PREVALENCE AND DETERMINANTS OF DEPRESSION AMONG RURAL ELDERLY

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Abstract

The present study based on a sample of 900 elderly selected from the rural areas of three different districts of Tamil Nadu indicates a high prevalence of depression among elderly. The depression status of elderly is measured using Geriatric Depression Scale consisting of 30 items in which the respondents are asked to respond in reference to how they felt over the past one week. The results of the study show that more than half of the elderly (51 percent) aged 60 years and above are severely depressed 23.2 percent are having mild depression and just 25.8 percent are normal. The major causes of depression are poor intake of food resulting in poor nutritional status, and poor life style behaviour mostly with sedentary type of activities. The study findings suggest the need for day care centres in villages with entertainment facilities and nutrition supplementation. Counselling through village health nurse would be of more help to elderly in reducing depression and improving their mental status.

Key words: *Geriatric Depression, Rural Elderly, Life Style, Physical Mobility, Nutritional Status*

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INTRODUCTION

Depression in simple sense could either be a common experience and a common illness. As an experience; the individual sometimes feel miserable and found it hard to enjoy life. As an illness, it is distressing and could be named as the common cold of psychiatry (Seligman, 1975). But Gilbert (1992a) has strongly contended that 'This comparison is unfortunate, for it conveys the impression of a frequent but mild complaint'.

On the contrary; the level of severe depression could cause tearfulness, irritability, feelings of guilt, emotional numbness, loss of enjoyment, lack of energy, poor concentration, disruption of sleep/appetite/sexual functioning, negative rumination, hopelessness and, in some cases, suicidal tendencies (Fennell, 1989). When elderly is diagnosed; dementia is often noticed as a major contributory factor for depressive disorders among the older population. It is an established reality that the prevalence of depressive disorders is often identified as high among individuals suffering from other mental disorders, especially dementia and cognitive impairment. Hence it is therefore considered to be a potentially fatal illness and if the individual is elderly; the damage is doubled as they are in their verge of life.

When an individual is considered as important in family and community; it would make the individual to feel more motivated, understood, increase the esteem and eventually promote the psycho-social wellbeing. It has been profound by Blazer II, D.G and C.F. Hybels (2005) that elderly with personality disorder were four times more susceptible to depressive symptoms compared to those without. High neuroticism and presence of continuous life challenges and more miseries increased the chances for developing depressive symptoms.

It has been reported by Ankur, et al., (2011) that prevalence of depressive disorders in the elderly population of the world ranges between 10 per cent and 20 per cent taking into consideration various socio, economic and cultural factors. There were also studies conducted earlier in India on mental health revealed that the range of prevalence of depressive disorders in elderly Indian population varies between 13% and 25% (Nandi D.N., 1976; Ramachandran V., 1982).

As the statistics indicate that India is the second-most populated country in the world in terms of elderly population of 60 years and above (Rangaswamy SM 2001, Wig NN 2001); the problem of depression among elderly is not yet gaining importance as a public health problem. Unfortunately very few community-based studies have been conducted in India so far to address this issue (Ankur, et.al, 2011).

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Lack of support from family and community led to problems like loneliness, isolation and depression among the elderly (Regina M. McDonald and Peter J. Brown 2008); as lack of social support prepares a breeding ground for depressive symptoms. Social support networks for the elderly provide a sustainable power to lead a better life. Moreover it provides a means of hold and a means to identify new ways of finding friendships with people who have a similar age, experiences, background and even losses. Hence social support and network of relationship for the elderly in the community are very essential in promoting the Quality of Life among old age people. Emotional and psychological support helps to strengthen areas where loss has been encountered both in physical and mental.

In other words the social support networks helps the elderly to disclose to each other their inner feelings and problems, share time together, adjust to the stages of their lives as they try to establish meaningful relationship with each other. Kay et al. (1985) had accounted that a significant risk of mortality due to depression among individuals concomitantly suffering from epilepsy or Parkinson disease as there is a significantly high prevalence of cognitive impairment among depressed individuals.

It has been observed by Moore, M. et. al., (2005) that the depressive elders will have a disturbed temporal focus in the sense that they are less focused to future life and more directed towards the past and wanted to live in the past than the present. It is to be understood that normally the timeline of an individual is continuous; it is discontinuous for the elderly suffering from depression. People with depression (reversible dementia) can be hypophonic and have a forgetful memory pattern, but able to learn new information. (Blackmun, 1998; Kay DW, et.al., 1985).

Relating with peer group in a social support network is a tactic that is more secured and reduces risk factors associated with poor mental and physical health of the elderly. World wide it has been observed that there is a decreasing trend of prevalence of depression among elderly population but the sorry state of affairs is that the Indian old age population showed a significantly higher rate of depression in recent years, than the rest of the world (Ankur, et.al, 2011).

As the family and social relations are essential; if the elderly lack close and intimate relations they are at the risk of developing major depression during the stressful life events like illness, divorce, death, bereavement, chronic stress & pain and adverse impact in their socio-economic life (D.G. Blazer II and C.F. Hybels 2005). When social network challenged abruptly, impaired social support may be the most important contributor to late-life depression (D.G. Blazer II and C.F. Hybels 2005).

It has been estimated by Paykel, 1989 (quoted in Gilbert, 1992a; Fennell, 1989) that the severe depression would lead to risk for life which could vary from 5 per cent to over 12 per cent. According to Fennell (1989) '…depression has been estimated to account for 75% of psychiatric hospitalisations'. Gilbert (1992b) also projected that various disorders such as anxiety, eating disorders, addictions, schizophrenia etc., are the offshoot of depression as in many cases it frequently a contributing factor. It was Beck (1987) who advocated that depressed individuals often tend to show over-action and exaggerate, misrepresent adverse life events and they tend to use disastrous ways and means than the healthy alternatives. "Higher levels of self-mastery have shown to have a direct association with fewer depressive symptoms in older adults and to buffer the adverse impact of disability and depression" (Jang et al. 2010).

The consequence of depression among the elderly is an another area which requires greater attention as Depressions often lead to emotional and physical suffering and ultimately deteriorate the quality of life and augment the risk for death among elderly. More over the body functioning and biological composition is also deteriorating when the depression increases among the older persons (Dan G. Blazer II and Celia F. Hybels 2005).

Self-efficacy is an important approach blended with social support reduces depressive symptoms (Bandura Albert, 1977). Social support in the form of economic security, health security, moral support, physical presence, active listening, help and assistance would promote healthy and productive older people. Apart from the above; social support can mediate between risk factors and development of depression. In number of longitudinal studies it has been proved that reduced social support is directly proportional to the developing of depressive symptoms among elderly. In this context the present paper focuses on the prevalence and determinants of depression among elderly in rural areas.

OBJECTIVES OF THE STUDY

1. To assess the prevalence and determinants of depression among elderly in rural areas.
2. To suggest suitable measures to reduce depression among elderly.

METHODOLOGY

The data for the present study is taken from a larger study conducted by the Department of Applied Research, Gandhigram Rural Institute, Gandhigram, TamilNadu, India, with funding from the Indian Council of Medical Research, New Delhi. The data were collected during the period from March 2008- September 2009. The study was carried out in three districts of Tamil Nadu viz. Madurai, Karur and Villupuram representing high, medium and low level of development districts as per the Tamil Nadu Human Development Report (2003).

In each of the selected districts, three Primary Health Centres (PHCs) were selected based on their distance from the district Head Quarters such as nearer(within 5KMs), away(5-10KMs) and far away(More than 10KMs). In the next stage, one sub-centre was selected at random from each of the selected PHCs and 100 elderly aged 60 years and above were selected using systematic random sampling procedure from each of the sub-centre area. Thus a total of 300 elderly were selected from each of the selected districts. Thus the total sample comprised of 900 elderly from the rural areas of the three selected districts of Tamil Nadu.

Information on the depression status of the elderly was collected using Geriatric Depression Scale (Yesavage et.al, 1983) which consists of 30 questions; in which the respondents are asked to respond with YES or NO answers in reference to how they felt in the past one week. In order to assess the overall depression status of elderly, each of the 30 depression items is scored as 1 for presence and 0 for absence. Based on the total score attained by each elderly, Score of 0-9 are considered normal, 10-19 are considered mild depression and scores of 20-30 are considered severe depression status. (Depression scoring details given in Annexure – 1)

RESULTS

Geriatric depression by selected background characteristics

The geriatric depression status by selected background characteristics of elderly is presented in Table 1. It is observed that overall only 25.8 per cent of elderly were normal, 23.2 per cent had mild depression and 51 per cent had severe depression. Education, earlier occupation, marital status, religion, caste and family income were observed to have significant association with the depression status of elderly.

Proportion of elderly with severe depression is significantly more among illiterates (54.4 per cent) than literates (46.5 per cent).The proportion of elderly who had severe depression is observed to be high among those who had involved in business (58.5 per cent) in their earlier life which is followed by those who involved in coolie work (55.6 per cent), agriculture (46 per cent), no work (39.7 per cent) and salaried (35.5 per cent). Significantly higher proportion of single elderly had severe depression than married elderly.

Proportion of elderly who had severe depression is more among Hindu (51.8 per cent) and Christian (50 per cent) than Muslim (41.4 per cent). Significantly higher proportion of elderly among the most backward community (61.7 per cent) is having severe depression compared to SC/ST (54.2 per cent) and Backward Caste (48 per cent).

Overall, the results indicate that the proportion of elderly with severe depression is observed to be significantly low among literates, salaried, muslim and backward caste elderely in rural areas.

Table 1. Percent Distribution of Elderly by their Depression Status and Selected Background Characteristics

Background characteristics	N	Depression status			χ^2	DF	P- value
		Normal	Mild	Severe			
All	**900**	**25.8**	**23.2**	**51.0**			
Age (years)							
60 – 69	160	24.4	25.6	50.0	4.271	4	0.371
70 – 79	553	24.6	24.1	51.4			
80+	187	30.5	18.7	50.8			

Sex							
Male	414	29.0	22.2	48.8	4.123	2	0.127
Female	486	23.0	24.1	52.9			
Education							
Illiterate	515	21.9	23.7	54.4	9.665	2	**0.008**
literate	385	30.9	22.6	46.5			
Earlier occupation							
No work	121	29.8	30.6	39.7	40.239	8	**0.000**
Coolie	509	20.2	24.2	55.6			
Business	82	20.7	20.7	58.5			
Agriculture	126	38.1	15.9	46.0			
Salaried	62	45.2	19.4	35.5			
Marital status							
Married	398	29.6	21.9	48.5	5.597	2	0.061
Single	502	22.7	24.3	53.0			
Religion							
Hindu	796	26.5	21.7	51.8	10.977	4	**0.027**
Muslim	58	25.9	32.8	41.4			
Christian	46	13.0	37.0	50.0			
Caste							
SC / ST	203	21.2	24.6	54.2	9.910	4	**0.042**
MBC	107	19.6	18.7	61.7			
BC	590	28.5	23.6	48.0			

Geriatric depression status and living arrangement

The percent distribution of elderly by their depression status and living arrangements is presented in table 2. It is found that the proportion of elderly who had severe depression is highest at 70.8 per cent among those who are living alone and lowest at 44.6 per cent among those who are living with spouse and unmarried children. The results indicate that loneliness is the major cause for depression among elderly.

Table 2. Percent Distribution of Elderly by their Depression Status and Living Arrangements

		Living arrangement					
Depression status	**N=900**	**Living alone N=24**	**Living with spouse N=203**	**spouse and unmarried children N=83**	**married son N=400**	**married daughter N=148**	**Grand children N=42**
Normal	25.8	20.8	29.1	28.9	27.8	16.2	21.4
Mild depression	23.2	8.3	21.7	26.5	25.0	23.0	16.7
Severe depression	51.0	70.8	49.3	44.6	47.3	60.8	61.9

Geriatric depression and nutritional status

The percent distribution of elderly by their depression status and nutritional status is presented in table 3. It is observed that the depression status of elderly is significantly associated with their nutritional status assessed based on the mini nutritional assessment schedule.

Table 3. Percent diSTRibution of Elderly by Their Depression Status and Nutritional Status

Depression Status	Nutritional status						
	N=900	Mal nutrition N=275	At risk of mal nutrition N=530	Normal N=95	χ^2	DF	P- value
Normal	25.8	16.0	26.0	52.6	81.585	4	**0.000**
Mild depression	23.2	16.0	26.0	28.4			
Severe depression	51.0	68.0	47.9	18.9			

Proportion of elderly with severe depression is found to be significantly more among malnourished elderly (68 per cent) compared to those who are at risk of malnutrition (47.9 per cent) and among those who are with normal nutritional status (18.9 per cent). Thus the results indicate the importance of improving the nutritional status to reduce depression among elderly.

Geriatric depression and weekly food intake

The depression status of elderly by their weekly food intake pattern is presented in table 4. It is observed that the depression status of elderly significantly associated with the weekly food intake pattern. The weekly food intake pattern is assessed based on the type of food taken by the elderly in the past one week. A list of food items were read out and a score of 1 is given for each food only once if consumed over a 7 days period. Based on the total score, the diet pattern of elderly is grouped in to poor, moderate and good.

The proportion of elderly with severe depression decreased with increase in the weekly food intake status. Proportion of elderly with severe depression is highest at 69.5 per cent among those who had poor intake of food compared to 51.2 per cent observed for moderate level of food intake and 40.3 per cent for those who had good food intake. The results indicate the need for good intake of food for reducing the level of depression among elderly.

Table 4. Percent Distribution of Elderly by their Depression Status and Weekly Food Intake Pattern

Geriatric depression status	Weekly food intake pattern						
	N=900	Poor N=105	Moderate N=604	Good N=191	χ^2	DF	P- value
Normal	25.8	14.3	25.3	33.5	24.173	4	**0.000**
Mild depression	23.2	16.2	23.5	26.2			
Severe depression	51.0	69.5	51.2	40.3			

Geriatric depression and leisure time activities

The depression status of elderly according to their level of leisure time activities is presented in table 5. It is observed that the level of depression is having significant association with the level of leisure time activities of elderly. The level of leisure time activities of elderly is assessed based on their level of participation in various leisure time activities. A total of 10 leisure time activities such as reading newspaper, listening to radio, going to cinema etc. were listed out and a score of 1 is given for each of the leisure time activities performed by the elderly. Based on the total score, their level of participation in leisure time activities is grouped in to low, moderate and high level of participation in leisure time activities (scoring details given in Annexure - II)

The proportion of elderly with severe depression is significantly low at 33.3 per cent among those who had high level participation in leisure time activities compared to those who had moderate (36.8 per cent) and low (54.5 per cent) level of participation in leisure time activities. Thus the results indicate that active involvement of elderly in leisure time activities helped them to get rid of severe depression.

Table 5. Percent Distribution of Elderly According to their Depression Status and Level of Participation in Leisure Time Activities

Depression status	Leisure time activities				χ^2	DF	P- value
	All N=900	Low N=727	Moderate N=155	High N=18			
Normal	25.8	21.9	42.6	38.9			
Mild depression	23.2	23.7	20.6	27.8	32.115	4	**0.000**
Severe depression	51.0	54.5	36.8	33.3			

Geriatric depression and physical mobility

The percent distribution of elderly by their physical mobility status and level of depression is presented in table 6. It is observed that the proportion of elderly with severe depression is comparatively low at 39.4 per cent among those who move freely everywhere compared to 63 per cent observed among those who are bed ridden. The results indicate that the depression level of elderly increased significantly with decrease in their mobility status.

Table 6. Percent Distribution of Elderly According to their Physical Mobility Status and Level of Depression

Physical mobility		Geriatric depression		
	N	Normal	Mild depression	Severe depression
Move freely everywhere	452	33.4	27.2	39.4
Neighbourhood only	297	24.2	21.2	54.5
Inside the house only	97	23.7	15.5	60.8
Bed ridden	54	16.7	20.4	63.0
Total	900	25.8	23.2	51.0

χ^2 30.825 DF-6 P<0.000

Geriatric depression and life style behaviour

The life style behaviour of elderly is assessed based on their daily practice of walking, cycling, gardening etc. Based on the total score attained by each of the elderly they were grouped into poor, moderate and good practice of life style behavior (scoring details given in Annexure III).

The daily life style behaviour of elderly and their level of depression are presented in table 7. It is observed that the overall status of daily life style behaviour of elderly is significantly associated with their depression status. The proportion of elderly with severe depression is lowest at 31.7 per cent among those who have good life style behaviour such as regular practice of prayer, walking, cycling etc. compared to 53.8 per cent observed among those who had poor life style behaviour.

Table 7. Percent Distribution of Elderly According to their Daily Life Style Behaviour and Level of Depression

Daily life style behaviour		Geriatric Depression Status					
	N	Normal	Mild depression	Severe depression	Chi	DF	Significance
Poor	680	22.2	24.0	53.8	21.135	4	**0.000**
Moderate	179	35.2	20.1	44.7			
Good	41	43.9	24.4	31.7			

DISCUSSION AND CONCLUSION

The study results on the prevalence of depression among elderly in rural areas indicate an alarming figure of 51 percent with severe depression and 23.2 percent with mild depression. Only one fourth (25.8 percent) of elderly are observed to be free from depression. Thus, the prevalence of depression is observed to be very high in rural Tamil Nadu compared to an earlier study conducted in Tamil Nadu by Rajkumar A.P. et.al (2009).

The prevalence of severe depression is significantly higher among illiterates and among those involved in business in their earlier life. Interestingly, the prevalence is significantly lowest among with salaried job than others. Prevalence of depression among Muslim elderly is significantly lowest compared to others. Most backward caste elderly have significantly higher prevalence of depression than others. The prevalence of severe depression is observed to be significantly high among elderly living alone compared to others.

Malnutrition is observed to be significantly the major cause of depression among elderly. Significantly poor status of food in take pattern which is a major cause for malnutrition is observed to be significantly associated with depression among elderly. Further, physical mobility is also observed to have significantly associated with depression. Elderly move freely everywhere showed significantly lower depression. A dynamic life style such as walking, gardening, cycling etc is also observed to be significantly reducing the depression among elderly.

Though the background characteristics such as education, occupation, religion, caste, etc are having significantly associated with the depression status of elderly no intervention could be initiated at this stage. However, intervention to improve the nutritional status of elderly through good food intake, behaviour changes such as exercise, entertainment, physical mobility are expected to improve the mental status of elderly. Village level day care centres with entertainment facilities and nutritional supplementation would certainly help to ease the depression among elderly in rural villages.

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