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ORIGINAL ARTICLE

Evaluation of Psychiatric Types of Morbidities among the Caregivers with Dementia

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ABSTRACT

Background: *Globally, an estimated 30 million people suffer from dementia, a number expected to quadruple every 20 years. Dementia patients often require high levels of care, predominantly provided by unpaid family caregivers. Without caregivers, patients face lower quality of life, earlier institutionalization, and increased societal and economic burden.* ***Objective:*** *To assess the evaluation and types of psychiatric morbidities among caregivers of patients with dementia.* ***Methods & Materials:*** *A cross-sectional observational study was conducted from July 2022 to June 2023 at the Psychiatry departments of National Institute of Neuro Sciences & Hospital (NINS) and National Institute of Mental Health (NIMH) & Hospital, Dhaka. A total of 107 caregivers were recruited using purposive sampling. Data were collected via face-to-face interviews with a semi-structured questionnaire. Psychiatric morbidity was assessed using DSM-5 criteria and confirmed clinically. Data were analyzed with SPSS v24 using descriptive statistics and Chi-square tests for associations.* ***Results:*** *Most caregivers were female (68.2%), aged 28–37 years (52.3%), with the majority being housewives (36.4%). Most had no prior experience in caregiving for patients with dementia (88.8%) and were not physically abused by the patient (86%). Overall, 75.7% of caregivers had psychiatric morbidity. The most common conditions were Major Depressive Disorder (54.3%), Obsessive-Compulsive Disorder (16%), Generalized Anxiety Disorder (9.9%), Panic Disorder with Agoraphobia (7.4%), and Panic Disorder without Agoraphobia (3.7%). Social Phobia, Somatoform Disorders, and Eating Disorders were less frequent. No significant association was found between socio-demographic characteristics and psychiatric morbidity.* ***Conclusion:*** *Caregivers of dementia patients experience a high prevalence of psychiatric morbidity, particularly depression and anxiety, highlighting the need for targeted mental health support and interventions.*

Keywords: *Prevalence, Psychiatric Morbidities, Caregiver, Dementia*

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INTRODUCTION

Dementia is a neurodegenerative disease manifested by cognitive impairment to such a degree that it hampers an individual's capacity to complete daily tasks without assistance[1]. This chronic condition affecting mostly the older adults[2] has become a global health concern with its increased prevalence of 46.80 million and estimated to be doubled in every 20 years[3]. Dementia poses an extreme caregiving burden for daily activities and most of these cares are provided by the informal or family caregivers[4]. Family (informal) caregivers might be any relative, partner, friend, or someone with very close relationship with the patient with dementia who provide care for the patients' particular needs and well-being regardless of whether they live together with the patient. Their responsibilities to care for the patients include but are not limited to helping with basic tasks of daily living such as eating, dressing, walking, planning, financial decision making for health and medical care and emotional support etc.[3]. The unique challenges experienced by the family caregivers[4] due to the extreme dependency of the patients with dementia often for the entire lifetime, become further stressful while balancing the caregiving

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responsibilities alongside taking care of own families and/or career. This makes them specifically vulnerable to develop psychiatric morbidities[5,6]. Previous research has found an increased likelihood of psychiatric illnesses among dementia caregivers[6,7]. Siobhan and colleagues revealed that 16% of the dementia caregivers in the study had suicidal thoughts in the past year[7]. A meta-analysis was conducted to explore the prevalence and related risk factors of certain psychiatric disorders among the caregivers of patients with Alzheimer's disease[6]. They confirmed that the caregivers of patients with Alzheimer's disease had higher prevalence of depression and anxiety than the general population and caregivers of the patients with other diseases. However, most of these studies have been conducted in the context of developed countries and the results cannot be generalized given the significant differences in caregiving settings of developing countries.

Over 60% of individuals living with dementia reside in developing countries. Additionally, the global population of individuals aged 60 years and older is projected to increase to 900 million by 2050, with 80% of them expected to live in low- and middle-income countries[8]. The predicted increased growth of older adults will raise the prevalence of dementia to 71% in LMICs by 2050. The 10/66 Dementia Research Group examined the facilities and access for care for the people with dementia in South-East Asia, China, India, Latin America and the Caribbean, and Nigeria[9]. However, limited opportunities of dementia related research and updated statistics complicate to follow the epidemiological trends of dementias to gauge the actual caregiving needs and related burdens and costs in Bangladesh, a low-income country of South-East Asia. While the existing evidence indicate the dementia caregivers as a vulnerable group for mental disorders, no study to date has been conducted in Bangladesh in this area. Given the increased prevalence and growth of dementia cases and relative scarcity of research in this area, it is very important to conduct more research in developing countries particularly in Bangladesh. This study examines the prevalence and types of psychiatric morbidities among the caregivers of the patients with dementia from two specialized hospitals in Bangladesh.

METHODS & MATERIALS

Study Design and Setting: This cross-sectional observational study was conducted in the in-patient and out-patient departments of Psychiatry at National Institute of Neuro Sciences & Hospital (NINS) and National Institute of Mental Health (NIMH) & Hospital, Dhaka, from July 2022 to June 2023. The National Institute of Mental Health is a tertiary-level specialized government hospital for psychiatric patients.

Study Population and Sample Size: The study population included caregivers of patients with dementia. A total of 107 caregivers of both sexes were included in the study.

Sampling Technique: Purposive sampling was employed to select participants based on availability and fulfillment of the inclusion and exclusion criteria.

Data Collection Procedure: Data were collected through face-to-face interviews using a semi-structured questionnaire. Socio-demographic information, caregiving experience, and previous exposure to patient care were recorded. Psychiatric morbidity among caregivers was assessed using standardized diagnostic criteria based on the DSM-5 and confirmed via clinical evaluation by trained psychiatrists. Informed consent was obtained from all participants before data collection.

Data Management and Quality Control: Collected data were checked, cleaned, edited, compiled, coded, and categorized to ensure accuracy, consistency, and completeness.

Statistical Analysis: Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 24. Descriptive statistics, including frequencies and percentages, were used to summarize categorical data. Inferential statistics, primarily Chi-square tests, were applied to examine associations between socio-demographic factors and psychiatric morbidity. A p-value of <0.05 was considered statistically significant.

RESULT

This is a descriptive cross-sectional study conducted in the in-patient and out-patient department of Psychiatry, National Institute of Neuro Sciences & Hospital (NINS) and National Institute of Mental Health (NIMH) & Hospital, Dhaka from July 2022 to June 2023. The National Institute of Mental Health is one of the tertiary level specialized government hospitals for psychiatric patients. After fulfilling inclusion and exclusion criteria, among 107 students the objective of the study was clearly explained to all participants and informed consent was obtained from each participant after counselling. Participants were assured that their personal information would be confidential.

Table – I: Distribution of the patients according to baseline (*n* = 107)

Age group	*n*=107	%
18-27	24	22.4
28-37	56	52.3
38-47	19	17.8
48-57	8	7.5
Sex Distribution		
Male	34	31.8
Female	73	68,2

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Relationship with patients			
	Wife	26	24.3
	Son	34	31.8
	Daughter	32	29.9
	Others	15	14.0
Religion			
	Muslim	97	90.7
	Sanatan	10	9.3
Educational Status			
	Primary	21	19.6
	SSC	24	22.49
	HSC	15	14.0
	Graduate	35	32.70
	Master	12	11.20
Occupational Status			
	House wife	39	36.49
	Farmer	14	13.10
	Labor	2	1.90
	Student	15	14.0
	Business	5	4.79
	Service	32	29.90
Earning Member		69	64.5
Family Type			
	Married	78	72.9
	Unmarried	29	27.1
Monthly Income of Family			
	10001-20000	22	20.6
	20001-30000	23	21.5
	>30000	62	57.9
Total		107	100.0

Table I shows that, more than half of the respondents (52.3%) came from the 28-37 years age group followed by 22.4 % from 18-27 years, 17.8% from 38-47% and 7.5% from 48-57 years. Female was quite double (68.2%) than male (31.80%). Relationship with patients. Wife, son, daughter and others were 24.3%, 31.8%, 29.9% and 14.0% respectively. urban and rural habitants were 65.4% and 34.6%. Most of the respondents (90.70%) were Muslim and rest of the respondents (9.3%) was Sanatan. about 32.70%, 22.40%, 19.60%, 14.00%, and 11.20% respondents completed graduation, secondary education, primary education, higher secondary education and post-graduation. Most of the respondents (36.40%) were housewife followed by service 29.90%, student 14.0%, farmer 13.10%, business 4.70% and labor 1.90. Most of the respondents (64.50%) were not the principal earning member. Most of the caregivers (72.90%) were married and rest of them (27.10) was unmarried. More than half of the family (57.9%) had monthly income>30000 BDT followed by 21.5% had 20001-30000 BDT and 20.6% had 10001-20000 BDT

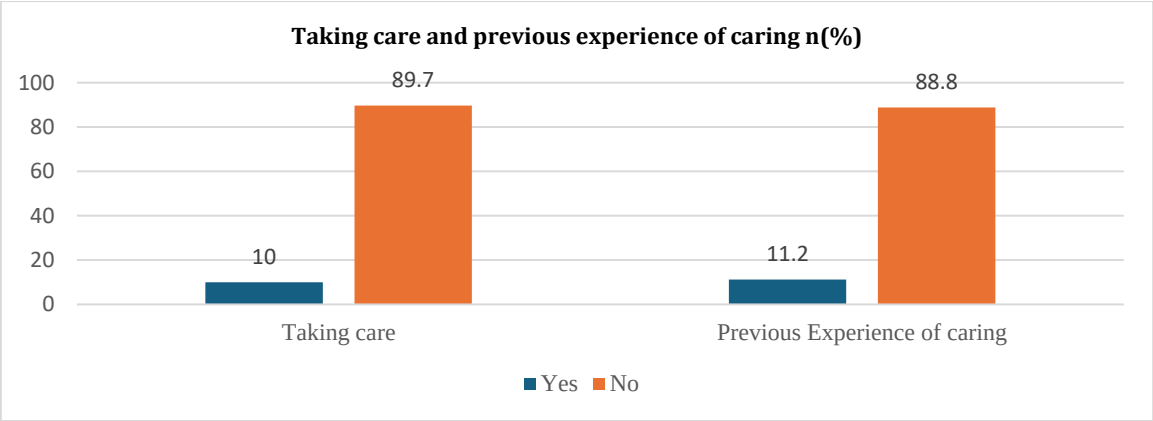

Figure – 1: Distribution of the patients according to taking care and previous experience of caring of any other patient by caregiver (*n*=107)

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Figure 1 show that, majority of the caregivers (89.70%) did not take care of other patients. Most of the caregivers (88.80%) had no previous experience of caring this type of patients

Table – II: Distribution of the patients according to duration of care (*n*=107)

Periods of taking care	Frequency	%
6-12 months	71	66.4
12-60 months	33	30.8
>60 months	3	2.8
Total	107	100.0

Table II Shows that, 66.4% respondents took care 6-12 months of the patient and 30.8% took care 12-60 months as well as 2.8% handled patient greater than 60 months.

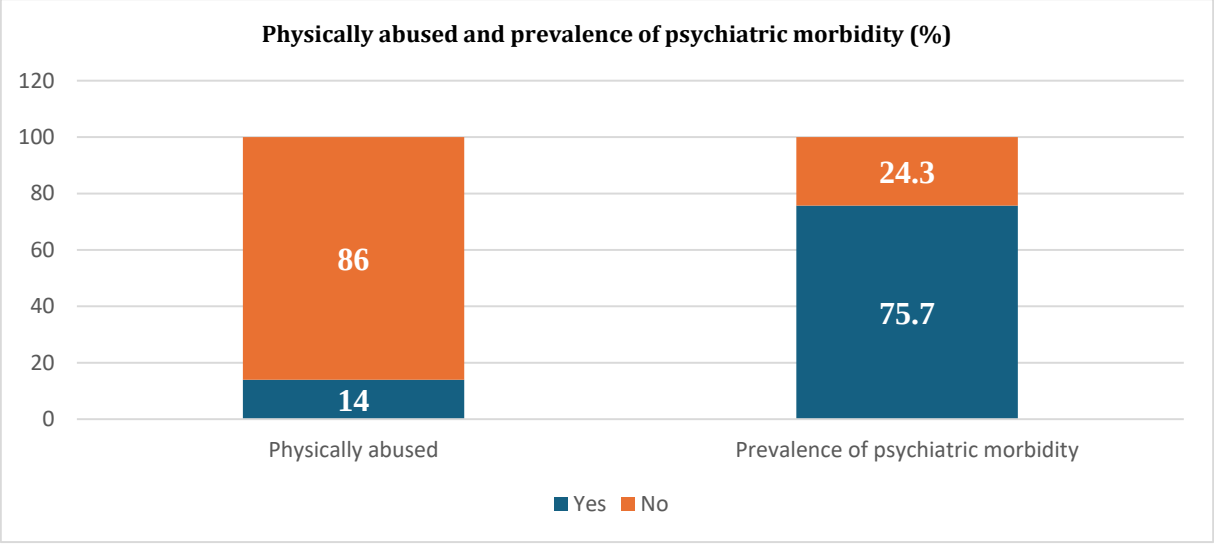
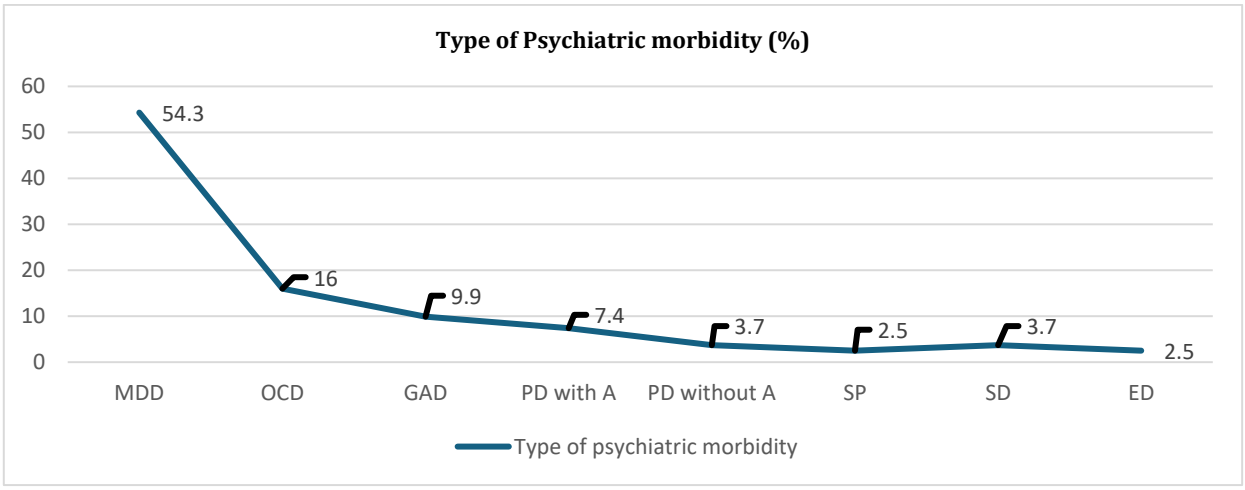


Figure – 2: Distribution of the patients according to physically abused and prevalence of psychiatric morbidity by the patient (n=107)

Figure 2 shows that, most of the respondents (86%) were not physically abused by the patient. Among 107(100.0%) respondents 81(75.70%) caregiver had psychiatric morbidity and 26(24.30%) had no psychiatric morbidity.



Fullform of type of psychiatric morbidity (MDD: Major depressive disorder, OCD: Obsessive compulsive disorder, GAD: Generalized Anxiety Disorder, PD with A: Panic disorder with agoraphobia, PD without A: Panic disorder without agoraphobia, SP: Social phobia, SD: Somatoform disorders and ED: Eating disorders).

Figure – 3: Distribution of the patients according to type of psychiatric morbidity (n = 107)

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Figure 3 shows the distribution of psychiatric morbidity among the 107 patients. Major Depressive Disorder (MDD) is the most common condition, affecting 54.3% of patients. This is followed by Obsessive Compulsive Disorder (OCD) at 16%, Generalized Anxiety Disorder (GAD) at 9.9%, Panic Disorder with Agoraphobia (PD with A) at 7.4%, and Panic Disorder without Agoraphobia (PD without A) at 3.7%. Somatoform Disorders (SD) also affected 3.7% of patients, whereas Social Phobia (SP) and Eating Disorders (ED) were the least common, each present in 2.5% of patients. Overall, mood disorders (MDD) are the predominant psychiatric morbidity in this cohort. Table III shows that, no significant association was found between socio-economic characteristics and psychiatric morbidity.

Table – III: Association between socio-economic characteristics and psychiatric morbidity (n = 107)

Age group	Psychiatric morbidity		Total	Chi-square	p value
	Yes	No			
18-27	16(15)	8(7.5)	24(22.4)	4.569	0.206
28-37	41(38.3)	15(14)	56(52.3)		
38-47	16(15)	3(2.8)	19(17.8)		
48-57	8(7.5)	0(0)	8(7.5)		
Gender					
Male	23(21.5)	11(10.3)	34(31.8)	1.757	0.185
Female	58(54.2)	15(14)	73(68.2)		
Habitat					
Rural	26(24.3)	11(10.3)	37(34.6)	0.907	0.341
Urban	55(51.4)	15(14)	70(65.4)		
Marital status					
Married	58(54.2)	20(18.7)	78(72.9)	0.282	0.596
Unmarried	23(21.5)	6(5.6)	29(27.1)		
Family type					
Extended	59(55.1)	20(18.7)	79(73.8)	0.170	0.680
Nuclear	22(20.6)	6(5.6)	28(26.2)		
Total	81(75.7)	26(24.3)	107(100)		

Results were expressed as frequency (percentage); 0.05 is considered as level of significance

DISCUSSION

Family caregivers of people with dementia, often called the invisible second patients, are critical to the quality of life of the care recipients. The effects of being a family caregiver, though sometimes positive, are generally negative, with high rates of burden and psychological morbidity as well as social isolation, physical ill-health, and financial hardship. Caregivers vulnerable to adverse effects can be identified, as can factors which ameliorate or exacerbate burden and strain. Psychosocial interventions have been demonstrated to reduce caregiver burden and depression and delay nursing home admission[9]. The study showed that there is a high level of psychiatric morbidity among caregivers. The present study represented more female than male. As in previous studies in this environment, a higher percentage of the patients were males[10]. The gender and age of the patient were however not significantly associated with psychiatric morbidity in the caregiver. Female caregivers (especially mothers) were predominant in this study as was also reported in other studies in this environment[11]. Gender of the caregiver and relationship with the patient were however not significantly associated with presence of psychiatric morbidity in the caregiver. The study therefore suggests that caring for a mentally unwell child is burdensome on the caregiver, regardless of gender or relationship. Marital and employment status were also not associated with psychiatric morbidity. The duration of the neuropsychiatric condition and the diagnosis of the patient, including whether or not there are comorbid conditions or the presence of psychosis, were also not associated with psychiatric morbidity in the caregiver. Other investigators have reported severe psychotic symptoms in the child as being associated with a high burden of care in the caregiver and consequently psychiatric morbidity[8,6]. This finding may be clarified by further research. This study found that more than half of the caregivers (54.3%) suffered from major depressive disorder followed by obsessive compulsive disorder 16%, generalized anxiety disorder 9.9%, panic disorder with agoraphobia 7.4%, panic disorder without agoraphobia 3.7%, social phobia 2.5%, somatoform disorders 3.7% and eating disorders 2.5%. This rate can be said to be very high when compared to the prevalence rates of psychiatric disorders in the general population as reported in the recent National Morbidity Survey in Nigeria by Gureje et al, who found a prevalence rate of 4.1% for depression, 5.7% for anxiety disorder and lower rates for other psychiatric conditions[12] The high rate of morbidity among caregivers compared to the general population may be due to a number of factors. One of such is that caregivers may be subjected to constant stress which may therefore be a significant risk factor for developing psychiatric morbidity. This constant stress has been linked to a high rate of increase in Interleukin-6 (IL-6) in caregivers (about four times greater than that of non-caregivers)[13]. Overproduction of IL-6, a pro-inflammatory cytokine, is associated with a spectrum of disorders including depression, age-related conditions including cardiovascular disease, osteoporosis, arthritis, type

2 diabetes, certain cancers, periodontal disease, frailty, and functional decline.88 Another possible reason for this high rate may be the influence of genetics. For instance, Grupp-Phelan et al reported that children with mental health concerns are more likely to have mothers who screen positive for a neuropsychiatric condition[14]. Higher prevalence rates of psychiatric morbidity have however been reported among Caucasian caregivers. For instance, Cooper et al reported a rate of 76.9% among caregivers of children with Tourrette's disorder[15]. Reasons for the lower rates in the current study (compared to other studies conducted in Caucasians) may be the better health on all scales observed among negroid caregivers compared to Caucasian caregivers[16]. This better health has been attributed to race, strong ethnic beliefs about care giving and spirituality among blacks[16]. Caregiver burden has been found to be the strongest predictor of psychiatric morbidity among caregivers[17]. The higher rate of psychiatric morbidity as reported in this study among caregivers of patients has also been reported by various other authors[18]. Molyneaux for instance reported that the more problem behaviors identified and the greater the functional impairment of the patient, the higher the strain score deciles and the more likely the carer was to have psychiatric morbidity[19].

CONCLUSION

The present study demonstrates a high prevalence of psychiatric morbidity among caregivers of patients with dementia, with Major Depressive Disorder being the most common condition. Other significant morbidities included Obsessive-Compulsive Disorder, Generalized Anxiety Disorder, Panic Disorders, Somatoform Disorders, Social Phobia, and Eating Disorders. Female caregivers, particularly housewives, constituted the majority, and most had no prior caregiving experience. No significant associations were observed between socio-demographic factors and psychiatric morbidity. These findings underscore the substantial psychological burden experienced by caregivers and highlight the need for routine mental health assessment and supportive interventions to mitigate caregiver stress and improve overall well-being.

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