

Variation of depressive and anxiety disorder among government and private old care home residents: a comparative study

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Summary

The older population is rapidly growing throughout the world. Though Bangladesh has a long cultural and religious tradition of looking after the elders, but rapid socioeconomic and demographic transitions, mass poverty, changing social and religious values, influence of western culture and other factors have broken down the traditional extended family and community care system. Most of the elderly people in Bangladesh suffer from some basic human problems, such as poor financial support, senile diseases, and absence of proper health and medicine facilities, negligence, deprivation and socioeconomic insecurity. Increase care based on old homes both government and private variation may be more able to improve the quality of life of elderly people as well as old care home residents. This study was done to find out the depressive and anxiety disorder variation among the elderly people living in old care home. This cross-sectional study was conducted from January 2018 to September 2019, among the residents of two different old care homes of Bangladesh. One was government, run by ministry of social welfare and another was private. Total 138 respondents (20 from government and 118 from private institution) irrespective of their sex were interviewed with a socio-demographic questionnaire at first. Then both structured clinical interview for DSM-IV (SCID) and depression anxiety stress scale (DASS) 21 Bangla version were applied to them to find out the depression and anxiety as well as their severity. The results showed that, the respondents were predominantly male (58.7%). More than half of the respondents were from urban background (52.2%) and most of them came from nuclear family (79.7%). Among the respondents, 10.87% had major depressive disorder, 5.07% had dysthymic disorder, 6.52% had generalized anxiety disorder, 3.62% had panic disorder, 2.17% had social phobia, 1.45% had obsessive compulsive disorder and 0.75 % had specific phobia. Apart from this, 15% of government old care home residents were suffering from any kind of depression, which was 16.1% among private. Also 15.3% old care home residents from private and 10% from government were suffering from any kind of anxiety disorder. Regarding within level or severity of depression in government old care home residents, it was found normal (22.9%), mild (19.4%), moderate (7.9%), severe (0%), extremely severe (18.8%) which was found in private old care home as normal (77.1%), mild (80.6%), moderate (92.1%), severe (100%), extremely severe (81.2%). According to the level or severity of anxiety in government old care home was found normal (24.4%), mild (17.1%), moderate (4.5%), severe (0%), extremely severe (33.3%). In comparison to private old care home which was found normal (75.6%), mild (82.9%), moderate (95.5%), severe (100%), extremely severe (66.7%). It was seen that depression and anxiety was more common among private old care home residents. Also Private institution was prone to be associated with all level of depression and anxiety from mild to extremely severe more often than the government.

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Introduction

Ageing is a normal biological phenomenon and refers to a progressive degenerative process advancing with chronological age, leading to increased functional deterioration and vulnerability,

ultimately culminating in death. It is a biological reality, which has its own dynamic, and is largely beyond human control. Though there is no fixed rule about considering old, as it varies from country to country and society to society. In developed societies,

chronological age plays an important role and the age of 65, roughly equivalent to retirement age, is said to be the beginning of old age. But in developing countries like Bangladesh, chronological age has little importance in defining old age. However, 60 is generally the age at which governments and agencies start defining old age.^{1,2} Improved health care services, more comfortable life-style and recreational facilities and healthy food habit has enhanced human longevity. This has led to a steep increase in the number of older people. Globally the population of older persons is increasing at a rate of 2.6% per year (UN, 2007). This means that the demand for Old care homes, special living arrangements, traveling facilities, geriatric hospital, recreation centers for ageing population are also increasing rapidly.³

Though a small proportion (around 6%) of the total population of Bangladesh constitutes the elderly population, but the rate of their increase is fairly high. The statistical data of Bangladesh represent the number of aged population has increased from 1.38 million to 7.59 million from the year of 1974-2001.⁴ Bangladesh has a long cultural and religious tradition of looking after the elderly and generally families and communities care for their own elderly members. But rapid socioeconomic and demographic transitions, mass poverty, changing social and religious values, influence of western culture, and other factors have broken down the traditional extended family and community care system. Most of the elderly people in Bangladesh suffer from some basic human problems, such as poor financial support, senile diseases, and absence of proper health and medicine facilities, exclusion and negligence, deprivation, and socioeconomic insecurity.⁵

Depression is also a common health problem in old care home residents, prevalence rates vary from 6 to even 50%.⁶ Depression is strongly related to quality of life of old care homeresidents.⁷ Depression in older persons is also a public health problem, since it is associated with increased physical morbidity and mortality.^{8,9} The prevalence of depressive disorders among old care home residents is 10%, while the prevalence of depressive symptoms is 29% on an international level.¹⁰ However, rates of depression in old care homes were found three to four times higher than those in community-dwelling older adults.⁶ Depression and anxiety are two of the most common psychiatric problems among older adults.¹¹ Comorbidity rates for depression and anxiety disorders are also high. In community-based studies, 47.5% of depressed elderly also meet diagnostic criteria for an anxiety disorder.¹² Among older primary care patients with depression, 61.4% also have an anxiety disorder.¹³ Anxiety, which is commonly found in adults with depressive disorders, both as a symptom and as a comorbid disorder such as generalized anxiety disorder, panic disorder,

obsessive-compulsive disorder (OCD), or a phobia. An estimated 85% of adults with depression experience significant symptoms of anxiety.¹⁴ Thirty-five percent of older subjects with depressive disorders had at least one lifetime anxiety disorder diagnosis, and 23% had a current diagnosis. Symptoms of generalized anxiety disorder were also associated with a higher level of suicidality.¹⁵ The co-occurrence of depression and anxiety is also associated with more severe emotional distress, increased risk for suicidal ideation, and poorer treatment response.^{15,16} Only a few studies of the associations between the experience of anxiety and depression and quality of life among older cognitively intact people in old care homes have been published.¹⁷

In perspective of Bangladesh there is a substantial lack of scientific papers about the prevalence and variation of depressive and anxiety disorder among both in government and private old care home residents. Clinical experience and sharing with senior and junior colleagues had influenced the researcher to conduct a research aimed to obtain credible baseline data to identify the depressive and anxiety disorders among the elderly people of government and private old care home and recommend them to take appropriate medical service timely. Moreover, this research will be helpful for better communication between clinician and old care home residents.

Materials and methods

This was a cross-sectional study conducted in a government old care home and a private old care home from January 2018 to September 2019. The government old care home was the only government care home in Dhaka city which was named as Bangladesh Association for the Aged (Probin Hitoishi Shongho) and Institute of Geriatric Medicine and was situated in Agargaon, Sher-E- Bangla Nagar, Dhaka. The old care home ran by private authority which was Old Rehabilitation Centre (Boyosko Punorbashon Kendro). It was situated in Bishia-Kuribari, Monipur, Gazipur and was the largest old care home in Bangladesh. Residing person of old care home of either sex those who gave consent for the study was the inclusion criteria. Exclusion criteria were severe neurocognitive impairment and who was not capable to give consent. Total 138 respondents (20 from government and 118 from private institution) irrespective of their sex were interviewed with a socio-demographic questionnaire at first by face to face interview. Then both structured clinical interview for DSM-IV (SCID) and depression anxiety stress scale (DASS) 21 Bangla version were applied to them to find out the depression and anxiety as well as their severity. Informed consent was taken from the respondents assuring confidentiality and freedom of choice of participation. The data were analyzed and presented using Statistical Package for the Social Sciences (SPSS) version 25.

Results

The results showed that, more than half (54.35%) of the respondents were 60-69 years old, followed by 28.26% respondents were 70-79 years, 13.04% respondents were 80-89 years, and 4.35% respondents were 90 years and above old. The mean age of the respondents was 70.83±8.28 years and the youngest and the oldest respondents were 60 and 99 years old respectively (Figure 1). The respondents were predominantly male (58.7%) with male to female ratio being roughly 3:2 (Figure 2).

More than half of the respondents were from urban background (52.2%) and rest are from rural background (47.8%). Only 2 (1.5%) foreigners were found. Nearly three-quarters (87.7%)

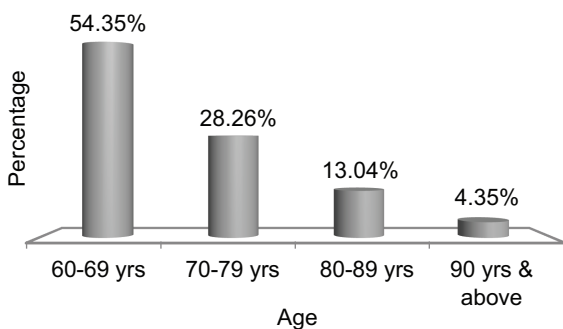


Figure 1: Distribution of respondents by age (n =138)

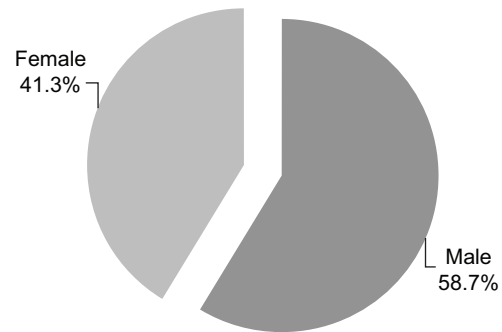


Figure 2: Distribution of respondents by their sex (n=138)

of the respondents were Muslim and 8.7% were Hindus. More than 50% had monthly family income of <10000 Bangladeshi taka (BDT), 20.3% had 10-20 thousands BDT, 10.1% had 20-30 thousands BDT and 9.4% had >50,000 BDT. Majorities (70.3%) of the respondents were widow/widower and 10.9% were single. Over one-third (38.4%) of the respondents were studied up to primary level, 26.8% were graduated, 14.5% were up to secondary level and 11.6% were up to higher secondary level. Most of them came from nuclear family (79.7%). In terms of family member, 68.1% had family members <4. According to DSM IV, depressive disorders were found significantly higher in private than government old care home (Table 1 and Table 2).

Table 1: Cross tabulation of depressive disorders and type of institution (n=138)

Depressive disorders	Type of institution		Total
	Government	Private	
Present			
Count	3	19	22
Percentage of depressive disorders	13.6%	86.4%	100.0%
Percentage of type of institution	15.0%	16.1%	15.9%
Absent			
Count	17	99	116
Percentage of depressive disorders	14.7%	85.3%	100.0%
Percentage of type of institution	85.0%	83.9%	84.1%
Total			
Count	20	118	138
Percentage of depressive disorders	14.5%	85.5%	100.0%
Percentage of type of institution	100.0%	100.0%	100.0%

Table 2: Comparison of depressive disorders between government and private institution (n=138)

Depressive disorders	Group		p-value
	Government (n = 20)	Private (n = 118)	
Present	3 (15.0)	19 (16.1)	0.901
Absent	17 (85.0)	99 (83.9)	

Figures in the parentheses indicated corresponding %; Chi-squared Test (c²) was done to analyze the data. According to DSM IV, anxiety disorders were also significantly higher in private than government institute (Table 3 and Table 4).

Table 3: Cross tabulation of anxiety disorders and type of institution (n=138)

Anxiety disorders	Type of institution		Total
	Government	Private	
Present			
Count	2	18	20
Percentage of anxiety disorders	10.0%	90.0%	100.0%
Percentage of type of institution	10.0%	15.3%	17.4%
Absent			
Count	18	100	118
Percentage of anxiety disorders	15.3%	84.7%	100.0%
Percentage of type of institution	90.0%	84.7%	82.6%
Total			
Count	20	118	138
Percentage of anxiety disorders	14.5%	85.5%	100.0%
Percentage of type of institution	100.0%	100.0%	100.0%

Table 4: Comparison of anxiety disorders between government and private institution (n=138)

Anxiety disorders	Group		p-value
	Government(n = 20)	Private (n = 118)	
Present	2 (10.0)	18 (15.3)	0.760
Absent	18 (90.0)	100 (84.7)	

Figures in the parentheses indicated corresponding %; Chi-squared Test (χ^2) was done to analyze the data.

Private Institution tended to be associated with all level of depression from mild to extremely severe more often than the government one ($p = 0.126$) (Table 5).

Table 5: Cross tabulation of level of depression and type of institution (n=138)

Level of depression		Type of institution		Total	p-value
		Government	Private		
Normal (0-9)	Count	8	27	35	0.126
	Percentage of level of depression	22.9%	77.1%	100.0%	
	Percentage of type of institution	40.0%	22.9%	25.4%	
Mild (10-13)	Count	6	25	31	
	Percentage of level of depression	19.4%	80.6%	100.0%	
	Percentage of type of institution	30.0%	21.2%	22.5%	
Moderate (14-20)	Count	3	35	38	
	Percentage of level of depression	7.9%	92.1%	100.0%	
	Percentage of type of institution	15.0%	29.7%	27.5%	
Severe (21-27)	Count	0	18	18	
	Percentage of level of depression	0.0%	100.0%	100.0%	
	Percentage of type of institution	0.0%	15.3%	13.0%	
Extremely severe (28+)	Count	3	13	16	
	Percentage of level of depression	18.8%	81.3%	100.0%	
	Percentage of type of institution	15.0%	11.0%	11.6%	
Total	Count	20	118	138	
	Percentage of level of depression	14.5%	85.5%	100.0%	
	Percentage of type of institution	100.0%	100.0%	100.0%	

Government Institution was more associated with normal to mild level of anxiety and private Institution tended to be associated with moderate to extremely severe level of anxiety than the government one ($p = 0.030$) (Table 6).

Table 6: Cross tabulation of level of anxiety and type of institution (n=138)

Level of anxiety		Type of institution		Total	p-value
		Government	Private		
					.060
Normal (0-7)	Count	10	31	41	
	Percentage of level of anxiety	24.4%	75.6%	100.0%	
	Percentage of type of institution	50.0%	26.3%	29.7%	
Mild (8-9)	Count	6	29	35	
	Percentage of level of anxiety	17.1%	82.9%	100.0%	
	Percentage of type of institution	30.0%	24.6%	25.4%	
Moderate (10-14)	Count	2	42	44	
	Percentage of level of anxiety	4.5%	95.5%	100.0%	
	Percentage of type of institution	10.0%	35.6%	31.9%	
Severe (15-19)	Count	0	12	12	
	Percentage of level of anxiety	0.0%	100.0%	100.0%	
	Percentage of type of institution	0.0%	10.2%	8.7%	
Extremely severe (20+)	Count	2	4	6	
	Percentage of level of anxiety	33.3%	66.7%	100.0%	
	Percentage of type of institution	10.0%	3.4%	4.3%	
Total	Count	20	118	138	
	Percentage of level of anxiety	14.5%	85.5%	100.0%	
	Percentage of type of institution	100.0%	100.0%	100.0%	

Discussion

The result showed that, total 138 respondents irrespective of their sex were interviewed. Among them 20 were from government and 118 were from private institution. This was might be due to that, the private old care home was the largest care home in Bangladesh which had total around 350 residents capacity. On the other hand government old care had only 40 seats. The respondents were predominantly male (58.7%) with male to female ratio being roughly 3:2. It was found that, 15% of government old care home residents had been suffering from any kind of depression, which was 16.1% among private. Also 15.3% old care home residents from private and 10% from government had been suffering from any kind of anxiety disorder. Depression and anxiety disorders were the most prevalent mental disorders worldwide; together they make up 50% of the international disease burden attributable to psychiatric and substance use disorders.¹⁸ Data from epidemiological studies suggested that more than 20% of the general population have at least one of these disorders during their lifetime.¹⁹ In general, old care home residents were characterized by high age, frailty, mortality, disability, powerlessness and dependency. Therefore, they were particularly vulnerable and more likely to become depressed. Moreover, studies in old care homes reported a large overlap of depression and anxiety.²⁰⁻²

Regarding within level or severity of depression in government old care home residents, it was found normal (22.9%), mild (19.4%), moderate (7.9%), severe (0%), extremely severe

(18.8%). On other hand, it was found in private old care home as normal (77.1%), mild (80.6%), moderate (92.1%), severe (100%), extremely severe (81.2%). In case of level or severity of anxiety in government old care home was found normal (24.4%), mild (17.1%), moderate (4.5%), severe (0%), extremely severe (33.3%). In comparison to private old care home which was found normal (75.6%), mild (82.9%), moderate (95.5%), severe (100%), extremely severe (66.7%). It was seen that, depression and anxiety disorders were more common among private old care home residents. Also private institution tended to be associated with all level of depression and anxiety from mild to extremely severe more often than the government. Private old care homes were well equipped, had more facility and fully furnished well-built structure. So, it was assumed that residents of private old care home would be more satisfied and less vulnerable to depressive and anxiety disorders. But the real scenario was different. Surprisingly, both depressive disorders and anxiety disorders were found higher in private old care home than the government aided autonomous old care home. And regarding level of severity, private Institution tended to be higher with all level or severity of depression and anxiety from mild to extremely severe than the government old care home.

This might be strongly associated with strict restrictions, rules and regulations in private old care home. In private old care home residents were not allowed to go outside whenever they wish. There was also restriction in meeting relatives also making phone calls. But on the other hand in government old care home,

residents could go anywhere writing in registry book in the main gate and could meet their friends, peers and relatives anytime by taking permission or informing the authority. Also their relatives, friends and well-wishers could come any day during the visiting hours and could meet, eat, gossip and spend a quality time with them. This helped them to ventilate and share their feelings, as well as remove their loneliness.

Conclusion

It was seen that depression and anxiety was more common among private old care home residents. Also Private institution was prone to be associated with all level of depression and anxiety from mild to extremely severe more often than the government. So government should look at this matter seriously and private care homes authority should be more flexible regarding their rules and regulation.

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