

A Comparative Study of Depression (BDI) Among the Elderly Population Living in Community and Old Age Home in Desert Areas of Rajasthan

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ABSTRACT

Aim: Present study aimed to assess and compare the depression among geriatric population residing in Community and Old age Homes and its association Socio-demographic parameters.

Methodology: A cross-sectional study of 408 elderly population living in Community (250) and Old age Homes (158) were examined for Socio-demographic parameters and Beck's Depression Inventory (II) scale.

Result: The percentage of elderly living in Old age Homes observed to be significantly high ($p < 0.05$) in Beck's Depression Scale (82.3% in Old Age Homes) in comparison to Community (44.0%). The study revealed that elderly population in higher age group i.e. 70 years and above suffered more from depression (78.8%) in comparison to 60-70 years age (65.2%). The distribution of elderly population according to marital status revealed that the percentage of elderly in 'Normal' were significantly higher in married (51.2%) elderly population living in Community than married elderly belonging in Old Age Homes (7.6%). The distribution of elderly population according to Education revealed that the percentage of elderly in 'Normal' were significantly higher in Literate elderly population living in Community (47.2%) than Literate in Old Age Homes (15.8%).

Conclusion: Depression observed higher in Old age Homes in comparison to elderly living in Community. Education showed a negative association with depression & is found to be positively associated with increase aged. Thus there is strong need of creating awareness and education regarding the general health care services.

Keyword: Elderly; Beck's Depression Inventory; Geriatric

INTRODUCTION

Depression is a disorder of major public health importance in terms of its prevalence and the suffering, dysfunction, morbidity and economic burden. Depression is more common in women than men. [1] Aging is an unavoidable process of every living organism and is related to a reduction in the homeostatic control and reserve capacity of the organ systems, the capability

to adapt to the environmental factors, and the capacity of a stress response. In addition to being an unavoidable physiologic process, aging is one of the most important causes of decrease in life quality due to its chronologic, biological, social, and psychological dimensions. [2,3] Assessment of quality of life has played an important role in development of health services. [4,5] A higher prevalence of untreated

depression, malnutrition, and disabilities in the elderly compared to other age groups and the subsequent limitations in their social activities negatively affect the quality of life and well-being and, consequently, can increase mortality. Currently, there is a growing number of research and increased clinical interest in developing robust quantitative measures of quality of life that can be used in clinical assessments and economic models. Moreover, the increase in the elderly population makes it necessary to investigate the characteristics of depression whose presence adversely affects the social interaction and may cause malnutrition, decrease the quality of life, cause pain and discomfort, and have a significant economic impact due to the significantly high treatment costs.^[6]

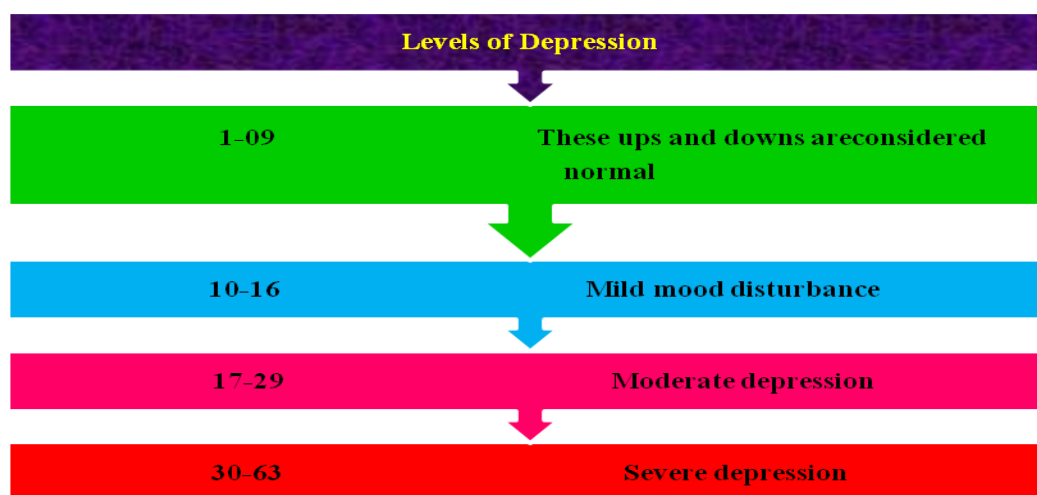
The present study is planned to observe the comparison to Beck's Depression Inventory (II) scale among the Elderly Population Living in Community and Old Age Home in Desert Areas of Rajasthan and its association Socio-demographic parameters.

MATERIAL AND METHOD

The study was cross-sectional and conducted among (408) Elderly Population Living in Community (250) and Old Age Home (158) of Jodhpur and Pali city who were 60 years and above.

Sample size in urban areas calculated on the basis of least prevalence of Nutrition and co-morbidities viz. decrease in life quality due to its chronologic, biological, social, and psychological problem (BDI). Elderly individual below age of 60 years were not registered. All the subjects were examined for: Socio-Demographic profile viz. age, gender, education, marital status. All the participants were interviewed personally. First, written informed consent was taken from the study subject. A semi-structured questionnaire assessing the socio-demographic characteristics and risk factors for depression was used Beck's Depression Inventory scale.^[7] All elderly were assessed for the severity of depression according to Beck's Depression inventory (BDI-II) and were labeled as having mild, moderate and severe depression besides normal category.

Interpretation of the Beck Depression Inventory was done as per the following Ranges of total score



Exclusion criteria- Elderly individual below the age of 60 years were not registered for the study.

Ethical Issues

A prior permission for conducting the study was taken from the Institutional Ethics

Committee of ICMR Desert Medicine Research Centre and Informed consent was taken from each elderly before doing examination/interview.

Statistical Analysis

The data were entered and analyzed by using Epi-info software and excel. Chi square test was applied to compare the parameters among the Elderly Population Living in Community and Old Age Home for its statistical significance.

RESULT

A total of 408 elderly people were studied, out of which 250 belong to community and 158 to old age homes. Among elderly living in community, males were 60.4 percent and females were 39.6 percent whereas, in old age homes, males were 50 percent. Regarding education, illiteracy ranges from 28 to 31 percent among the elderly population living in community as well as in old age homes. Regarding the marital status, the percentage of widow and widowers were higher among old age homes (36.7 & 26.6%) in comparison to elderly living in community (10.4 & 6.8%).

Table 1 showed the distribution of the elderly according to Beck's Depression Inventory Scale (BDI II). Table 1 revealed that females suffered significantly more from depression than males among both in community and old age homes i.e. 59.6 and 33.8 percent (Community) and 93.7 and 70.9 percent (Old Age Homes) respectively. Overall the percentage of Normal were significantly higher among elderly living in

community (56.0%) in comparison to Old age homes (17.7%) (P<0.05). Among Community, the percentage of elderly suffered from mild, moderate and severe depression were 16.0, 20.4 and 7.6 percent respectively whereas, in Old Age Homes, the percentage was 19.0, 47.5 and 15.8 percent respectively (Fig.1).

Table 2 showed the distribution of depression (BDI Scale II) among elderly according to age groups. Among the community, the percentage of depression was significantly higher in higher age groups i.e. ≥70 Years (78.8%) in comparison to lower age group i.e. 60-69 years (65.2%) (P<0.05), whereas, among Old Age Homes, the percentage of depression was almost same in higher age groups i.e. ≥ 70 years (89.9%) as well as in lower age group i.e. 60-69 years (92.4%).

Table 1. Distribution of Elderly population according to Beck Depression Inventory Scale (BDI II)

Depression	Community-Geriatric Centre					
	Male N = 151		Female N = 99		Total N = 250	
	N	%	N	%	N	%
Minimal (0-9)	100	66.2	40	40.4	140	56.0
Mild (10-16)	16	10.6	24	24.2	40	16.0
Moderate (17-29)	27	17.9	24	24.2	51	20.4
Severe (30-63)	08	5.3	11	11.2	19	7.6
Depression	Old Age Home					
	Male N = 79		Female N = 79		Total N = 158	
	N	%	N	%	N	%
Minimal (0-9)	23	29.1	05	6.3	28	17.7
Mild (10-16)	15	19.0	15	19.0	30	19.0
Moderate (17-29)	37	46.8	38	48.1	75	47.5
Severe (30-63)	04	5.1	21	26.6	25	15.8

P<0.05

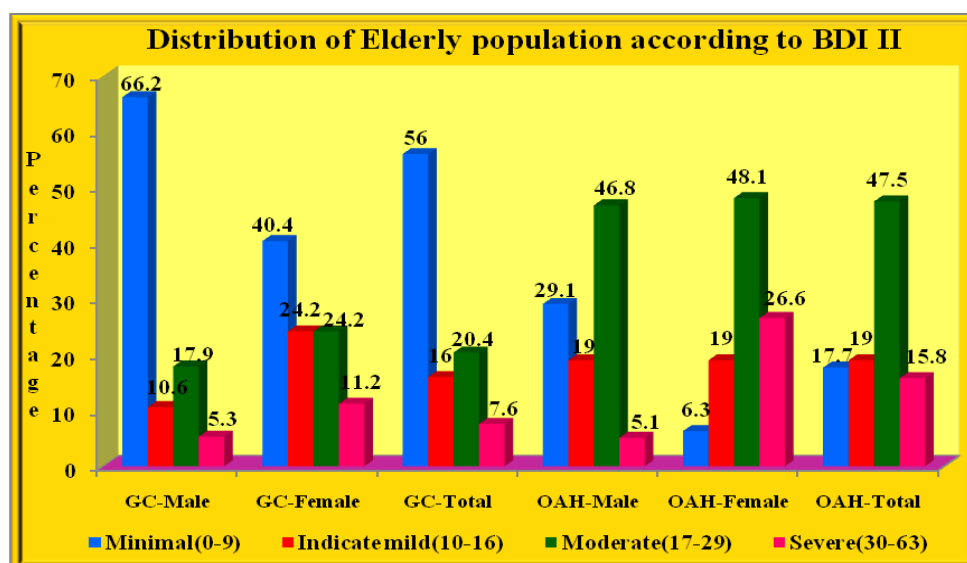


Figure 1

Table 2. Distribution of Elderly population according to Back Depression Inventory Scale (BDI II) and Age groups

Age Group		Community-Geriatric Centre							
		Minimal (0-9)		Indicate mild (10-16)		Moderate (17-29)		Severe (30-63)	
		N	%	N	%	N	%	N	%
60-69 years	Male	59	39.1	06	4.0	15	9.9	07	4.6
	Female	28	28.3	16	16.2	12	12.1	07	7.1
	Total	87	34.8	22	8.8	27	10.8	14	5.6
≥ 70 years	Male	41	27.2	10	6.6	12	7.9	01	0.7
	Female	12	12.1	08	8.1	12	12.1	04	4.0
	Total	53	21.2	18	7.2	24	9.6	05	2.0
		Old Age Home							
		Minimal (0-9)		Indicate mild (10-16)		Moderate (17-29)		Severe (30-63)	
		N	%	N	%	N	%	N	%
60-69 years	Male	09	11.4	04	5.1	11	13.9	01	1.3
	Female	03	3.8	06	7.6	13	16.5	06	7.6
	Total	12	7.6	10	6.3	24	15.2	07	4.4
≥ 70 years	Male	14	17.7	11	13.9	26	32.9	03	3.8
	Female	02	2.5	09	11.4	25	31.6	15	19.0
	Total	16	10.1	20	12.7	51	32.3	18	11.4

P<0.05

The distribution of depression (BDI Scale II) among elderly according to education showed that among the community, the percentage of depression was significantly higher in illiterate group (91.8%) in comparison to literate group (52.8%), whereas, among Old Age Homes, the percentage of depression was also higher in illiterate group (98.1%) in comparison to literate group (84.2%) (P<0.05).

The distribution of depression (BDI Scale II) among elderly according to marital status showed that among the community, the percentage of depression was significantly lower in married group (48.8%) in comparison to group including widow, widower, single, separated (95.2%), whereas, among Old Age Homes, the percentage of depression was almost same in married group (92.4%) and in group including widow, widower, single, separated (89.9%) (P>0.05).

DISCUSSION

Depression according to Beck's Depression Inventory Scale (BDI II) among the elderly population living in Community and in Old Age Homes was found to be significantly higher in females than males in present study both in community and old age homes i.e. 59.6 and 33.8 percent (Community) and 93.7 and 70.9 percent (Old Age Homes) respectively. In present

study overall the percentage of depression was high and almost twice in elderly population living in Old Age Homes i.e. 82.3 percent in comparison to elderly living in community (44%). Overall the percentage of Normal were significantly higher among elderly living in community in comparison to Old age homes (17.7%) (P<0.05), may be due to socio-psychological reasons as they are living alone in Old Age Homes and not getting their family support. In the present study, the percentage of elderly (Community) suffered from mild, moderate and severe depression were 16.0, 20.4 and 7.6 percent respectively which is significantly higher than elderly living in Old Age Homes (19.0, 47.5 & 15.8%). Similar results has been reported earlier [1] revealing that as per the BDI classification, 25.5% of the patients were mildly depressed, 24.5% were borderline clinically depressed, 41.5% were moderately depressed and 8.5% of them were found to be severely depressed. In another study [8] reported from Aligarh urban areas, the prevalence of depression in adults was found to be 9.7 percent and prevalence of depression was more in female subjects as observed in the present study.

Another study [9] from Ludhiana among elderly population reported that the prevalence of depression in the study population was 8.9%. It was significantly

higher in urban residents, females, older elderly, and nuclear families, in those living alone, those not working, illiterates, poor, functionally impaired, and cognitively impaired. Similar results has been reported in the present study that the percentage of depression was significantly higher in higher age groups i.e. ≥ 70 years (78.8%) in comparison to lower age group i.e. 60-69 years among elderly living in the community. Similarly in the present study, the depression was significantly higher in illiterate group in comparison to literate group and significantly lower in married group in comparison to group including widow, widower, single and separated.

Another study ^[10] from rural South India among elderly population reported that 9.3 percent of the elderly had depression and Depression was found to be significantly associated with increased age, co-morbid conditions, economic dependence and physical dependence for daily activities.

CONCLUSION

In present study, depression observed higher in Old age Homes in comparison to elderly living in Community. Education showed a negative association with depression and is found to be positively associated with increase aged. Overall the percentage of depression was high and almost twice in elderly population living in Old Age Homes in comparison to elderly living in community, may be due to socio-psychological reasons as they are living alone in Old Age Homes and not getting their family support along with lack of social/ economic support, in turn, nutrition also. Thus there is strong need of creating awareness and education regarding the general health care services including mental health for elderly population and need to be included in the National Health Programs of India.

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REFERENCES

1. Prajapati P, Sikarwar AS, Prajapati R. To study the clinical and demographic profile of patients presenting with depression in Tertiary care Hospital. *Journal of Medical Science and Clinical Research*.2018; 06(12):308-312.
2. DeLisa JA, Gans BM, Walsh NE. *Physical Medicine and Rehabilitation: Principles and Practice*. Wolters Kluwer Health.2005;1:1926.
3. Power M, Kuyken W, Orley J, Hermann H, Shofield H, Murphy B, et al. The World Health Organisation Quality of Life Assessment (WHOQOL)-Development and general psychometric properties. *Social Science & Medicine*. 1998; 46(12): 1569-1585.
4. Keshavarzi S, Ayatollahi SMT, Zare N, Sharif F. Quality of life of childbearing age women and its associated factors: an application of seemingly unrelated regression (SUR) models. *Quality of Life Research*. 2012;1-9.
5. Klassen A, Jenkinson C, Fitzpatrick R, Goodacre T. Patients' health related quality of life before and after aesthetic surgery. *British journal of plastic surgery*. 1996; 49(7):433-438. [http://dx.doi.org/10.1016/S0007-1226\(96\)90025-9](http://dx.doi.org/10.1016/S0007-1226(96)90025-9).
6. Bergquist S, Frantz R. Braden scale: Validity in community-based older adults receiving home health care. *Applied Nursing Research*. 2001; 14(1):36-43.
7. Beck AT, Steer RA, Brown GK. *Beck Depression Inventory Manual*, 2nd Edition. San Antonio, TX, Psychological Corporation. 1996.
8. Safwi SR, Amir A, Khalique N, Gour RK. Prevalence and severity of self-reported depression in urban population of Uttar Pradesh. *International Journal of Medical Science and Public Health*. 2015; 5(6):1077-1082.

9. Sengupta P, Benjamin AI. Prevalence of Depression and Associated Risk Factors among the Elderly in Urban and Rural Field Practice Areas of a Tertiary Care Institution in Ludhiana. *Indian Journal of Public Health*. 2015; 59(1).
10. Chauhan P, Kokiwar PR, Shridevi K, Katkuri. A study on prevalence and correlates of depression among elderly population of rural South India. *International Journal of Community Medicine and Public Health*. 2016; 3(1):236-239.

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