ORIGINAL ARTICLE

Are we Caring those who Deserve Special Care? Frequency of Depression among Older Population Residing in a Nursing Home at Karachi

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ABSTRACT:

Objective: To find out the frequency of depression and factors related to it among elderly admitted in a nursing home of Karachi

Materials and Methods: This cross-sectional study was carried out at DarulSukun, Karachi, for a period of four months. Official permission was obtained and 80 citizens (30 females and 50 males), 60 years of age or above, willing to participate, able to speak, express their views and understand Urdu language properly were included in this study.Data collection tool included a questionnaire consisting of two sections. The first had basic demographic information while the second had fifteen items Geriatric Depression Scale (GDS-15). Demographic data of each subject was obtained by direct interview. Age, gender, marital status, education,financial dependency and exercise were also recorded.

Results: Mean age was 67 years.Out of total 80 subjects, 62.5% (n=50) were males while 37.5% (n=30) were females.27.5% (n=22) had depression majority being females.Only 7.5% (n=6) were married and were living as couples. None of them had depression. 66.2% (n=53) participants were educated from Grade-5 till Grade-9.72.5% (n=58) were dependent on their families.Depression was more common in those subjects who were admitted in a period of 3 months or less.22 male subjects performed morning walk on routine basis. Only 3 of them had depression.

Conclusion: The frequency of depression among elderly admitted in a nursing home of Karachi was 27.5%. Gender, marital status, education, financial dependency,recent admission and exercise were found to be related with depression.

Keywords: Nursing homes, Old citizens, Depression, Frequency, Related factors

INTRODUCTION:

Depression is a serious matter of concern especially in the under-developed countries.[1] Among elderly population, depression is regarded to be the most common disorder of psychiatry which usually manifests as minor depression or major depression usually characterized by a group of common depressive symptoms.[2] According to the results of study related to Global Burden of Illness, it was revealed that by 2020, depression will be the leading cause of Disability Adjusted Life Years (DALY's) in under-developed world.[3]Different studies have reported under-treatment and under-estimation of depression among the elderly population not only in under-developed countries but also in developed-countries.[4,5,6] From the year 2000 to 2050, the proportion of elderly population all over the world having age of more than 65 years is expected to be doubled and thus exceeding the current percentage of 6.9% to more than 16%.[7] With the improvement in the health care facilities and the life expectancy, the elderly population is increasing accordingly both in underdeveloped and developed countries.This demographic drift has been noticed not only in developed countries but also in under-developed countries.[8]According to one study, it has been revealed that about 60% of the total world elderly population resides in under-developed countries and the percentage is estimated to be increasing up to 70% till 2020.[9] Pakistan is a developing state in South Asia and is regarded to be the 6th populous state in the world.The life expectancy on average here in Pakistan is 62.[10] Total 6.1 % of elderly population was estimated in the year 2009 and it is expected to further increase to 15% by 2050.[11]Therefore, there is a dire need to assess and evaluate appropriate measure that needs to be taken for elderly population in Pakistan where there is lack of appropriate social care and health facilities.[12] A considerable prevalence of depression in Pakistani community has been observed in different studies conducted in various regions of Pakistan.The study conducted by Mirza has depicted that mean prevalence of depressive and anxiety disorders in Pakistani community was more than 30%.In an underdeveloped state like Pakistan, the large chunk of elderly population financially and socially depends upon their children and off-springs.[12] This sort of support most importantly the physical and psychological support is quite practical in joint families.[13] Mason and Lyness in their studies have mentioned that the current trend of urbanization is most likely to erode the natural family trend to care and support the elderly population physically, morally and financially and thus eventually decreasing the co-

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residence of elderly parents with their adult children.[14,15] In order to determine the nature and magnitude of depression, it is essential to perform assessment of depression in homecare elderly personnels.[16,17] Previously, a Geriatric Depression Scale (GDS) containing 30 items was developed to rule out positive cases of depression among elderly population.[18] The introduction of shorter version of Geriatric Depression Scale has resulted in consuming comparatively less time along with other benefits.[19] It has been validated after its thorough evaluation in different elderly nursing homes, outpatient, inpatient and primary care settings. However, it has been reported in two different studies that the results of GDS are not that much reliable when interviewed from a person having little or no education at all.[16,20] Keeping in mind this point we developed our exclusion criteria. In another study by Tang, no obvious differential item functioning was observed in connection to the education in elderly population.[21]

Karachi is regarded to be the largest city of Pakistan. It accounts nearly for 10% of the total population of Pakistan.[22] While couple of studies have already been conducted in Karachi reporting the frequency of depression among the elderly population but not even a single recent published study is available to describe the frequency of depression among elderly living in nursing homes. It might be due to the reason that in Pakistan the trend of sending elderly to the nursing homes in not that much common. However, with the advancement of time, a trend has been developed in couple of bigger cities of the country. So there was a need to conduct an exclusive study in different elderly nursing homes to find the frequency of depression among the older population residing in nursing homes. We hypothesized that an appreciable number of elderly population admitted in the elderly nursing homes is suffering from depression. We aimed to find out the frequency of depression among elderly admitted in one of the prominent nursing homes of Karachi and to find association of depression with gender, marital status, educational qualification and financial dependency.

MATERIALS AND METHODS:

A cross-sectional study was carried out at one of the most prominent old age nursing homes in Karachi namely DarulSukun. Official permission was obtained from the administration of the said organization. A total of 80 old citizens (30 females and 50 males) were included in this study out of 85 (32 females and 53 males).

All those patients who were 60 years of age or above, willing to participate in this study, able to speak and express their views and were able to understand Urdu language properly were included in this study while those who were below 60 years of age or didn't provide consent to be a part of this study or were unable to understand Urdu were not included.

Data collection tool included a questionnaire consisting of two sections. The first section was meant to record the basic demographic information while the second section was Fifteen Item Geriatric Depression Scale (GDS-15) to measure the depression among the study participants. The demographic data of every subject was obtained by direct interview and the age, gender, origin, nationality, marital status, number of off-springs and occupation was duly noted.

As the national language of the country is Urdu so there was a need to translate the scale into Urdu language. In order to ensure a quality translated pre-tested version of manuscript, a pre-prepared version was obtained on request from the corresponding author of study titled, "Depression in the elderly: Does family system play a role? A cross-sectional study" published in 2007[1](Figure 1). The team of aforementioned study developed an Urdu version of questionnaire. Three separate translations of scale into Urdu language were performed and then back-translation was done and then finally the best final script was selected (Figure 2). The scale was thoroughly discussed by the interviewers to decrease the interviewer bias.

All the participants of study were interviewed by a panel of 2 medical students. Each interview lasted for not more than 16 minutes. The interviewers were first trained by a psychiatrist of DarulSukun regarding skills of taking a proper interview and interpreting the views of interviewee.

The ethical consideration was taken in account and confidentiality of subjects was secured. All the subjects were informed regarding the objectives of the study. It was decided and informed to the subjects that the names and personal identity of the subjects will not be disclosed to the third party without their prior written consent. The data was analyzed in SPSS version 19 while the graphs were designed in MS. Excel 2013. The entire study duration was about 4 months.

Figure: 1
15 Item Geriatric Depression Scale[17]

Geriatric Depression Scale (Short Form)		

Patient's Name: _____ Date: _____

Instructions: Choose the best answer for how you felt over the past week. Note: when asking the patient to complete the form, provide the self-rated form (included on the following page).

No.	Question	Answer	Score
1.	Are you basically satisfied with your life?	Yes / No	
2.	Have you dropped many of your activities and interests?	Yes / No	
3.	Do you feel that your life is empty?	Yes / No	
4.	Do you often get bored?	Yes / No	
5.	Are you in good spirits most of the time?	Yes / No	
6.	Are you afraid that something bad is going to happen to you?	Yes / No	
7.	Do you feel happy most of the time?	Yes / No	
8.	Do you often feel helpless?	Yes / No	
9.	Do you prefer to stay at home, rather than going out and doing new things?	Yes / No	
10.	Do you feel you have more problems with memory than most people?	Yes / No	
11.	Do you think it is wonderful to be alive?	Yes / No	
12.	Do you feel pretty worthless the way you are now?	Yes / No	
13.	Do you feel full of energy?	Yes / No	
14.	Do you feel that your situation is hopeless?	Yes / No	
15.	Do you think that most people are better off than you are?	Yes / No	
		TOTAL	

Figure:2
Urdu translated version of GDS-15

| نہیں	ہاں	سوال	
☐	☐	کیا آپ بنیادی طور پر اپنی زندگی سے خوش ہیں؟	۱۔
☐	☐	کیا آپ نے اپنے کئی مشاغل اور کام ترک کردئے ہیں؟	۲۔
☐	☐	کیا آپ زیادہ تر وقت خوش رہتے ہیں؟	۳۔
☐	☐	کیا آپ باہر جا کر کام کرنے کی نسبت گھر پر رہنا پسند کرتے ہیں؟	۴۔
☐	☐	کیا آپ اکثر وقت اچھی امنگ میں رہتے ہیں؟	۵۔
☐	☐	کیا آپ سمجھتے ہیں کہ آپ کی زندگی بہترین ہے؟	۶۔
☐	☐	کیا آپ توانائی سے بھر پور محسوس کرتے ہیں؟	۷۔
☐	☐	کیا آپ اپنی زندگی کو ایک خلا سمجھتے ہیں؟	۸۔
☐	☐	کیا آپ اکثر بور ہوتے ہیں؟	۹۔
☐	☐	کیا آپ کو اپنے ساتھ کچھ برا ہونے کا خدشہ ہوتا ہے؟	۱۰۔
☐	☐	کیا آپ اکثر لاچار محسوس کرتے ہیں؟	۱۱۔
☐	☐	کیا آپ سمجھتے ہیں کہ آپ کو یاداشت کے ساتھ مسئلہ باقی لوگوں سے زیادہ ہے؟	۱۲۔
☐	☐	کیا آپ سمجھتے ہیں کہ آپ کو موجودہ حالت میں امید نہیں؟	۱۳۔
☐	☐	کیا آپ سمجھتے ہیں کہ زیادہ تر لوگوں کی زندگی آپ سے بہتر ہے؟	۱۴۔
☐	☐	کیا آپ اپنی موجودہ حالت میں اپنے آپ کو بے قدر سمجھتے ہیں؟	۱۵۔

ٹوٹل اسکور۔

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RESULTS:
82subjects(30 females and 52 males) fulfilled the inclusion criteria and were requested to participate in the current study. Out of 82 subjects, 80 (30 females and 50 males) agreed to participate in the study making the response rate of 97.5%.

The mean calculated age was 67 years. Majority (86.8%) of the subjects fell in the age range of 65–74 years. Out of total 80 subjects, 62.5% (n=50) were male while 37.5% (n=30) were females. Out of the total 80 subjects, 27.5% (n=22) were diagnosed with depression using GDS-15. Majority of those who were found positive for depression by using GDS-15 were females. Out of 27.5% of subjects who were diagnosed with depression, 15 were females and 7 were males. Figure 3 depicts the detailed description of positive and negative cases of depression and its association with gender.

Figure: 3
Frequency of depression and gender
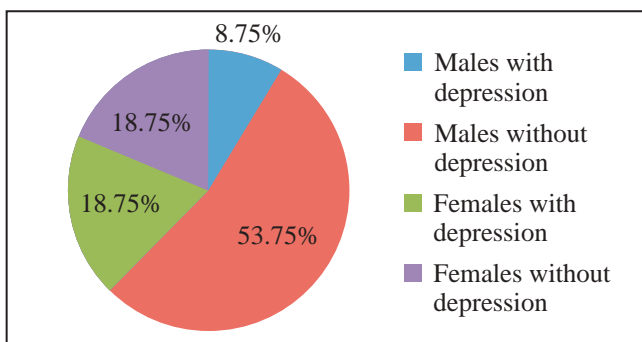
While focusing on the marital status, 92.5% (n=74) were unmarried. Those who were separated, divorced or widowed were also included in this category. Only 7.5% (n=6) were married and were living as couples. Among the married personnel, none of them were having depression according to GDS-15. Table 1 depicts the association of marital status with depression.

Table: 1
Association of depression with marital status
(n=80)

Marital Status	Total Number Subjects	Positive for depression according to GDS-15
Unmarried	74	22 (27.5%)
Married	6	0 (0%)

Total 66.2% (n=53) of the study participants were educated from Grade-5 till Grade-9, while 31.2% (n=25) had passed their matriculation examination (Grade-10). Remaining 2 (2.5%) study participants were having education of less than Grade-4. The educational status was also found to be related with depression. Table 2 portrays the detailed picture of relation of depression with the educational status.

Table: 2
Association of depression with educational status
(n=80)

Educational Status	Total Number Subjects	Positive for depression according to GDS-15
Grade 4 or below	2	2 (100%)
Grade 5 – Grade 9	53	16 (30.1%)
Grade 10 or above	25	4 (16%)

All the subjects were either unemployed or retired from their jobs. 23.75% (n=19) were financially dependent on their monthly pensions while 72.5% (n=58) were dependent on their families and rest of the 3.75% (n=3) were financially supported by the organization in every means. While associating depression with financial situation it was revealed that those who were financially dependent on their families were found to be comparatively more depressed as compared to those who were financially dependent on their pensions or organization itself (Table 3)

Table: 3
Association of depression with financial dependency
(n=80)

Financial Dependency	Depressed	Non-depressed	Total
Monthly pension	4 (21.05%)	15	19
Family / Relatives	18 (31.03%)	40	58
Organization	0 (0%)	3	3

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Depression was more common in those subjects who were admitted in the elderly nursing care homes in a period of 3 months or less whereas the frequency of depression was comparatively less in those who were living there for more than 3 months duration. Among those who were admitted in a period of 3 months or less, 42.8% were found to be depressed while among those who were living for a period of more than 3 months, 26.5% were found to be depressed (Table 4).

Table: 4
Association of depression with duration of admission in nursing home
(n=80)

Admission duration	Depressed	Non-depressed	Total
3 months or less	9 (42.8%)	12 (57.1%)	21
More than 3 months	13 (26.5%)	36 (73.4%)	49

Involvement in different healthy activities including morning walk and exercise was found to have an important role in preventing depression. Majority of those who were involved in such healthy activities were mostly not having depression. Out of total 80 subjects, 22 reported to be performing exercise or morning walk on routine basis. All these 22 subjects were males. Out of these 22 subjects only 3 (13.63%) were having depression according to GDS-15.

DISCUSSION:
The current study helped us in finding the frequency of depression among elderly population residing in nursing home. Although previously, an appreciable number of studies have already been conducted to find the frequency of depression among elderly population living in different regions of Pakistan but according to our best available knowledge, not even a single study has been reported in Karachi depicting exclusively the frequency of depression among elderly admitted in nursing homes and old age houses.

Our study revealed that frequency of depression among elderly population residing in nursing homes is 27.5%. This percentage is slightly less than the prevalence of depression reported in another study that was conducted in Rawalpindi by using GDS-30.[23] The variation in findings could be due the difference in study settings as we conducted our study in a nursing home while the aforementioned study was conducted in an open community setting.

While correlating the findings of our study with similar studies conducted in neighboring countries of Pakistan, it was found that the prevalence of depression among elderly residing in an Indian community was ranging from 11.6% to 31.1%.[24] However, while analyzing the results reported by studies conducted in western countries, it was found that the prevalence of depression among elderly population was actually ranging from 14% to 42% in elderly residing in different institutions and 0.9% to 9.4% in elderly residing n private settings.[25] However, one of the studies conducted in United Kingdom reported prevalence of depression among 40% of elderly population[26]. The prevalence of depression among elderly has been reported different in various studies and the variation has been attributed to different parameters including the diversity in population, culture, and different modalities that were used to assess depression.[27] A strong evidence exists depicting higher prevalence of depression among elderly residing in nursing homes as compared to elderly living in their personal homes.[4,5,6] But on the other hand, a Korean study has revealed that the inhabitants of nursing homes are comparatively less depressed as compared to those who reside in their private homes. They have correlated this finding with the perception of safe environment, support and companionship as depicted by the residents of nursing homes.[20] Another study conducted in a local setting of Pakistan, in Rawalpindi revealed that people residing in nursing homes are at a high risk of developing depression as compared to those who reside in their personal homes. Pakistan has to face huge number of challenges while dealing with elderly population that is estimated to rise from 14.8% by the year 2050 from just 6.5% in the year 2013.[23]

CONCLUSION:
By using GDS-15, almost quarter of the subjects (27.5%) were found to have depression having comparatively more propensity in female subjects. Marital status, education, financial dependency on their families, recent admission in the nursing home and involvement in different healthy and recreational activities among the elderly admitted in one of the prominent nursing homes of Karachi were also found to be associated with depression.

Keeping in mind the current situation, it is the duty of the government to develop the health sector of Pakistan to meet the challenges of modern era. No doubt that the elderly population is the backbone of every society. They are the torch-bearers and blessed with visionary view of thinking. A nation cannot succeed without providing a contented platform to the entire elderly population.

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