were 26%, among control maximum 30% were professional while in case group only 4% were professional.

Maximum no. of case group were belongs to low socioeconomic group (61%) while in control group maximum belongs to upper socioeconomic group (50%). These results is also supported by study of Ramachandran V. et al. 1982<sup>14</sup>, D.K. Sharma et al. 1985<sup>15</sup>, Tiwari SC 2000<sup>15</sup> and Jain RK et al. in 2007<sup>16</sup>, who also found that lower than expected educational attainment are significantly associated with depression and more common in low social class, unemployed condition, low educational level.

Among cases (76%) and control (82%) groups maximum belonged to nuclear type families. Many studies Lai, 1971, Bagadia, 1973 and Sethian d Sinha, 1977 and Sethi BB 1980<sup>17</sup>, have demonstrated association between depression and family constellation. Maximum subjects in cases (73%) and control group (75%) belonged to urban locality. Similar results by Nandi PS 1997<sup>18</sup> and Reddy VM et al 1998<sup>19</sup> confirmed higher prevalence of depression in urban sector. Most of patients had precipitating factor (71%), had no past history (78%) and had no family history (70%).

**CONCLUSION**

We studied socio-demographic, clinical profile of participants and also compared the prevalence among them. Maximum cases were Belonging to 26-35 yrs. age group, were female, married, Hindu, educated up to 8th, unemployed, had no income, lived in nuclear family and urban locality, had negative family history of psychiatric illness. Whereas maximum controls were Belonging to 26-35 age group, were male, married, Hindu, educated up to graduation , professionals by occupation, lived in nuclear family, in urban locality, had negative family history of psychiatric illness. In a multivariate analysis using logistic regression analysis, these variables showed strong relationships with depression. The results show significant relationships between depression and different socio-demographic factors.

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**Conflicts of interest**

There are no conflicts of interest

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