

Study of Psychiatric Morbidity in Geriatric Population Attending Psychiatric OPD in Teaching Hospital

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I. Introduction

The term old age brings to mind , the end of one's productive and fulfilling life. Eric Erikson in his theory of personality has rightly named the old age, the last stage of life span of man, as the stage of maturity, as it involves certain physical and psychological changes which in turn lead to personal, interpersonal and other social adjustments. Understanding of this inevitable and essential part of life in BIOPSYCHOSOCIAL perspective is thus needed as this stage is interdependent of previous stages and adjustment in old age is dependent on person's physical, psychological and social interaction.

As things stand, the rapid spread of modernization , growing urbanization and crumbling of joint family system have conspired to increase insecurity and loneliness among the geriatric population. However, India has not yet come out with an appropriate policy framework to provide social security for the elders. Lack of family support , poor financial status, physical and mental disorders and guilt of being dependent on others are some of the problems nagging the elderly population in India, and other countries around the world.

A number Indian epidemiological studies on geriatric population indicated prevalence rate of psychiatric morbidity among those with 60 years and above was estimated at 89/1000 population amounting to 4 million in the country as a whole (Indira jai prakesh Ageing in India,1999). The risk of specific psychiatric illness increases with age. The overall prevalence rate rises from 71.5% for those over 60 to 124 for those in 70's to 155 for those over 80 years (Venkoba rao and Madhavan,1983).

II. Review of Literature

Various prevalence studies carried out in India show that one to two percent of Indian population at any given time suffer from psychiatric illness requiring urgent attention and treatment [Dube(1970),Elnager et al(1971),Sethi et al(1972), Verghese(1973),Nandi(1975), Carstairs and Kapur (1976)] which though not striking is equally distressing and debilitating [Kapur(1979)].

Studies in western countries have found psychiatric morbidity in general practice to range from 14%(Vessel,1960) to 44%(Golberg, 1972). Goldberg (1972) using the General Health Questionnaire estimated the morbidity to be 44%. Krishnamurthy et al (1981) estimated the morbidity to be 36% in general practice.

Ramachandran et al (1979) conducted a major epidemiological study, exclusively on elderly population above 50 years of age in Poonamallee, a sub urban area of Madras, and found the prevalence rate for functional illnesses at 3.5% , organic illnesses 3.2%, depression 23.6%., anxiety 1.97%, hysteria 0.5% and alcoholism 0.5%.

In another study, Ramachandran et al (1981), studied the family structure of the elderly and found, high degree of functional disorders in the subjects living in nuclear family or living alone. They also found that the family and living conditions are important in influencing the mental health of the subjects.

AIM : Our aim is to find out the psychiatric morbidity in geriatric population attending a psychiatric OPD in a teaching hospital

OBJECTIVES :

- To obtain Socio demographic data of geriatric psychiatric patients
- To understand the pattern of associated physical illness.
- To find out the various types of psychiatric illness occurring in elderly patients visiting psychiatric OPD in a teaching hospital.

III. Materials And Methods

DATA SOURCE: The present study was a cross sectional descriptive study , conducted at Owaisi Hospital & Research Centre, Deccan college of Medical Sciences, Hyderabad.

SAMPLE:The sample for the present study was collected from the outpatient department of Psychiatry Department at Owaisi Hospital and Reseach Centre, Between may-2012 to feb-2013. A sample of 32 geriatric patients attending a psychiatric opd were included in the study.

DESCRIPTION OF SUBJECTS: The subjects were aged between 60-85 years and came to Psychiatric OPD . There were no controls as the current study is of a descriptive type rather than that of a comparative one

INCLUSION CRITERIA

- Age 60 years and above
- Both sexes
- Informed consent of the patients and relatives

OPERATIONAL PROCEDURES

- The subjects were taken into before they were counseled by the psychiatrist.
- The subjects so chosen, were explained the nature of the study
- Informed consent was obtained from each subject
- Using the intake proforma, details about sociodemographic data was collected
- Then each subject was administered with a structured interview

DESCRIPTION OF SCALES: 4.SCALES were used in this study to study the psychiatric morbidity in geriatric patients. These are 1.HAMILTON ANXIETY RATING SCALE (HAM-A), 2.HAMILTON DEPRESSION RATING SCALE (HAM-D), 3.MINI MENTAL STATE EXAMINATION(MMSE), 4. NEUROPSYCHIATRIC INVENTORY(NPI).

RESULTS

TABLE 1. Mini Mental Status Examination (MMSE)

	MMSE	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Severe impairment	6	18.8	18.8	18.8
	Moderate dementia	10	31.3	31.3	50.0
	Mild dementia	16	50.0	50.0	100.0
	Total	32	100.0	100.0	

- Mean: 2.31 ,, sd : 0.780 ,, std error: 0.138
- The above table shows the frequency and degree of dementia in patients attending opd, 50%(n=16) patients in the study have MILD Dementia, 31%(n=10) patients in the study have MODERATE Dementia, 19%(n= 6) patients have SEVERE Dementia, Majority of the patients are having MILD DEMENTIA in our study group.

TABLE.2 : Hamilton Anxiety Rating Scale (HAM-A)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MILD	15	46.9	46.9	46.9
	MODERATE	11	34.4	34.4	81.3
	SEVERE	6	18.8	18.8	100.0
	Total	32	100.0	100.0	

- MEAN : 1.7188 SD: 0.77 STD ERROR MEAN : 0.13645
- The above table shows the frequency and degree of Anxiety in patients attending opd, 47%(n= 15) patients in the study have MILD Anxiety, 34%(n=11) patients have MODERATE Anxiety,19%(n=6)patients have SEVERE Anxiety, Majority of patients have MILD form of Anxiety in our study group.

TABLE 3: Hamilton Rating Scale For Depression (HAM-D)

	HAM-D	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MILD	9	28.1	28.1	28.1
	MODERATE	17	53.1	53.1	81.3
	SEVERE	6	18.8	18.8	100.0
	Total	32	100.0	100.0	

- MEAN: 2.9063; SD: 0.68906; STD ERROR MEAN: 0.12181

- This table shows the frequency and degree of Depression in patients attending opd, 19%(n=6) patients in the study have SEVERE Depression, 28%(n=9) patients in the study have MILD depression. 53%(n=17) patients in the study have MODERATE Depression, Majority of the patients have MODERATE form of depression in our study group.

TABLE NO. 4: Neuropsychiatric Inventory (NPI)

NPI		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	mild behav disturbances	7	21.9	21.9	21.9
	moderate behavioural disturbances	21	65.6	65.6	87.5
	severe beh disturbances	4	12.5	12.5	100.0
	Total	32	100.0	100.0	

- Mean: 1.9063; SD: 0.59; STD ERROR MEAN: 0.10395
- The above table shows the frequency and degree of behavioral disturbances in patients attending opd, 22%(n=7) patients have MILD behavioral disturbances, 66%(n=21) patients have MODERATE behavioral disturbances, 12%(n=4) patients have SEVERE behavioral disturbances, Majority of the patients have MODERATE behavioral disturbances in our study.

AGE OF THE PATIENT

- Observed that the relationship between age of the patient and its effects on Anxiety, Depression, Neuropsychiatric Inventory, MMSE of patients attending the opd, was assessed using the Pearson Product moment correlation coefficient and the results were no significant relationship between was noted.

SEX OF THE PATIENT

- Observed that the relationship between sex of the patient and its effects on Anxiety, Depression, Neuropsychiatric Inventory, MMSE of patients attending the opd, was assessed using the Pearson Product moment correlation coefficient and the results are were no significant relationship between was noted.

TABLE NO. 5: Education Of The Patient

ANOVA Education OF THE PATIENT						
		Sum of Squares	Df	Mean Square	F	Sig.
HAM-D	Between Groups	2.224	3	.741	1.661	.198
	Within Groups	12.495	28	.446		
	Total	14.719	31			
HAM-A	Between Groups	4.926	3	1.642	3.395	.032
	Within Groups	13.543	28	.484		
	Total	18.469	31			
NPI	Between Groups	1.462	3	.487	1.474	.243
	Within Groups	9.257	28	.331		
	Total	10.719	31			
MMSE	Between Groups	3.446	3	1.149	2.085	.125
	Within Groups	15.429	28	.551		
	Total	18.875	31			

- From the above table it is observed that there is significant correlation between education of the patient and HAM-A(r=3.395, p=0.032), This table shows that there is no statistical significance between education of the patient and HAM-D, NPI, MMSE, GHQ(0.198, 0.243, 0.125, 0.390)

TABLE NO. 6: Occupation Of The Patient

ANOVA Occupation OF THE PATIENT						
		Sum of Squares	Df	Mean Square	F	Sig.
HAM-D	Between Groups	5.910	3	1.970	6.263	.002
	Within Groups	8.808	28	.315		
	Total	14.719	31			
HAM-A	Between Groups	2.735	3	.912	1.623	.206
	Within Groups	15.733	28	.562		

	Total	18.469	31			
NPI	Between Groups	1.985	3	.662	2.122	.120
	Within Groups	8.733	28	.312		
	Total	10.719	31			
MMSE	Between Groups	3.567	3	1.189	2.175	.113
	Within Groups	15.308	28	.547		
	Total	18.875	31			

- From the above table it is observed that there is statistical significant correlation between occupation of the patient and HAM-D(R=6.263, P= 0.002),This table shows that there is no statistical significance between occupation of the patient and HAM-A, NPI, MMSE, GHQ(0.206, 0.120, 0.113, 0.897)

TABLE NO. 7: Socio Economic Status Of The Patient

ANOVA SES OF THE PATIENT						
		Sum of Squares	df	Mean Square	F	Sig.
HAM-A	Between Groups	4.080	2	2.040	4.111	.027
	Within Groups	14.389	29	.496		
	Total	18.469	31			
NPI	Between Groups	.022	2	.011	.029	.971
	Within Groups	10.697	29	.369		
	Total	10.719	31			
HAM-D	Between Groups	2.230	2	1.115	2.589	.092
	Within Groups	12.489	29	.431		
	Total	14.719	31			
MMSE	Between Groups	3.511	2	1.756	3.314	.051
	Within Groups	15.364	29	.530		
	Total	18.875	31			

- From the above table it is observed that there is statistical significant correlation between socioeconomic status of the patient and HAM-A (R=4.111, P= 0.027). and MMSE (R=3.314, P=0.051),This table shows that there is no statistical significance between socioeconomic status of the patient and HAM-D, NPI, GHQ(0.92 , 0.971 , 0.158)

TABLE NO 8: NPI

NEURO PSYCHIATRIC INVENTORY													
		Dels ion	hallu	Aggi	anxiet y	Depr	eupo	apath y	disin h	irrat	amb	sleepto t	appetit e
N	Valid	32	32	32	32	32	32	32	32	32	32	32	32
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		.44	1.13	1.19	4.00	3.84	.41	.84	.44	2.28	.91	3.41	1.94
Median		.00	.00	.00	2.50	2.00	.00	.00	.00	2.00	.00	4.00	.00
Mode		0	0	0	0	2	0	0	0	0	0	6	0
Std. Deviation		1.10	3.55	1.73	3.672	3.73	1.24	.954	1.105	2.41	1.67	2.650	2.285
Minimum		0	0	0	0	0	0	0	0	0	0	0	0
Maximum Percent		4	12	6	12	12	6	2	4	6	6	6	6
		9	9	41	72	81	13	47	16	59	31	69	47

The above table shows the neuro psychiatric inventory of the total 32 patients taken in the study, the mean scores of all the 12 items taken in the study of all the highest mean value was depression 4.00, anxiety was 3.84, night behavior sleep 3.14, irritability was 2.28, appetite was 1.94, agitation was 1.19, hallucinations was 1.13, aberrant motor behavior 0.91, apathy was 0.84, dis inhibition and delusions were 0.44, and lowest mean value was euphoria 0.41.

IV. Discussion

The aim of our study was to find out the psychiatric morbidity in geriatric patients attending a psychiatric OPD in a teaching hospital through obtaining socio demographic data and thus understanding the distribution of various types of psychiatric illness occurring in elderly patients visiting psychiatric OPD in a teaching hospital.

The subjects an initial interview were given a proforma for collecting their sociodemographic data. Andstructured psychological scales were administered.(HAMILTON Anxiety Rating Scale (14 Item), HAM-A, HAMILTON Depression Rating Scale (17 Item), Mini Mental Status Examination (30 Item), MMSENeuro Psychitric Interview (12 Item), NPI

The sample consisted of 32 - subjects belonging to different sociodemographic variables attending the Psychiatric OPD in Owaisi Hospital & Research Centre, between may-2012 to feb-2013

The data was analysed using statistical methods(Chi Square, One way Anova , T-test) and results were compiled under the following headings :AGE, SEX, OCCUPATION, EDUCATION, SOCIOECONOMIC STATUS

AGE : The sample in the present study consists of patients divided according to their age who were attending Psychiatric OPD. Patients of age group 60-75 were maximum (84%, n=27)and patients of age group 76-85 were minimum(16% n= 5).

SEX : Both male and female geriatric patients attending the OPD were included in the study and among them, female patients were more (59% n= 19) in the study than that of male patients (41%, n=13). This was similar to the findings made by Almida et al (1997) who found psychiatric morbidity were higher in women.

OCCUPATION : We included the occupation of the patients as one of the sociodemographic variables for our present study as it may effect their psychological status. Of the total sample, house wives were maximum (47% n=15) and unemployed were minimum (3% n=1). Other groups include those who are employed (25% n=8) and retired (25% n=8).

EDUCATION: Patient's education was taken as one of the variables for our study. Of the total sample, illiterate patients were maximum (47% n= 15) and those who studied upto degree were minimum (9% n= 3) and those with education upto SSC and those with only Primary education were 22% each (n=7+7=14). This was similar to the findings made by Almida et al (1997) where they found that psychiatric problems and psychiatric morbidity were more likely be in illiterates(23.4% vs12.1%).

SOCIOECONOMIC STATUS: The distribution of Socioeconomic status of the subjects in the study was divided into 3 sub-groups(low, middle and high). Among these, patients belonging to low income group were maximum (47% n=15) and middle income group were 28% (n=9) and patients belonging to high income group were minimum (25% n= 8). This was similar to the findings made by Almida et al (1997) where they found that psychiatric problems and psychiatric morbidity were more in patients with low income group(2.21 vs 4.01).

V. Interpretation of Results

HAM-A(HAMILTON ANXIETY RATING SCALE) :

Anxiety was measured on HAM-A Scale and it was found out that 47% (n= 15) of the patients in our study have MILD Anxiety , 34% (n=11) have MODERATE Anxiety and 19% (n=6) have SEVERE Anxiety.

HAM-D(HAMILTON DEPRESSION RATING SCALE) : Depression was measured on HAM-D scale and the results showed that 53% (n=17) have MODERATE Depression , 28%(n=9) have MILD Depression and 19% (n=6) have SEVERE Depression.

MINI MENTAL STATUS EXAMINATION (MMSE) : In our present study, 50% (n=16) has MILD dementia and 31%(n=10) has MODERATE dementia while 19%(n=6) has SEVERE dementia.

NEUROPSYCHIATRIC INTERVIEW(N.P.I) : The NPI is administered by the clinician to the caregiver to assesses behavioral changes based on a standardized caregiver interview. The caregiver is usually a family member involved in the daily care of the patient. the 12 behavioral changes depression is the most common with 81.1%(n=26), followed by anxiety 71.9%(n=23),sleep disturbances68.8%(n=22), irritability 59.4%(n=19),apathy47%(n=15), agitation 30.6%(n=13), aberrant motor behavior 31.2%(n=10), dis-inhibition and delusions hallucinations were 15.7%(n =5), the most uncommon was the euphoria 12.5%(n=4)This correlates with the study of PatelV.et.al (2001) in which depression was a common presentation in primary care.This study is not in similar correlation with K.Ritchie et al 2005 where in his study anxiety disorders were found to be the most common psychiatric disorders.

OCCUPATION OF THE PATIENT:

The variable related to the occupation of the patient indicates that occupation i.e housewife s were maximum (47%) plays a major role in psychiatric morbidity i.e., they show a positive correlation with HAM-D.There is a significant positive correlation observed between occupation and HAM-D($r=6.263$, $P=0.002$).This correlates with Noorbala, Begheri yazdi, Yasamy,Mohammad(2004) in their study on mental health survey of the adult population found that the risk of mental disorders increases with wife age , the higher risk of mental disorders related to housewives. In their research depression and anxiety were more prevalent than somatization and social dysfunctions.

This correlated with the study of Almida et al (1970) in their study on mental health of elderly attending regional primary centre found higher prevalence (72.9%) of depressive symptoms and tension

,somatic complaints and signs of inefficient functioning were also common (50.4% and 45.9%) and were more likely to be illiterates (23.4% vs 12.1%) and have low income (2.21 vs 4.01) with minimum wages.

EDUCATION OF THE PATIENT:

The variable related to the education of the patient indicates that illiterates were maximum (47%) and plays a major role in psychiatric morbidity i.e., they show a positive correlation with HAM-A. There is a significant positive correlation between education and HAM-A ($r=3.395$, $p=0.032$). This correlated with the study of Almida et al (1970) in their study on mental health of elderly attending regional primary centre found higher prevalence (72.9%) of depressive symptoms and tension, somatic complaints and signs of inefficient functioning were also common (50.4% and 45.9%) were more likely to be illiterates (23.4% vs 12.1%) and have low income (2.21 vs 4.01) minimum wages. This correlates with the study of Tiwari SC 2000 where socially, economically, and educationally disadvantaged subjects were found to be more psychiatrically ill.

SOCIOECONOMIC STATUS OF THE PATIENTS:

The variable related to the socio economic status of the patients indicates that socioeconomic status of patients were maximum with low economic status (47%), and this plays a role in psychiatric morbidity. i.e. positive correlations with MMSE and HAM-A. There is a significant positive correlation between socioeconomic status and HAM-A ($r=4.111$, $p=0.027$) and MMSE ($r=3.314$, $p=0.05$). This correlated with the study of Almida et al (1970) in their study on mental health of elderly attending regional primary centre found higher prevalence (72.9%) of depressive symptoms and tension, somatic complaints and signs of inefficient functioning were also common (50.4% and 45.9%) were more likely to be illiterates (23.4% vs 12.1%) and have low income (2.21 vs 4.01) minimum wages. This correlates with the study of Tiwari SC 2000 where socially, economically, and educationally disadvantaged subjects were found to be more psychiatrically ill.

VI. Summary And Conclusions

The present study was conducted with an aim to determine the psychiatric morbidity in geriatric patients attending a psychiatric OPD in a teaching hospital across different sociodemographic variables using standardized interviews. The subjects were randomly examined about the study and after initial interview, sociodemographic data was collected using an intake proforma and following variables were included namely, age, sex, occupation, education, socioeconomic status.

In total 32 subjects were included and interviewed using intake proforma and structured questionnaires (HAM-A, HAM-D, GHQ, MMSE and NPI). The data was analysed and following conclusions were drawn.

The salient features of the Conclusions are :

- 47% (n=15) of the patients in our study have MILD Anxiety, 34% (n=19) have MODERATE Anxiety and 19% (n=6) have SEVERE Anxiety.
- 53% (n=17) have MODERATE Depression, 28% (n=9) have MILD Depression and 19% (n=6) have SEVERE Depression.
- In our present study, 50% (n=16) has MILD dementia and 31% (n=10) has MODERATE dementia while 19% (n=6) has SEVERE dementia.
- In our present study 66% (n=21) have MODERATE behavioral disturbances and 22% (n=7) have MILD behavioral disturbances and 12% (n=4) have SEVERE behavioral disturbances.
- Significant correlation exists between OCCUPATION and HAM-D (0.002)
- Significant correlation exists between EDUCATION and HAM-A (0.032)
- Significant correlation exists between SOCIOECONOMIC STATUS and MMSE (0.05) AND HAM-A (0.027).

LIMITATIONS OF THE STUDY:

- The generalization of the findings were limited because of the small sample size.
- It was a cross sectional study and the individuals were not followed up.

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