



Original Article

A Study on Prevalence and Determinants of Psychiatric Morbidity in Elderly Population of Rural Areas of District Kanpur Nagar

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Abstract

Introduction: *The World Health Organization estimates that one of four families, worldwide, has at least one-member suffering from psychiatric disorder. The World Health Organization (WHO) Global burden of disease study estimates that mental and addictive disorders are among the most burdensome in the world, and their burden will increase over the next few decades.*

Aim and Objectives

1. To assess the prevalence of psychiatric morbidity in geriatric population and its association with biosocial factors.
2. To identify the determinants of psychiatric morbidity of study subjects.

Material and Methods: *Across-sectional study was conducted among the elderly (more than 60 years) living in municipal limits of rural Kanpur from January 2019 to January 2020. A total of 278 study subjects were included in the study.*

Results: *Prevalence of psychiatric morbidity was found to be (21.94%) in rural areas among population of >60 years. Mean age of study subjects was 64.36 ±3.89 years in rural areas.*

Introduction

The **World Health Organization** estimates that one of four families, worldwide, has at least one-member suffering from psychiatric disorder and psychiatric disorders will be among the most common causes global burden of disease by the year 2020. The World Health Organization (WHO) Global burden of disease study estimates that mental and addictive disorders are among the most burdensome in the world, and their burden will increase over the next few decades. The mental and behavioural disorders account for

about 12% of the global burden of diseases. By 2020 it is likely to increase to 15%. (**WHO World Health Report 2001**). In developing countries, which contain 4/5th of the world's population, non-contagious diseases like psychiatric disorders are quickly replacing infectious diseases and are becoming the major cause of disability and early deaths. These changes will cause many difficulties for the health systems in these countries.

Aims and Objective

1. To assess the prevalence of psychiatric morbidity in geriatric population and its association with biosocial factors.
2. To identify the determinants of psychiatric morbidity of study subjects.

Material and Methods

Study Population: All the participant of age group ≥ 60 years living in municipal limits of Kanpur Nagar district.

Sampling Unit: All the participant in the age group ≥ 60 years.

Study Subject: All the participant of age group ≥ 60 years who participated in the study.

Period of Study: January 2019 to January 2020.

Study Design: Cross-sectional study.

Sample Size: the minimum sample size was calculated by taking prevalence from study done by **TIWARI S.C. et al (2011)** on prevalence of psychiatric morbidity in geriatric population of northern India. A prevalence of **23.7 %** was reported by the study was used for calculation of minimum sample size which was obtained as 278. A total of 278 subjects were taken for study from rural areas of the district Kanpur Nagar.

Sampling Technique Kalyanpur Rural Block of Kanpur Nagar District was selected using simple random sampling out of 10 blocks of district. To select the Rural areas of survey, 4 areas (Bairi-1, Bairi-2, Kheda, Naubasta) were chosen out in Kalyanpur block using Simple Random Sampling without Replacement Technique. List of all the houses located in the selected areas were made available through Block Development Officer, Kalyanpur and survey was planned accordingly to cover the sample population. The survey was started from Bairi-1 area and was carried out to other selected areas, till the optimum sample size 278 was achieved. Data was recorded on a predesigned and pretested questionnaire covering all objectives of the study. Direct personal interview method was applied to record the data. Prior consent was taken from all the participants.

The data collected was classified, presented and analysed using most appropriate Statistical tools.

Results

- Study subjects taken from rural areas of Kanpur Nagar majority (96.04%) were in the age group of 60-70 years with (67.27%) males and (32.73%) females with majority (92.81%) of Hindus, mostly unemployed (35.97%).
- Majority of study subjects (46.04%) belonged to Class II and few of them were from Class V (3.24%) by Modified BG Prasad Scale (AICPI 2019).
- Prevalence of psychiatric morbidity was found to be (21.94%) in rural areas among population of >60 years. Majority of study subjects had (27.34%) chronic illness. Common illnesses among study subjects was Hypertension (22.30%), followed by diabetes (19.42%) and least being (1.44%) Genitourinary problems. Around (5.40%) had family history of psychiatric morbidity. Sleep duration was mostly of less than 6 hours in 20.14% of study subjects. Family history of death /emotional trauma was present in 2.16% of study subjects. Maximum (84.73%) subjects with psychiatric morbidity belonged to the age group of 60-70 years.

As per Modified B.G. Prasad Classification (AICPI May 2019) maximum subjects with psychiatric morbidity belonged to social class II (61.07%). Among the study subjects with psychiatric morbidity, majority (83.97%) were from joint family. Among the subjects with family history of psychiatric morbidity, (21.37%) had psychiatric morbidity.

Some important bio-social correlates were as follows:

1. Among the subjects with family history of psychiatric morbidity 21.37% have psychiatric morbidity and the association of family history with psychiatric morbidity was found to be statistically significant ($p < 0.05$).

2. Maximum (6.87%) subjects with psychiatric morbidity were suffered from physical/mental harassment. Association between history of psychosocial problem and psychiatric morbidity was found to be statistically significant ($p < 0.05$).
3. Maximum (85.50%) had sleep duration less than 6 hours. Association between history of sleep duration and psychiatric morbidity was found to be statistically significant ($p < 0.05$).
4. Among the study subjects with psychiatric morbidity, (5.34%) with history of emotional trauma. Association between history of death/emotional trauma with psychiatric morbidity was found to be statistically significant ($p < 0.05$).

Table 1: Demographic Particulars of the Elderly Study Subjects

Variable	Number	%
Total number of subjects	278	100
Male	187	67.27
Female	91	32.73
Age (in years)		
60-70	267	96.04
70-80	11	3.96
80 and above	0	0.00
Total	278	100

Table 2: Prevalence of Psychiatric Morbidity in Study Subjects

Depression	Number	%
Present	61	21.94
Absent	217	78.06
Total	278	100

Table 3: Psychiatric Morbidity in Relation to Their Family History

Family history of psychiatric morbidity	Psychiatric morbidity			
	Present		Absent	
	Number	%	Number	%
present	14	21.37	4	1.88
Absent	52	78.63	208	98.12
Total	66	100	212	100

Table 4: Psychiatric Morbidity in Relation to Their Sleep Duration

Duration of Sleep	Psychiatric morbidity			
	Present		Absent	
	Number	%	Number	%
Less than 6	56	85.50	2	0.71
More than 6	9	14.50	211	99.29
Total	65	100	213	100

Table 5: Psychiatric Morbidity in Relation to their history of Death/Emotional Trauma

Family history of Death/ Emotional trauma	Psychiatric morbidity			
	Present		Absent	
	Number	%	Number	%
Yes	4	5.34	3	1.41
No	62	94.66	209	98.59

Discussion

In the present study, subjects taken from rural areas majority (96.04%) were in the age group 60-70 years followed by (3.96%) were in the age group 70-80 years and no study subject 80 and above age group. Study subjects taken from rural areas (67.27%) were male and (32.73%) were female. Almost the same trend was observed in the study of **NANDI P.S. et al (1997)** reported in the study of psychiatric morbidity of the elderly population of a rural community in West Bengal participant were aged 60 year and above with majority belong to 60-70 year (72.13%) followed by 70-74 year (12.02%). **TIWARI S.C et al (2011)** reported in the study on prevalence of psychiatric morbidity in northern India among the community dwelling rural older adults population aged >60 years that majority (60.7%) of population in 60-69 years age group followed by (29.6%) in 70-79 years and (9.7%) in 80 years and above.

In our study, Majority of study subjects (46.04%) belong to Class II and least belong to Class V (3.24%) by Modified BG Prasad Scale (AICPI 2019). In the study done by **TIWARI S.C et al (2011)** reported in the study on prevalence of psychiatric morbidity in northern India among the community dwelling rural older adult's population aged >60 years that belong to (46.6%) middle class and (53.4%) lower class. **TIWARI S.C et al (2014)** reported in the study on prevalence of

psychiatric morbidity among urban elder lies found out that (13.4%) upper, (58%) middle and (28.6%) in low socioeconomic status.

The present study shows that Prevalence of psychiatric morbidity was found to be (21.94%) in rural areas among elderly population of >60 years. This is in concordance with the findings of **TIWARI S.C et al (2011)** in the study found over all prevalence of psychiatric morbidity (23.7%) in northern India among the community dwelling rural older adults population aged >60 years that higher in the age group of 60-69 years(11.6%) than 70-79 years (8.1%) and 80 year and above (4.1%). **SEBY K. et al (2011)** reported in study over all prevalence of psychiatric morbidity (26.7%) and physical illness (69.8%) in an urban geriatric population that prevalence of psychiatric morbidity higher (37.5%) in >90 years age group followed by (30.8%) in 85-89 year age group, (27.8%) in 80-85 year age group and least (24.1%) in 70-74 year age group.

In our study it was observed that among the study subjects with psychiatric morbidity, Maximum (42.75%) were illiterate and Minimum (0.68%) were post graduates. This observation was found to be statistically not significant ($p>0.05$).this is in concordance with the findings of **Deswal Balbir S.et al (2001)** found out in an Epidemiological study of mental disorders at Pune, Maharashtra among urban adult population aged >18 years that the lifetime prevalence rate of mental disorders was found to be higher among those with 0–5 years of education as compared with higher educated persons. **SINGH A. PURNA et al (2012)** reported in a study named psychiatric morbidity in geriatric population in old age homes and community that psychiatric morbidity among higher in Illiterate (37.8%) than Literate (30.5%).

In our study it was observed that Maximum (38.93) study subjects with psychiatric morbidity were unemployed, Minimum (3.05%) study subjects were Professional, Statistically not significant ($p>0.05$). this is in concordance with the findings of **Deswal Balbir S. et al(2001)** found out in an Epidemiological study of mental

disorders at Pune, Maharashtra among urban adult population aged >18 years that the lifetime and 12-month prevalence of depression, panic disorder, generalized anxiety, substance abuse and any mental disorder were the highest among the employed group, followed by the homemaker group and the lowest among the retired group. **SINGH A. PURNA et al (2012)** reported in a study named psychiatric morbidity in geriatric population in old age homes and community that psychiatric morbidity more in Illiterate (37.8%) than Literate (30.5%).

In the present study Among the study subjects with psychiatric morbidity, As per Modified B.G. Prasad Classification (AICPI May 2019) Among the study subjects with psychiatric morbidity, maximum belonged to social class II (61.07%), Minimum were in the social class IV (6.87%),No study subject with psychiatric morbidity in class V, This association was found to be statistically not significant ($p>0.05$).This is in concordance with the findings of **Barua A. et al (1999)** reported in a study on psychiatric morbidity among adult population in Karnataka that proportion of psychiatric disorders were significantly high (67.4%) among individuals belonging to low socio-economic status. **TIWARI S.C et al (2011)** reported in the study on prevalence of psychiatric morbidity in northern India among the community dwelling rural older adult's population aged >60 years that belong to (46.6%) middle class and (53.4%) lower class.

In present study shows that among the subjects with family history of psychiatric morbidity, (21.37%) had psychiatric morbidity, among the subjects with family history of psychiatric morbidity, 1.88% had no psychiatric morbidity, Presence of family history of psychiatric morbidity highly prone to psychiatric morbidity and this association was found to be statistically significant ($p<0.05$). with concordance with study of **DK Thapa et al (2013)** in a study titled “The study of Psychiatric Disorders in patients with Thyroid Disorder at the tertiary care center in Western Region of Nepal “reported that about

(83.3%) did not have family history of mental disorder. Among the detected cases, anxiety disorder and bipolar affective disorder were found both in (5%) of the cases while depression in (3.3%) of the cases.

In the present study, Maximum (6.87%) subjects with psychiatric morbidity suffered from physical/mental harassment, Association between history of psychosocial problem and psychiatric morbidity was found to be statistically significant ($p < 0.05$), which was in concordance with **Maideen S.F. Kader et al (2015)** in a study to assess the prevalence, associated factors & predictors of anxiety observed that majority (12.3%) of the participants had serious financial problem followed by 7.34% had serious marital/family problem, 3.9% had serious problem at work and 3.5% lost their job and presence of anxiety in 44.8% participants with serious marital/family problem, 22.8% with serious problem at work, 21.2% with lost job & 18.4% with serious financial problem

In our study, among the study subjects with psychiatric morbidity, maximum (21.37%) suffered from diabetes mellitus and followed by hypertension (16.03%), Statistically not significant ($p > 0.05$). This is similar to the findings of **SEBY.K et al (2011)** conducted a study prevalence of psychiatric and physical morbidity in urban geriatric population and found out that the most common chronic illness was visual impairment (41.6%), followed by cardiovascular disease(35.1%), hearing impairment (18.8%) and genitourinary disease (11.9%).

In the present study, Among the study subjects with psychiatric morbidity, maximum (85.50%) had sleep duration less than 6 hours, (14.50%) had sleep duration more than 6 hours, Association between history of sleep duration and psychiatric morbidity was found to be statistically significant ($p < 0.05$). No studies reference extracted for the following parameter for discussion.

In our study, among the study subjects with psychiatric morbidity, (5.34%) had history of death closed ones or any other emotional trauma,

Association between history of death/emotional trauma and psychiatric morbidity was found to be statistically significant ($p < 0.05$). No studies reference extracted for the following parameter for discussion.

Limitations of the Study

- Due to time constrain Mini assessment scale was used for screening of psychiatric morbidity. Confirmatory diagnosis using gold standard test for each psychiatric morbidity was not applied due to lack of time during community visits.
- This study should be carried out on a larger sample size, so that the reflection from the study would be stronger.
- Responses made by respondents were based on recall memory which may involve bias, as some of the questionnaires require to state whether the condition had been present for the past two weeks. The result of the study therefore, should be visualized within the framework of limited objective, scope, content and the limitation of the study.

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