A Comparison of Depressional Status and Associated Factors among Residents of Geriatric Homes and Elderly Attending Outpatient Clinics in Suburban Community

Samia Kattab Abd El-Rahman

Geriatric Nursing Department, Faculty of Nursing Damanhour University
samia_khattab@hotmail.com

Abstract: Introduction: Depression is a major cause of morbidity worldwide. Depression as a medical illness, the person feels with sadness, discomfort and lack of self-confidence. It can also be a sign of medical problem. According to the census survey 2006 of elderly in Egypt, ageing 60 years and more, constitutes 6% of total population. The depression risk factors increase with ageing. Aim of the study is to assess the prevalence of depressional status among elderly living in geriatric homes and those attending the outpatient clinics to detect the underlying associated factors of depression. Methods and Subject: Descriptive a cross-sectional study to compare the depressional status and the associated factors among the elderly residents of in institution and the elderly patients attending the outpatient clinics at Damanhur National Medical Institute of El-Behaira Governorate, Egypt. It also looked into associated factors for elderly depression, using socio-demographic characteristics and associated medical questionnaires. The sample size was 100 elderly aged 60 years and above, half of the study sample participants were from geriatric homes and another half from outpatients attending the outpatient clinics. Results: The study postulates that depression is common in institutional settings. The age groups more than 65 years were 2.1 fold higher among institutionalized residents than non-institutionalized participants. Among the socio-demographic factors only having no children and monthly income showed significant differences between the groups of the two studied settings. The most common associated chronic diseases with depression, were diabetes alone, hypertension alone and both diabetes and hypertension combined, with a significance of (P = 0.04). Both suggested and indicated depression collectively, accounted 90% of the depressed participants of in institution versus 74% for those outpatient individuals. Conclusion: depression among elderly is one of the most public health problems. The depressive symptoms are high among Egyptian elderly population especially those over 65 years and with chronic diseases, and inadequacy of monthly income, as well as among those live alone or having no children. Evaluating sub threshold depressive symptoms as suggested depression among institutionalized residents will help in better treatment and adjusting better lifestyle for elderly at care homes.

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1. Introduction:

Depression among elderly is an important public health issue.[1] As well as a serious problem with significant morbidity and mortality.[2] With the increase of life expectancy the ratio of elderly people, also increases and consequently health problems related to old age gain more attention. The prevalence of depression does not decrease in the elderly.[3]

Depression was more frequent in elderly individuals living in rural environments than in those living in urban areas. These symptoms increased with age.[4] Similar, findings were reported among Saudi elderly living in a remote `rural area with poor housing arrangements,[5] in Sri Lanka, the depressive symptoms among the elderly people were higher than those reported for most Asian countries.[6]

Although physicians and other health care providers typically view older people as the recipients of informal case, individuals older than age 65 provide a substantial amount of care to others with health problems and disability.[7] A cross-sectional studies demonstrated depression is associated with disability in elders and that disability in depressed elders is also associated with greater medical illness burden, cognitive impairment and behavioral changes.[8] The prevalence of depressive symptoms is very high in the elderly, four times higher than a diagnosis of clinical depression.[4]

Depressive symptomatology and especially psychomotor retardation and loss of interest in activities, contributed to disability in depression – executive dysfunction syndrome patients. Motival is altered when the patient is depressed, where depression significantly increases behavioral disorders.[9] clinical symptoms and neuropsychological findings associated with striatofrontal dysfunction. Contribute to disability in depressed & elderly patients.[10] Frontal lobe syndromes include reduced activity, particularly a diminution of spontaneous activity, lack of drive, inability to plan ahead and include a lack of concern,

these constitute the executive dysfunction syndrome.[9] Although somatic symptoms of depression and anxiety are associated with health and functional status, cross-sectionally depressed mood was found by far the stronger predictor of health declines overtime.[11]

The prevalence of depression in institutions vary widely between studies depending on the method of diagnosis and the type of institution from which the sample is drawn. A review of the literature reported that 44% of elderly people living in institutional care suffer from at least some depressive symptoms, with 16% diagnosed with major depression.[12] In one depressive symptoms of any level were reported, in 34% and case level of depression warranting treatment, in 15% (using AGECAT).[13] The second reported that 40% of two studies of depression prevalence in existing residents of institutions have been reported, in reached a level warranting intervention.[14] This high prevalence could be due to either increased level of all depressive symptoms or specific symptoms that may be common in the institutionalized elderly. Everyday experiences of institutionalized elder people one likely differ from those living in other settings, which could affect the type of symptoms reported.[15,16]

The review indicates greater prevalence of both major depression and clinically significant depressive symptoms compared to rates reported in the international literature.[17] However, the correct diagnosis and treatment of depression in the elderly is very important, since old age depression does not only cause significant distress, but often leads to suicide and it generally increases morbidity and mortality.[3] Developing measures of the quality of the care needed by older patients with complex comorbidities is critical to improving their care.[18] So, treatment models can be most effective if they focus on amelioration of depressive symptoms, but also on treatment adherence, prevention of relapse and recurrence, and improvement of the quality of life of patients and their families.[19]

Aim of the study:

- The goal of the study was compare the depressional status among the institutionalized residents and non-institutionalized individuals those attended outpatient clinics through.
- To assess the prevalence of the depressional status among institution residents and for non-institution participants.
- To assess the effect of the socio-demographic factors on the two groups of the study.
- To determine the associated chronic diseases among the participants residented persons.
- And to investigate the socio-relationship among outpatient participants.

Material and Methods:

1- Study setting:

The study was carried out at outpatient clinics in Damanhour National Medical Institute and geriatric homes (Dar al saada, Dar al rabiea, Dar al wafa, Dar al amal) in El-Behaira Governorate, Egypt. Each of the selected setting was visited twice a week for a period of one month.

2- Study design:

Descriptive a cross sectional study to determine. The prevalence of depression and its associated factors among the elderly people residents of institution and non-institutionalized outpatients, attending the outpatient clinics of the National Medical Institute of Damanhour.

3- Target population:

- Inclusion criteria:
  1- Age of 60 years and above.
  2- Acceptance to participate in the study.
  3- Being cognitively alert.
- Exclusion criteria:
  1- Refuse to participate.
  2- Having any communication problems (cognitive impairment).

4- Sample size:

A total of 100 subjects were selected randomly and agreed to participate in the study. The age of the studied groups was 60 years and above. Fifty subjects were chosen from institution residents and the other fifty subjects were selected from outpatient clinics (non-institution participants).

5- Statistical analysis:

The collected data were manually coded and tabulated using PC computer. SPSS for windows version (17) software package was used for statistical analysis in addition, the probability $p<0.05$, P-value based on Mont Carlo exact probability, Chi square (χ^2) and independent samples t-test were considered for the significant of different statistical analysis.

6- Technical design:

The depressional status of the two elderly studied groups was looked into family dynamics and medically related pre-coded questionnaires.

7- Geriatric Depression Scale short form (GDS),was used to assess the depressional status among the studied groups of elderly. The scoring according to the response of the participants is as follows: yes=1, in question numbers, 2 to 7 and 9, 11, 14 and 15 white no= 1 in question numbers, 1, 8, 10, 12 and 13. The best score is given to zero (absence of depression). The scores between 5 and 9 are considered as suggested depression and the scores above 9, are considered indicated depression.

8- Administrative design:

1- Official permissions are obtained from the authorities of the outpatient clinics and the elderly care homes.
2- A pilot study is carried out using mentioned tools on 10 elderly participants for the two study groups, to assess the clarity and feasibility of the tools and methods.
3- The interviews are carried by the researcher herself.
4- Arabic form of GDS[20] was used, which is considered reliable and valid measures of geriatric depression. It is composed of 15 items with total score ranged from 0 to 15.
5- The elapsed time for each interview differed according to the response and mood of the participant.
6- The data are collected in twice a week visits for a period of one moth during the academic year.

3.Results:

Table (1) Shows the distribution of study participants regarding socio-demographic data of both in institution and non-institution participants. The age ranged from less than 65 to 90 years as grouped in 10 years intervals. Age group (65-74 years) contributed about two thirds 31(62%) of in institution individuals. While the same age group for the non-institution participants accounted less than one third 15(30%). There was a highly significant difference as regards age of the two studied groups, (χ^2 = 12.2, P = 0.002). As regards the gender, no significant difference was found between the study groups, (χ^2 = 2.0, P = 0.155).

The distribution of marital status of studied groups, showed the highest percentages of widowed, individuals (56%) for in institution residents versus 17(34%) for non-institution participants. There was a highly significant difference between the two studied groups as regards marital status, (χ^2 = 13.6; P = 0.004).

Number of children for the study participants showed highly statistical significantly difference between the in-institution residents and the non-institution participants of the study (χ^2 = 33.8; P = 0.000). Where participants with no consisted 34 (68%) among non-institution participants against about only quarter 12(24%) among the in institution study group. Concerning the educational level, the distribution of illiteracy, basic, secondary and university or more education levels, showed almost a similar trend, without any significant difference between the two studied groups (χ^2 = 1.11; P = 0.775).

As regards, to the income source, it was observed that highest percentages of both groups were depend on the retirement funds, 36(72%) for in institution residents and 32(64%) for the non- institution participants. No significant difference was noticed is regards to the income source between the two groups (χ^2 = 5.4; P = 0.25). On the other hand, there was a highly statistically significant difference between the in and non-institution participants concerning monthly income, (χ^2 = 43.1; P = 0.000). It was noticed that who earn less than 300 pounds monthly 22(44%) among non-institution participants and those got less than 600 pounds were among in institution residents counted, 27(54%).

Table (2) Illustrates the comparison of depressional status according to the socio-demographic characteristics of the depressed and non depressed participants in the institution. It was clearly noticed that only 5 participants of the 50 residents of the institution were free of depression, constituting 3(25%) with age less than 65 years and 2 (6.5%) of age between 65-74 years. These age groups accounted more in the case of depressed individuals valuing 9(75%) and 29(93%), respectively. No significant difference was reported between the two groups, (χ^2 = 4.2; P = 0.122).

Depressed males dominates by 30 (90.9%) while their counterpart females percentage 15(88.2%). With no significant statistical difference regarding the gender depressional status among in institution residents, (χ^2 = 0.089; P = 0.765). In the case of marital status of the same group of study married and widowed dominates depressed and not depressed groups accounting 15(88.2%) and 25(89.3%), respectively, versus 2(11.8%) and 3(10.7%), respectively, for the not-depressed participants. No significant difference was noticed, (χ^2 = 0.36; P = 0.886).

As regards to the educational level of the in institution residents, illiterates and basic educated individuals dominated the depressed candidates valuing 18(94.7%) and 24 (96%), respectively. There was highly significantly statistical differences between depressed and depression free participants, (χ^2 = 13.9; P = 0.1003). Similarly, having no children, dominates in depressed group 12(100%) followed by those having more than (7-10 children) accounting, 16(100%). There was statically significantly difference concerning number of children and the depressional status, (χ^2 = 8.1; P = 0.044).

On the other hand, there was no statistically difference regarding job, income source and monthly income (χ^2 = 2.7; P = 0.438, χ^2 = 5.6; P = 0.231 and χ^2 = 0.45; P = 0.92, respectively) and the depressional status of the in institution study participants.

Table (3) Postulates the comparison of depressional status regarding the socio-demographic characteristics of the depressed and non-depressed (free of depression) for the study participants of the non-institution (outpatients). From the table neither

age groups nor the gender, showed any significant differences among study individuals of this study group, ($\chi^2 = 0.24$; $P = 0.624$, respectively).

Concerning the marital status, educational level and job, no significant statistically differences were detected between the two groups of non-institution outpatients and their depressional status, ($\chi^2 = 0.40$; $P = 0.991$, $\chi^2 = 6.40$; $P = 0.092$) and $\chi^2 = 3.2$; $P = 0.360$, respectively).

Although, having no children was higher among both, not-depressed and depressed individuals of this group of study, accounting, 9(26.5%) and 25(73.6%) respectively, but no significant differences were observed between the two studied groups, ($\chi^2 = 8.6$; $P = 0.650$). Similarly, no significantly differences were reported for income sources and monthly income of the study participants of this groups, ($\chi^2 = 5.6$; $P = 0.231$ and $\chi^2 = 9.2$; $P = 0.057$, respectively).

Table (1):Distribution of study sample regarding socio-demographic characteristics in institution and non-institution groups

Scio-demographic data	Study groups				χ^2	*P*-value
	In-institution		Non-institution			
	No	%	No	%		
Age						
<65	12	24	15	30		
65-74	31	62	15	30	12.2	0.002*
≥75	7	14	20	40		
Gender						
Male	33	66	26	62	2.0	0.155
Female	17	34	24	48		
Marital status						
Single	2	4	11	22		
Married	17	34	12	24	13.6	0.004*
Divorced	3	6	10	20		
Widowed	28	56	17	34		
No. of children						
No	12	24	34	68		
3-4	6	12	11	22	33.8	0.000*
5-6	16	32	5	10		
7-10	16	32	0	0.0		
Educational level						
Illiterate	19	38	18	36		
Basic education	25	50	23	46	1.11	0.775*
Secondary	3	6	6	12		
University or more	3	6	3	6		
Income source						
Salary	2	4	1	2		
Retirement find	36	72	32	64		
Asset owner	7	14	4	8	5.4	0.250
Non-governmental charity	1	2	5	10		
Other sources	4	8	8	16		
Monthly income						
<300	2	4	22	44		
300-600	27	54	9	18		
600-900	2	4	11	22	43.1	0.000*
900-1500	19	38	5	10		
1500-3000	0	0	3	6		

P -value based on Mont Carlo-exact probability.
* $P < 0.05$ (significant)

Table (2):Comparison of depressional status between depressed and not depressed among in institution participants according to their socio-demographic characteristics

Scio-demographic data of in-institution study participants	Depressional status				χ^2	*P* -value
	Not-depressed		Depressed			
	No	%	No	%		
Age						
<65	3	25	9	75		
65-74	2	6.5	29	93	4.2	0.122^
≥75	0	0.0	7	100		
Gender						
Male	3	9.1	30	90.9	0.089	0.765
Female	2	11.8	15	88.2		
Marital status						
Single	0	0.0	2	100		
Married	2	11.8	15	88.2	0.36	0.886^
Divorced	0	0.0	3	100		
Widowed	3	10.7	25	89.3		
Educational level						
Illiterate	1	5.3	18	94.7		
Basic education	1	4	24	96.0	13.9	0.003*^
Secondary	2	66.7	1	33.3		
University or more	1	33.3	2	66.7		
Job						
Not working	0	0.0	4	100		
Retired	2	10.0	27	90	2.7	0.438*^
Housewife	3	22.2	7	77.8		
Working	0	0.0	7	100		
No. of children						
No	0	0.0	12	100		
3-4	2	33.3	4	66.7	8.1	0.044^
5-6	3	18.8	13	81.3		
7-10	0	0.0	16	100		
Income source						
Salary	1	50.0	1	50.0		
Retirement fund	2	5.60	34	94.4		
Asset owner	1	14.3	6	85.7	5.6	0.231^
Non-governmental charity	0	0.0	1	100.0		
Other sources	1	25.0	3	75.0		
Monthly income						
<300	0	0.0	2	100		
300-600	3	11.1	24	88.9		
600-900	0	0.0	2	100	0.45	0.922^
900-1500	2	10.5	17	89.5		
1500-3000	0	0.0	0	0.0		

^ = *P* -value based on Mont Carlo-exact probability.
* = $P < 0.05$

Table (4) Shows the effect of socio-relationship on the depressional status among non-institution study group. It is noticed that 45 of 50 of the participants of this group of study were depressed, of whom 26(89.7%) were accompanied their families, versus 3(10.3%) of those free of depression. The depresional status of these two groups of study did not show any significant statistically differences concerning socio-relationship according to Mont Carlo exact probability (0.148) at significant ($P < 0.05$), even including those whom living alone 8(100%).

Table (3): Comparison of depressional status between depressed and not depressed among non-institution participants according to their socio-demographic characteristics

Scio-demographic data of non-institution study participants	Depressional status				χ^2	*P* -value
	Not-depressed		Depressed			
	No	%	No	%		
Age						
<65	4	26.7	11	73.3		
65-74	4	26.7	11	73.3	0.02	0.991
≥75	5	25.0	15	75.0		
Gender						
Male	6	23.1	20	76.9	0.24	0.624
Female	7	29.2	17	70.8		
Marital status						
Single	2	18.2	9	81.8		
Married	3	25.0	9	75.0	0.40	0.991
Divorced	4	40.0	6	60.0		
Widowed	4	23.5	13	76.5		
Educational level						
Illiterate	2	11.1	16	88.9		
Basic education	6	26.1	17	73.9	6.40	0.092^
Secondary	3	50.0	3	50.0		
University or more	2	66.7	1	33.3		
Job						
Not working	2	12.5	14	87.5		
Retired	6	27.3	16	72.7	3.2	0.360^
Housewife	4	44.4	5	55.6		
Working	1	33.3	2	66.7		
No. of children						
No	9	26.5	25	73.6		
3-4	2	18.2	9	81.8	0.86	0.650
5-6	2	40.0	3	60.0		
7-10	0	0.0	0	0.0		
Income source						
Salary	1	100	0	0.0		
Retirement fund	6	18.8	26	81.3		
Asset owner	2	50.0	2	50.0	5.6	0.231^
Non-governmental charity	2	40.0	3	60.0		
Other sources	2	25.0	6	75.0		
Monthly income						
<300	5	22.7	17	77.3		
300-600	1	11.1	8	88.9		
600-900	2	18.2	9	81.8	9.2	0.057^
900-1500	4	80.0	1	20.0		
1500-3000	1	33.3	2	66.7		

^ = *P* -value based on Mont Carlo-exact probability. * = $P < 0.05$ (significant)

Table (4):Effect of socio-relationship on the depressional status among non-institution study participants

Accompaniment with	Depressional status				MCP
	Not-depressed		Depressed		
	No.	%	No.	%	
Family	3	10.3	26	89.7	
Son	2	40.0	3	60.0	
Daughter	0	0.0	5	100	0.148
Close-relative	0	0.0	3	100	
Alone	0	0.0	8	100	

MCP = *P* -value based on Mont Carlo exact probability
* = $P < 0.05$ (significant)

Table (5) Compares between in-institution and non-institution (outpatients) participant regarding the associated chronic diseases. The results reveal that, among in-institution residents, 18(36%) had both diabetes and hypertension, while, diabetes alone was 13(26%) and hypertension alone was 6(12%) among this group of study. As heart diseases accounted 6(12%) among the same group of patients. On the other hand, diabetes, alone 14(28%) were the most accompanied disease among the non-institution patients, followed by hypertension alone, 11(22%), then those suffering from both diabetes and hypertension, 8(16%). The study reveals that 8(16%) of the participants were free from any chronic diseases studied. Statistically significant difference was found ($\chi^2 = 14.47$; $P = 0.04$) between the associated chronic diseases among in-institution and non-institution patients.

Table (5):Comparison between in-institution and non-institution study participants regarding the associated chronic disease

Chronic disease	Study participants				χ^2	*P* -value
	In-institution		Non-institution			
	No	%	No	%		
Diabetes	13	26	14	28		
Hypertension	6	12	11	22		
Osteopsathyrosis	2	4	3	6		
Liver diseases	5	10	3	6		
Heart diseases	6	12	0	0.0	14.47	0.04*
Respiratory diseases	0	0.0	2	4		
Brain stroke	0	0.0	1	2		
Diabetes/ hypertension	18	36	8	16		
Free from chronic disease	0	0.0	8	16		

* $P < 0.05$ (significant)

Table (6) Shows the distribution of chronic diseases among not depressed and depressed participants of the study sample. The morbidity among depressed patients was reported for diabetes alone 22(81.5%), versus 5(18.5%) among not depressed patients.

Similarly, hypertension valued 11(64.7%) for depressed patients against 6(35.3%). On the opposite side, osteopsathyrosis was higher 3(60%) among not depressed versus 2(40%) for the depressed patients. Both diabetes and hypertension together dominates the morbid status of the depressed participants accounting, 24(92.3%).Eight non-depressed participants were free from all studied chronic diseases. There was a significant statistically difference between depressed and not-depressed regarding the comorbidity ($\chi^2 = 15.42$; $P = 0.03$).

Table (7) reveals the comparison between in-institution and non-institution participants of the study according to their depressional status. It was observed that about three quarter 37(74%) of the in-institution residents was assorted as indicated depression. While not-depressed among this group counteracted only 5(10%).

These results were versus, 19(38%) and 13(26%), respectively for the non-institution participants, with highly significant difference, ($\chi^2 = 13.2$; P= 0.001). Comparing the mean ± SD (10.5 ± 3.2) for in-institution residents and (8.3 ± 4.2) for the other group of study, with highly significant difference according to independent sample t-test, ($t = 2.9$, $P = 0.005$).

Table (6):Distribution of chronic diseases among not-depressed and depressed participants of the study

Chronic diseases	Depressional status				χ^2	*P* -value
	Not-depressed		Depressed			
	No	%	No	%		
Diabetes	5	18.5	22	81.5		
Hypertension	6	35.3	11	64.7		
Osteopsathyrosis	3	60	2	40		
Liver diseases	0	0	8	100		
Heart diseases	0	0	6	100	15.42	0.03*
Respiratory diseases	0	0	2	100		
Brain stroke	0	0	1	100		
Diabetes/ hypertension	2	7.7	24	92.3		
Free from chronic disease	8	100	0	0.0		

* $P < 0.05$

Table (7):Comparison between in institution and non-institution (outpatients) study groups according to the depressional status

Depressional status	Study groups				χ^2	*P* -value
	In-institution		Non-institution			
	No	%	No	%		
Not-depressed	5	10	13	26		
Suggested depression	8	16	18	36	13.2	0.001*
Indicated depression	37	74	19	38		
Range	1-15		0-15		t=2.9	0.005*
Mean ± SD	10.5±3.2		8.3±4.2			

t = independent samples t-test
* = $P < 0.05$ (significant)

Figure (1) Illustrates that, suggested and indicated depression among the in institution study group, collectively constituted (90%), versus (74%) of that of non-institution study group. While depression free participants among in institution study group, valued only (10%) against (26%) of the non-institution study group. The statistical analysis showed significant differences between the two study groups ($P = 0.037$), for the depressional status studied.

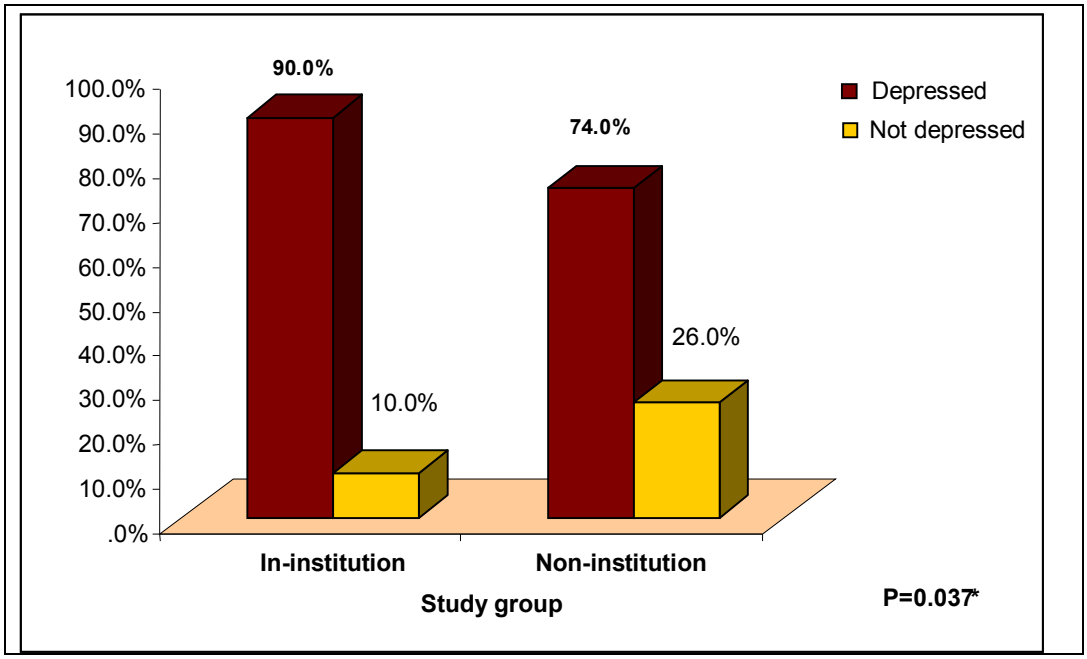

Figure (1): Distribution of in-institution and non-institution study groups according to the depressional status

4.Discussion

Depression is a major cause of morbidity worldwide.[21] Lifetime prevalence varies widely from 3% in Japan to 17% in U.S. In most countries the number of people who would suffer from depression during their lives falls within an 8-12% range.[22,23] Both major and minor depression are reported in 13% of community dwelling older adults, 24% of older medical outpatients, 30% of older acute care patients and 43% of nursing home dwelling older adults.[24] Health care systems in Egypt have largely ignored the needs of the elderly. The only sporadic programs of care for elderly mainly initiated by the community or within the private sector. Those above 65 years old represent, 4.4% of the Egyptian population.[25]

This study reported that about two third (62%) of the institutionalized residents were over 65 years, exceeding the same age group among non-institution participants by 2.1 fold, with highly significant (P = 0.002) difference between the two studied groups. No significant difference was observed for the gender (P = 0.155) among them. Oppositely, the marital status showed highly significant difference between care home participants and outpatient individuals (P = 0.004). Institutionalized widowed residents exceeded by 1.65 folds their counterparts from outpatient participants table (1). These findings for elderly age are in match with the mean ± SD of 68.8 ± 7.7 age Saudi elderly with depressive symptoms,[5] and in Srilanka, the depressive symptoms among the elderly people over 60 years, were higher than those report for most Asian countries.[6] On the other side a study in Baltimore, stated that people are most likely to suffer their first depressive episode between the ages 30-40 years, with a smaller peak between ages 50 to 60 years.[26] The present result for gender difference absence was in agreement with the results drawn from a study among elderly in Beni Suef (upper Egypt).[27] Whereas, many studies reported significant differences between depressed and normal elderly as regards sex, being higher among women than men.[4,5,28] The significant difference of the marital status mentioned in this study matched those reported in Beni Suef study,[27] and reported for depressed elderly that were more than triple times among widowed, divorced or single, compared to those who are married.[29]

This study postulates the highly significant differences in regards to number of children, (P = 0.000) and monthly income (P = 0.000) between care home residents and outpatient participants. These postulations are in concurrent with the univariate analysis of variables that were significantly associated with depression as female gender, increasing age, living alone, divorce,[1] income and related interaction terms,[30] among the elderly percuved perceive income inadequacy and among those who live alone.[6]

No significant differences were observed among the institution residents and outpatient participants concerning educational level, income sources. Although many studies explained the association of elderly depression with lower education, and inadequacy of income,[5,6] and individual income and education,[31,32] but the insignificant of educational level is in accordance with what reported about the absence of relation in occurrence of depression with education.[27]

Results presented for the comparison of depressional status among depressed and normal individuals in institution and outpatient participants are consistent with previews reports, by Martha et al[33]geriatric major depression is twice as common in patients receiving home care as in those receiving primary care.The mean prevalence of major depression ranges from 0.9 to 9.4% in private household to 14% - 42% in institutional living.[34]

The rates of depressive syndromes in elderly recipients of nursing home residents exceed those in elderly community samples.[35]

The variations in the estimates of the prevalence of depression in institutions were also reported.[12] This arguing study found no significant difference regarding the depressed elderly in geriatric homes and geriatric clubs reflecting proper matching of the study sample.[27]

No significant difference was found among depressed and normal persons attending the outpatient clinics, although more than 80% accomidated with their families. This finding is similar to the reported statement that depression among elderly in geriatric homes more by 1.6 fold than those who live with their families,[27] and among those who live alone.[6]

It was noticed that diabetes alone, hypertension alone and diabetes and hypertension combined were the most associated chronic diseases with depression among institutionalized and non-institutionalized parsons of the study. Similar notation was reported for the depressed participants of the total sample, with significant differences. Many investigators reported the association of depression and the chronic medical illness in old age people, that worsens the outcomes of many medical illness and increases mortality.[36] Late life depression principally affects individuals with other medical and psychosocial problems,[19] and depression is associated with greater medical illness burden in elders.[8] It is also significantly associated with cardiovascular diseases, reinforcing the importance of evaluating subthreshold depressive symptoms in the elderly in the community.[17]

An evidence suggests that the prevalence of depression is elevated in those with chronic illness such as diabetes,[37] and the bugle impact of co-morbid depression and diabetes on the individuals.[38] These reports are in line with the results shown on, (tables 5,

6 and 7). In edition, to strong association between depression and poor glycaemic control and number of co-morbid conditions.[39] similar, evident also suggested that diabetes complications and depression are often coexist.[40]

Conclusion

Depression in elderly people mainly affects those with chronic medical illness and cognitive impairment, causing suffering, family disruption and disability, worsens the outcomes of many medical illnesses and increases both morbidity and mortality. This study reflects that, the depression associated factors among institutionalized residents and outpatient persons that affect their life style. The socio-demographic characteristics that affect significantly the depressional status of the elderly were age groups more than 65 years, being 2.1 fold higher among institutionalized residents. As well as the marital status (1.65 fold higher). While the gender, educational level and income sources, as socio-demographic factors did not present any significant differences among the studied two groups. The number of children and the monthly income contributed significantly among the studied groups in the favour of institutionalized participants being well-off and having no children.

No significant differences were observed among depressed and not-depressed participants for both institutionalized residents and non-institutionalized individuals, regarding age, gender, marital status, educational level, job, income source and monthly income as socio-demographic factors for depressional status of the studied group. With exception of number of children and educational level for the institution residents.

The socio-relationship among the outpatients participant, rated high count 45(50) and 89.7% of the depressed participants were accompanied with their families, versus only 10.3% for those free of depression. The morbidity status of the in institution participants and non-institution individuals, was clearly associated with diabetes, hypertension and both diabetes hypertension. There was a significant difference between the two studied groups concerning co morbidity.Similar, findings were observed among 76% of the total study sample, who were with associated chronic diseases, with significant difference between depressed and not-depressed participants.

Suggested depression encountered 8(16%) among in institution residents versus 18(36%) among non-institution participants. On the other-side, indicated depression valued 37(74%) for institutionalized candidates, versus 19(38%) for non-institutionalized participants. The difference between the two groups of the study is highly significant, for the depressional status. While, both depression types (suggested & indicated) were 90% form institution-residents versus 74% for the non-institution participants.

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