Original Research Article

A study on the association of Mental Disorders and Physical Illness in the Geriatric Population

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ABSTRACT

Background: Growth of elderly people in the general population in recent years is termed as "graying of the world" where there is a shift from high mortality & fertility to low mortality & fertility, resulting in an increased proportion of older people as seen in India. Improved health care promises longevity but socio-economic factors like poverty, joint families and poor services pose a psychological threat. Epidemiological data regarding the prevalence of mental disorders in geriatric population with physical illness is required for proper health planning. The aim of the study is to study the association of mental disorders and physical illness in geriatric population.
Methodology: Sixty consecutive elderly patients aged 60 years or above of both sexes, reporting with physical illness to general outpatient registration counter of Navodaya Medical College Hospital & Research Centre, Raichur, India, were considered for the Study. With informed consent, they were screened with General Health Questionnaire (GHQ-12) and were further evaluated for diagnosing mental disorders according to WHO International Classification of Diseases (ICD-10) criteria. Descriptive statistics and percentage were used to describe the data.
Results: Mental disorders were detected in 48.3%, predominantly depressive disorders, nicotine dependence, generalized anxiety disorder, alcohol dependence and least was dementia. Most common physical illness was cardiovascular disease followed by metabolic, respiratory and other diseases. Depressive disorders, substance dependence and dementia were more associated with cardiovascular disease compared to metabolic disease and respiratory diseases were more associated with nicotine dependence.
Conclusions: Depression and Substance use disorders among elderly population is of concern, which needs to be further studied with larger population. Psychiatric morbidity will adversely have an impact on physical illness which needs proper assessment and management. This will enhance our understanding and prioritize our planning for future.

Keywords: Geriatric, Mental Disorders, Physical Illness.

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INTRODUCTION

According to United Nations population fund (UNFPA), 1 out of every 10 persons is now 60 years or older [1]. Latest census in India revealed that it is home to more than 76 million people aged 60 years and over [2]. This age group currently constitutes 7.4% of the Indian population. The life expectancy of an average Indian has increased from 54 years in 1981 to 64.6 years by 2002. This elderly population is likely to increase to 137 million by 2021. As the population of older people in the world is steadily growing, mental health conditions are becoming an important cause of morbidity and premature mortality in this age group.

Indian Studies

Authors from India report 22-35% prevalence rate of psychiatric disorders in their elderly study population [3-7]. In a geropsychiatric morbidity survey in rural Uttar Pradesh, India, psychiatric morbidity

was found in 42.2% of geriatric population, in comparison to only 3.97% psychiatric morbidity in non-geriatric population (with overall psychiatric morbidity in general population being 6.9%) [8]. In an institution-based study of elderly psychiatry outpatients over a period of 3 years, mood disorder was reported to be the most common illness (48.07%), followed by anxiety spectrum disorder (15.47%) and organic mental disorders (14.36%) [9]. Medical comorbidity was a significant finding of this study as additional physical illness diagnosis was found to be present in more than half (56.35%) of these patients [9]. In a retrospective study of elderly patients attending a psychiatric clinic, psychotic disorder was reported in 33.6% and affective psychosis in 31.6% of geriatric patients [10]. Prasad found 43% of his elderly patient population had non-organic psychoses while 22% of had organic psychosis [11]. In a psychiatry outpatient-based study, mood disorder was reported to be the commonest clinical diagnosis (44%), followed by psychotic disorder (33.3%) and dementia (9.5%) [12]. Nandi and others concluded that 61% of elderly population were mentally ill, women had higher prevalence than men (77.6% – 42.4%) and majority had depressive disorders and rate of dementia was low [14]. According to Seby K et al., Psychiatric Illnesses were detected in 26.7 % while Physical illnesses were present in 69.8% among elderly patients. Predominant were depressive disorders, dementia, generalized anxiety disorder and alcohol dependence [13]. Tiple and others report that the depressive disorders were the most common psychiatric illnesses. Many patients had associated physical illnesses and hypertension was the most common [12]. In a study of old age homes, majority of the inhabitants (64.4%) were having psychiatric morbidity, and no one was observed physically fit and were having one or more physical morbidities.

Foreign Studies

In a prevalence study of psychiatric disorder amongst French elderly population, 46% of the study population was reported to have had experienced at least one mental disorder in their lifetime [6]. Ritchie and others found a lifetime prevalence of 26.5% and 30% for major depression and anxiety disorders in geropsychiatric patients, respectively [6]. The prevalence of significant depressive symptoms in community dwelling elderly individuals ranged from 11 to 44%, with an average of about 20% [7]. Depression was present in the range of 13.3-18.3% prevalence as reported in the western literature [18-20]. Improved healthcare promises longevity but social and economic conditions such as poverty, break-up of joint families and poor services for the elderly especially those with physical illness pose a psychological threat to them [15].

The current study aimed at studying the relationship between mental disorders and physical illness in elderly patients.

METHODOLOGY

Sixty consecutive elderly patients aged 60 years or above of either sex, reporting for their physical illness to General Outpatient registration counter of Navodaya Medical College Hospital and Research Centre, Raichur, India was considered for the Study. Informed consent was taken and the patients were screened with General Health Questionnaire (GHQ-12). The 12 items version is increasingly employed in recent years in primary and community setting and takes about 2-3 minutes for administration and has a sensitivity of 87.5% and a specificity of 79.2%. The GHQ has been standardized in Indian setting and has been translated into many Indian languages. A cut off score of 2/12 was used and anybody scoring 3 or more was taken as positive cases. In the present study, those who were positive on GHQ-12 criteria were further evaluated for diagnosing psychiatric morbidities according to WHO International Classification of Diseases and Related Health Problems (ICD-10) criteria.

Inclusion Criteria: Outpatients aged 60 yrs and above of both sex and providing informed consent.

Exclusion Criteria: Inpatients, patients reporting to casualty and those who are not willing to give consent.

Descriptive statistics and percentage were used in the study.

RESULTS

The Socio-demographic profiles shows that males contributed 63.3% (38) and females contributed 36.7% (22) of the study population. Majority of them were from rural background contributing forty-two (70%) and remaining eighteen (30%) were from urban population. Forty-five (75%) were in the age range of 60-70 years, thirteen (21.7%) of them were in the age range of 71-80 years and the remaining two (3.3%) were aged above 80 years. Thirty-five (58.3%) were found positive for GHQ-12 screening test and twenty nine (48.3%) were diagnosed with psychiatric morbidity. All the patients were married but substantial number among the married was widowed (male 15%; female 20%). 40% of the study population had no formal education. Only 10% had an education of above tenth standard. 80% was staying along with their children. Majority were dependent (40%) on other family members for financial support. Most participants were Hindu by religion (90%) and had no family history of psychiatric illness. In those with psychiatric illness among family members, substance abuse and depressive disorders were the most common complaints.

Table 1 shows the distribution of psychiatric disorders across the various age groups of the study population. Common clinical diagnoses in the age group of 60-70 years were mild depression (26.7%) followed by nicotine dependence (22.2%), generalized anxiety disorder (11.1%), moderate depression (8.9%), alcohol dependence and dementia (2.2%). In the age group of 71-80 years, common disorders were mild depression (30.8%) followed by nicotine dependence (23.1%), alcohol dependence (15.4%) and generalized anxiety disorder (7.7%). In the age group of more than 80 years, moderate depression and nicotine dependence contributed 50% each. Overall, most common psychiatric morbidity was mild depression (26.7%) followed by nicotine dependence (23.3%), generalized anxiety disorder (10%), moderate depression (8.3%), alcohol dependence (5%) and the least was dementia (1.7%).

The distribution of physical illnesses diagnosed by various specialists in our hospital in the study population shows that cardiovascular diseases were found to be more common (33.3%) following other diseases category (45%). Metabolic diseases (20%), visual impairment (15%), respiratory diseases (10%) and genitourinary diseases (6.7%) were the remaining physical illnesses.

Table 1 Type of Psychiatric Disorders

Age Group (Years)	Total Population GHQ Positive Psychiatric Morbidity	Depression Mild N %	Depression Moderate N %	Alcohol Dependence N %	Nicotine Dependence N %	GAD N %	Dementia N %
60-70	45 24 21	12 26.7	04 08.9	01 02.2	10 22.2	05 11.1	01 02.2
71-80	13 09 06	04 30.8	00 00.0	02 15.4	03 23.1	01 07.7	00 00.0
>80	02 02 02	00 00.0	01 50.0	00 00.0	01 50.0	00 00.0	00 00.0
Total	60 35 29	16 26.7	05 08.3	03 05.0	14 23.3	06 10.0	01 01.7

(N - Total Number, % - Prevalence per 100)

Table 2 shows association of psychiatric disorders with physical illnesses. Cardiovascular diseases were associated with mild depression and nicotine dependence contributing 30% each. Metabolic diseases were associated with 25% of mild depression and 1% each of moderate depression and nicotine dependence. Visual impairment was associated with 11.1% of generalized anxiety disorder and respiratory diseases were

associated with 50% of nicotine dependence. Overall, depressive disorders and substance dependence were more associated with cardiovascular diseases, respiratory diseases were more associated with nicotine dependence and generalized anxiety disorder was associated with visual impairment but because of the small association in terms of sample, it cannot be correlated.

Table 2: Association Of Psychiatric Disorders With Physical Illnesses

Physical Illness	Depression Mild N (%)	Depression Moderate N (%)	Alcohol Dependence N (%)	Nicotine Dependence N (%)	GAD N (%)	Dementia N (%)
Cardiovascular	6 (30)	4 (20)	2 (10)	6 (30)	0 (0)	1 (5)
Metabolic	3 (25)	1 (8.3)	0 (0)	1 (8.3)	0 (0)	0 (0)
Genitourinary	1 (25)	1 (25)	1 (25)	0 (0)	0 (0)	1 (25)
Respiratory	2 (33.3)	1 (16.7)	0 (0)	3 (50)	2 (33.3)	0 (0)
Visual Impairment	0 (0)	0 (0)	0 (0)	0 (0)	1 (11.1)	0 (0)
Others	8 (29.6)	4 (14.8)	0 (0)	7 (25.9)	5 (18.5)	1 (3.7)

(N - Total Number, % - Prevalence per 100)

DISCUSSION

Evaluating an elderly population with physical illness visiting tertiary care general hospital with a valid screening test came out with following findings. The prevalence of geriatric psychiatric disorders was 48.3%, which was more than the 32.2-43.3% prevalence reported in other Indian studies [5, 16-17]. There was high co-morbidity with physical illnesses, specifically cardiovascular diseases, metabolic diseases and respiratory diseases. Prospective studies are required to examine the exact nature of these associations. The prevalence of dementia was less compared with the 1.6-10% prevalence of dementia reported in other Indian studies [5, 14, 17]. Depression was present in 35% of the population, which is more than 13.3-18.3% prevalence reported in the literature [18-20]. The prevalence rates in Indian studies have been unfortunately widely varied, ranging from 6% [21] to 55.2% [14]. The risk factors associated with depression in this study were co-morbid physical illnesses, specifically cardiovascular diseases, respiratory diseases and metabolic diseases. Physical disability has been consistently found to be a risk factor for depression in late life [22]. In the present study, 10% of the population had generalized anxiety disorder, which cannot be compared with 4.6% prevalence rate reported by Ritchie et al. because of small sample size [23]. Interestingly, no panic disorder, phobia or obsessive compulsive disorder (OCD) was detected in our study. Most Indian researchers reported a low prevalence of anxiety disorders in the elderly population [5,14, 21]. The prevalence of alcohol dependence in our study was 5% which is comparable to 3.7% prevalence reported in the urban Indian elderly population [16]. Male sex, family history of substance disorders and cardiovascular diseases were associated with alcohol dependence in our study. Subjects with cardiovascular diseases had a significantly higher prevalence of dementia and depressive disorders. Association of dementia with cardiovascular disorder may be explained by the occurrence of vascular dementia. Whether depression is a psychological reaction to a serious physical illness or due to undiagnosed cerebral accidents common in cardiovascular disorder patients is uncertain. Studies have shown that physical illness, depression and dementia are three important independent predictors of suicide. Association of physical illness with depression and dementia may make the elderly population particularly vulnerable to suicide. The present study confirms the findings of the earlier studies, in that a significant proportion of the elderly population in the community has psychiatric illnesses. This study showed a high prevalence of depression in the elderly. Geriatric depression tends to get neglected often, and this study points to the importance of screening for depression routinely in practice. Even with small sample size, this study showed the prevalence rates of other psychiatric disorders such as anxiety disorders, nicotine dependence and alcohol-related disorders, on which little data is available

in the elderly in India at present. All the subjects with psychiatric co-morbidity were not taking any psychiatric treatment at the time of the study. Sadly, their family members often did not consider it necessary to seek treatment for them. Lack of awareness about geriatric psychiatric morbidity in patients with physical illness attending tertiary care general hospital points to the state of affairs regarding awareness about geriatric mental health in India. Steps are required at various levels of administration to bring awareness and provide interventions to alleviate the disability and suffering of the individual, their family members and the community in general.

Limitations: The Sample size on which the study was done was small. A study on the community population shall reveal details regarding different psychiatric illnesses prevalent in elderly patients with physical illness. GHQ-12 negative patients were not assessed which would have revealed the percentage of false negative cases. In-patients were not included in the study and psychiatric illness among in-patients may be high as reported by various studies.

CONCLUSION

The prevalence of psychiatric morbidity in the elderly population with physical illness in this study is high. Depression and Substance use disorders among elderly population is of concern, which needs to be further studied with larger population. Psychiatric morbidity will adversely have an impact on physical illness which needs proper assessment and management. Initiatives should be undertaken to formulate a policy for developing services based on available research data, requirements, available infrastructure and gap [26]. Studies on Geriatric population will be important for future health care and studies like this will enhance our understanding and prioritize our planning for future. Based on this study and the previous related studies, further research should be carried out in India to check the cost-effectiveness of consultation-liaison psychiatry and efforts should be made to improve the morbidity [24]. Equally important is to get the subject of geriatric mental health recognized to attract the medical and paramedical people to take up careers in the subject and to establish specialized psychogeriatric services in the country [26].

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