# Effect of Group Reminiscence Therapy on Depression among institutionalized elderly in Dakahlia Governorate – Egypt

Nadia Mohamed Hassan Saleh<sup>1</sup> & Ebtsam Salah Shalaby Salama<sup>2</sup>

<sup>1</sup> Lecturer of grontological Nursing, Faculty of Nursing -Mansoura University – Egypt. <sup>2</sup>Lecturer of psychiatric and Mental Health Nursing. Faculty of Nursing – Mansoura University – Egypt.

Abstract: Depression is one of the most important psychosocial problems in later life that may highly influence the quality of life of elderly people in different settings. Reminiscence therapy is one of psychiatric treatment that aims to increase self esteem, socialization, as well as reduce loneliness, sadness, and depression. Objective: Is to determine the effect of reminiscence group therapy on depression among residents of elderly homes in Dakhellia governorate. Study Design: The study used a quasi-experimental research design (pre-post intervention study). Setting: - The study was conducted in the three governmental elderly homes in Dakhellia governorate namely; Dar El-Amal, Dar El-Malak Mechael in Mansoura city and Dar El-Walaa in meet ghamr city. Subjects: All elder's residents at the previous settings and fulfilled the study criteria , their age 60 years and above, able to comprehend and communicate and had mild or moderate depressive symptoms, operationalized by score of  $\geq 11$  on Geriatric Depression Scale (GDS); their number amounted 38 out of 61 elders were included in the study. Tools: Three tools were used Socio-demographic structured Interview Schedule Sheet, Mini-Mental State Exam (MMSE) scale and Geriatric Depression Scale (GDS) short form -15. The study subjects will be divided into small groups, the group consisted of 3 to 5 elder's, and reminiscence sessions were held, once weekly for 8weeks totaling 8 sessions. Results: level of depression was decreased after implementation of reminiscence group therapy, as the mean depression score before the intervention was  $7.82\pm1.49$ , compared to  $6.03\pm1.33$  immediately after the intervention. Conclusion: Reminiscence group therapy decreases the feeling of depression among residents of elderly homes. .Recommendations:-Replicating the study using different group settings as community, with a larger sample size. Keywords: Depression, Elderly, Reminiscence, Therapy.

# I. Introduction

Depression is one of the most important psychosocial problems in later life that may highly affect the quality of life of elderly people in different settings. As elderly face numerous mental issues because of the emotional responses that occur as a result of the normal aging process, acute and chronic disease, and role changes with family. Any of these issues produce stress and can lead to depression <sup>(1)</sup>. The overall prevalence of depression estimated by WHO among the elderly generally varies between 10 and 20% depending on the cultural situations <sup>(2, 3)</sup>. In Egypt 2009 a study done among elderly living in Al-Nahda City; reported that the prevalence of depression was 31.4% <sup>(4)</sup>, also another study conducted in Damanhour city- Egypt 2013 reported that the rates of depressive syndromes among institutionalized elderly exceeded those who are residents in community<sup>(5).</sup>

Depression can have dangerous negative outcomes in old age. In addition to reducing the general quality of life, it can lead to greater disability, and increase utilization of health care services, longer length of hospital stay, poorer nutrition and increased risk of suicide  $^{(1, 6)}$ . One type of psychotherapy that has been studied is participation in reminiscence therapy. This intervention is cost-effective and relatively free from harmful effect  $^{(7)}$ . Reminiscence therapy can be defined as a therapy that uses the recall of past memories or stories, feelings and thoughts to facilitate pleasure, quality of life or adaptation to present circumstances  $^{(8)}$ .

Nursing professionals began applying reminiscence therapy in elderly care in the late 1960s. Reminiscence therapy has been shown to improve self esteem, socialization, and life satisfaction as well as reduce loneliness, sadness, and depression <sup>(9)</sup>. Moreover, some studies have analysed the advantages of reminiscence for the elderly, and reported that, reminiscence in general decreases depression and confusion <sup>(10)</sup>. Reminiscing is a technique working to think and talk about one's life and can be of enormous benefit to clients on a structured or unstructured group or individual basis <sup>(11-12)</sup>. Group reminiscence therapy also provides a warm and empathic environment to help the subjects feel free to engage in overt reminiscence. The advantage of group reminiscence may be that it provides the subjects with an opportunity for self-expression <sup>(13)</sup>. Also in a group there is opportunity to receive positive reinforcement from peers and to practice social skills with other group members. Further group usually provide a good deal of enjoyable interaction, which can increase a participant's commitment to treatment, encourage attendance, and increase social confidence <sup>(8)</sup>.

As the numbers of elderly population increased, the grontological nurse plays a main role in the practice of reminiscence therapy and thus needed to be knowledgeable about reminiscence therapy and its relation to well being of the elderly <sup>(14)</sup>. Nurses are needed to evaluate and plan nursing intervention targeting mental health of the elderly, also she must be cautious in assessing how older adults respond to different life situations, and challenges to their physical and mental health in order to start appropriate interventions in a suitable time <sup>(15)</sup>.

To the best of the author's knowledge this is the first study to be carried out in Mansoura city - Egypt about the effect of reminiscence group therapy on depression among institutionalized elderly.

## Aim of the Study

Is to determine the effect of reminiscence group therapy on depression among institutionalized elderly in Dakhellia governorate.

## .Research Hypotheses

Level of depression will be reduced after implementation of reminiscence group therapy.

# Subjects and Method

## Study design

The study used a quasi-experimental research design (pre-post intervention study).

# Setting:-

The study was conducted in the three governmental elderly homes in Dakhellia governorate namely; Dar El-Amal, Dar El-Malak Mechael, in Mansoura city and Dar El-Walaa in meet ghamr city.

## Subjects:-

All elders' residents at the previously mentioned settings and fulfilled the study criteria their number amounted 38 out of 61 elders were included in the study:

- Aged 60 years and above.
- Able to comprehend and communicate.
- Had mild or moderate depressive symptoms, operationalized by score of ≥ 11 on Geriatric Depression Scale (GDS)
- Had normal cognitive function, score of 24 or higher on the Mini-Mental State Examination (MMSE).

Tuble (1) Distribution of elderry persons of y place of residence and study enterna			
Elderly Homes	Total number of elders	Selected sample with mild and moderate depression	
Dar El- Amal	21	14	
Dar El- Walaa	22	13	
Dar El- Malake Mikhael	18	12	
Total	61	38	

Table (1):- Distribution of elderly persons b y place of residence and study criteria

## Tools of data collection:-

## **Study Tools:**

Three tools were used for collection of necessary data.

*Tool I:* Socio Demographic and clinical data structured interview schedule: - such as; age, sex, religion, level of education, marital status, occupation before retirement, and income. Also medical health history of the elders as presence of chronic illnesses and medication taken.

# Tool II: The Mini Mental State Examination (MMSE) Scale.

**The MMSE** scale was developed by **Folstein et. al**, **1975**<sup>(16)</sup>. It was used for assessing cognitive function of elders. It includes questions related to orientation, registration, attention, calculation, recall and language. The scale was translated into Arabic and approved to be valid and reliable by **EL Okel 2002**<sup>(17)</sup>. The scale score is 30 point is classified as: score from 24 to 30 indicates normal cognitive function, score from 18 to 23 indicates mild cognitive impairment and score from zero to 17 indicates severe cognitive impairment of the elderly.

## Tool III: The Geriatric Depression Scale (GDS) Short Form-15.

The geriatric depression scale (GDS) short form is 15 items self report instrument developed by *Sheikh, and Yesavage 1986*<sup>(18)</sup> to assess depression and general wellbeing of the elderly. The scale was translated into Arabic and approved to be valid and reliable by (*Elhuseiny, 2013*<sup>(19)</sup>. The older adult chooses the best answer either yes: one (1) or No: zero (0) for how he/ she have felt over the last week. From the 15 questions, 10 questions were indicating the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) were indicating depression when answered negatively. Scores ranges from

zero to 15, items are summed for total score. Score from zero to 4 indicates no depression, score from 5 to 8 was indicating mild depression, and score from 9 to 11 was indicating moderate depression and score from 12 to 15 indicates severe depression.

# II. Method

- Permission to carry out the study from the responsible authorities was obtained.
- The purpose of the study and the time of data collection were explained for the administrators of each elderly home.
- Tool I (Socio Demographic and clinical data structured interview schedule) was developed by the researcher after review of the literature.
- Study tools I, II and III was revised by 5 experts in the field of grontological nursing, and psychiatric and mental health nursing- university of Alexandria, to test its content validity and feasibility and necessary modifications was done.
- A pilot study was carried out on 10 elders' selected from El- Amal elderly club, Mansoura city, Dakahlia, to test clarity and feasibility of the tools; and the estimated time needed for the interview.
- Cognitive function and depression were assessed for all elders resided in elderly homes to identify those fulfill the study criteria using tool II (mini mental state examination) and tool III (geriatric depression scale short form); according to inclusion criteria that each elderly should be with mild or moderate depression and had intact cognitive functions.
- The studied Elderly with mild and moderate depression was interviewed individually by the researcher to collect the necessary data using study tools.
- The studied elders with mild and moderate depression were divided into small groups; each group consisted of 3 to 5 elder's and reminiscence sessions were held, once weekly for 8weeks totaling 8 sessions.
- The researchers visit El-Amal elderly home Saturday of each week and Dar El-Malak Mechael Monday every week and Dar El-Walaa Thursday of each week.
- Evaluation of the intervention was done immediately and three months after the intervention using geriatric depression scale short form.
- The study was conducted over a period of 7months beginning at October 2015 till the end April 2016.

# **Description of the program:**

- The researchers developed Reminiscence sessions after review of the related literature. However, a majority of studies reviewed recommend reminiscence focusing on positive memories (Burnside, 1993; Cook, 1991; Fry, 1983; Stinson & Kirk, 2006)<sup>(14, 20-22)</sup>.
- Matching of the group subjects such as careers, hobbies, or social activities. Although we considered a similar age group, similar level of mental and physical capabilities.
- Creating a safe environment for participants as sizeable space with a quiet, warm, and comfortable atmosphere. Being able to sit in a circle allowed participants to have eye contact with one another, to hear what each person said, and to readily join the conversation whenever they wanted.
- Private photographs of the elderly were used to help the elderly to remember the past significant events, also drinks as juice and chocolate were offered to encourage socialization.
- Before starting the first session, the researchers introduce themselves to the elders and establish good relation to relief fears and gain their cooperation and group members introduced themselves.
- The researchers start each session with simple structured question about the content of each session, and encourage each elderly to share and talk.
- Each session was included simple recollection of positive autobiographical events, with the goal of fostering positive emotions.

## The proposed study sessions include :-

- **First Session**: **Childhood and School Life**: the elderly tried to remember the significant characteristics of being a child and their relation with parents and brothers or sisters. Elderly talked about school period, their homework, teachers and colleagues.
- Second Session: Adolescent stage: Elderly person discussed changes in their personality, their hobbies and interests.
- **Third Session: Family relationship**: Elderly shard memories about their home, their role and relationship within the family.
- Fourth Session: Adulthood Stage: The meaning of work and their relation within the colleagues and success in work. Also this session involves memories about marriage, first meeting with the spouse, marriage preparation and wedding day.

- **Fifth Session:** This session involves memories related to married life prior to having children and after having children, birth of first child, growth of children and their education.
- **Sixth Session**: This session involves memories related to marriage of the children, difficulties encountered and the action taken to overcome them, life after they were left the home.
- Seventh Session: Relationship and their role with grandchildren.
- **Eighth Session:** Aging, coping with retirement and current life situation.

## **Ethical Considerations:**

Verbal consent from the elderly to participate in the study was being obtained. Confidentiality of data, privacy and the right of the elderly to withdraw from the study at any time was assured.

## Data analysis:

Data was analyzed using SPSS (Statistical Package for Social Sciences) version 15. Qualitative data was presented as number and percent. Quantitative data was tested for normality by Kolmogrov-Smirnov test. Normally distributed data was presented as mean  $\pm$  SD. Student t-test was used to compare between two groups. Non parametric data was presented as min – max and median. Mann-Whitney test was used for comparison between groups. Kruskal-Wallis test was used to compare between more than two groups. P < 0.05 was considered to be statistically significant.

# III. Results

Table (2): Distribution of institutionalized elderly according to their socio- demographic characteristic. It was observed from the table that the age of the studied subjects ranged from 60 to 84years with a mean of  $67.95\pm6.58$  years. About 84.2 % of the institutionalized elderly were young old (aged between 60 to less than 75 years). Males were more prevalent than females in the study sample, they constituted 57.9%. Regarding the marital status it was observed that 31.6 % were widow, 31.6 % were divorced, while 18.4% were single and 18.4% were married.

Concerning the level of education, the results reported that the highest percentage 36.8% could just read and write, 23.9% of institutionalized elders had a university degree, 15.8 secondary education, 13.2% completed their basic education and 10.5% were illiterate. Concerning elder's occupation before retirement 57.9% of institutionalized elderly were employee, while 23.7% were housewives and the rest 18.4% were manual worker. The main source of income was pension it was reported by 78.9% of institutionalized elder and 50.0% of them had enough income, 34.2% reported not enough income, while the rest 15.8% reported enough income and can save money.

institutionalized elderi		
Items	No= 38	%
Age in years :-		
60-74	32	84.2
75-84	6	15.8
85+	0	0
Mean ±SD		67.95±6.58
Sex :-		
Male	22	57.9
Female	16	42.1
Marital status:-		
Single	7	18.4
Married	7	18.4
Divorced	12	31.6
Widow	12	31.6
level of education		
Illiterate	4	10.5
Read and write	14	36.9
Basic education	5	13.1
secondary education	6	15.8
University	9	23.7
Occupation before		
retirement :-	22	57.9
Employee	9	23.7
Housewife	7	18.4
Manual worker		
Income :-		
Enough	19	50.0
Not enough	13	34.2
Enough and save	6	15.8
Source of income:- 🗆		

Table (2): Distribution of institutionalized elderly according to their socio- demographic characteristic.

Pension	30	78,9	
Social affairs	9	23.6	
Son help	5	13.1	
Mara than and answar was given			

□More than one answer was given

**Table (3): Distribution of institutionalized elderly according to their medical history.** The table illustrates that hypertension is the most prevailing disease among institutionalized elders, it was reported by 44.7%, diabetes mellitus is the second most common disease reported by 39.5%, while 15.8%, 13.2%, 10.5 and 7.9% reported osteoarthritis, cardiac, respiratory and renal diseases respectively.

 Table (3):
 Distribution of institutionalized elderly according to their medical history.

Items	No=38	%
Type of disease 🗆		
Hypertension	17	44.7
Diabetes mellitus	15	39.5
Osteoarthritis	6	15.8
Cardiac diseases	5	13.2
Respiratory diseases	4	10.5
Renal diseases	3	7.9

 $\square$  More than one answer was given

Table (4): Distribution of institutionalized elderly according to their decision, reason of admission to the elderly home and duration of stay. It was observed from the table that 68.4% of elderly it was their own decision to move to the elderly home; while 31.6% it was their family decision. Regarding reasons for admission to elderly home, it was noticed that 57.9% of elderly reported that feeling of loneliness, no one caring at home57.9% are the main reasons of admission to the elderly home, while the rest 28.9% of elderly reported family problems. Concerning the length of stay in elderly homes; it ranged from less than one year to more than five years, with a mean of  $2.46\pm3.07$ . As 71.1% and 18.4% of elders stayed in elderly home since one to less than five years or five years and more respectively.

 Table (4): Distribution of institutionalized elderly according to their decision, reason of admission to the elderly home and duration of stay.

Item	No=38	%
Decision of admission		
Elders' decision	26	68.4
Family decision	12	31.6
Reason of admission to the elderly home: □-		
Feeling lonely	22	57.9
No one caring at home	22	57.9
Family problems	11	28.9
Duration of stay		
≤1 year	7	18.4
1-5 years	27	71.1
$\geq$ 5 years and more	4	10.5
Mean ±SD		2.46±3.07

**≠**More than one answer was given.

Table (5): comparison of mean score of 15 – item geriatric (GDS -15) depression scale before and after group reminiscence therapy. It was observed from the table that the mean depression score before the intervention was  $7.82\pm1.49$ , decreased to  $6.03\pm1$ . 33 immediately after the end of the intervention and the difference was statistically significant t= 9.104,  $p = \le 0.001$ , while three months after the intervention the mean depression score had increased to  $7.45\pm1.41$ , although this was still significantly lower than before the intervention t= 2.772, p= 0.009.

 Table (5): comparison of mean score of 15 – item geriatric (GDS -15) depression scale before and after group

 reminicence therapy

Variable	Before intervention N= 38	Immediatelyafter intervention N= 38	Three months after intervention N= 38
Mean (SD) GDS-15			
score	7.82±1.49	6.03±1.33	7.45±1.41
Т	-	9.104	2.772
p- value	-	$\leq 0.001$	= 0.009

Table (6): Demographic characteristics of elderly and decrease in mean score of the 15 –item geriatric depression scale before and after the intervention. It was observed from the table that there is no statistically significant difference observed between the socio- demographic characteristics of the subjects as age, sex, marital status, level of education, occupation before retirement and income; and the decrease in mean score of geriatric depression score comparing before and after the intervention.

Variable	No of subjects		Difference 1	Difference 2
variable	No of subjects		Median( min, max)	Median(min, max)
	N= 38	%	Wieulan( Inni, max)	Weulan(Inni, max)
A go in yoong	N= 38	%0		
Age in years:-	22	04.15		
60-74	32	84.15	1.00(0.5.00)	0 (-1.0, 2.00)
	6	15.2	1.00(0, 5.00)	
75-84			2.00(0,4.00)	0(-1.0,1.00)
Test of significance	N. 20	0/	Z= 1.230, p= 0.291	Z= 1.074,p= 0.283
Sex :-	N= 38	%	2 00(0 4 00)	0 ( 1 0 2 00)
Male	22	57.9	2.00(0,4.00)	0 (-1.0,2.00)
Female	16	42.1	1.00(1.48,0)	0 (-1.0, 1.00)
Test of significance			Z= 0.770, p= 0.442	Z= 0.159, p= 0.874
Marital status :-	N= 38	%		
	12	31.6	2.00(1.0, 5.00)	0 (-1.0,1.00)
Widow	12	31.6	2.50(0, 4.00)	1.00(-1.0, 2.00)
Divorced	7	18.4	1.00(0,3.00)	0 (-1.0,2.00)
Married	7	18.4	1.00(0, 2.00)	0 (-1.0,2.00)
Single				
Test of significance			X <sup>2</sup> = 5.371,p= 0.147	$\chi^2$ - = 1.491,p= 0.684
Level of education	N=38	%		
Illiterate	4	10.5	1.00(0, 5.00)	0 (0, 1.00)
Read and write	14	36.8	1.50(0,4.00)	0 (-1.0,2.00)
Basic education	5	13.2	1.00(0.84,2.00)	0 (0 ,-2.00)
secondary education	6	15.8	1.50(1, 4.00)	0.50(-1.00,1.00)
University	9	23.9	2.00(0, 4.00)	1.00(-1.0,2.00)
Test of significance			<i>X</i> <sup>2</sup> = <b>3.481</b> , <b>p</b> = <b>0.481</b>	$\chi^2 = 0.629, p = 0.960$
Occupation before	N=38	%		
retirement :	22		2.00(0, 4.00)	0.50(-1.00, 2.00)
Employee	9	57.9	1.00(0, 5.00)	0 (0, 1.00)
Housewife	7	23.7	1.00(0, 2.00)	0 (-1.00, 1.00)
Manual worker		18.4		
Test of significance			$X^2 = 2.055$ , p= 0.358	$\chi^2 = 1.944$ , p= 0.378
Income :-	N= 38	%	/ <b>*</b>	
Enough			2.00(0, 4.00)	0 (-1.00, 2.00)
Not enough	19	50.0	1.00(0, 5.00)	0 (-1.00, 1.00)
Enough and safe	13	34.2	3.00(1.00, 4.00)	1.00(-1.00, 1.00)
	6	15.8		· · · · · · · · · · · · · · · · · · ·
Test of significance			$X^2 = 6.072$ , p= 0.048	$\chi^2 = 1.634$ , p= 0.442

 Table (6): Demographic characteristics of elderly and decrease in mean score of the 15 –item geriatric depression scale before and after the intervention.

Difference 1= before minus immediately after the intervention. Difference 2= before minus three months after the intervention.

# IV. Discussion

Depression is considered an important public health issue among elderly <sup>(23)</sup>. Purposeful reminiscence group therapy is effective in reduced depressive symptoms among elderly <sup>(15)</sup>. A group reminiscence program, with a specific path guiding older people to re-evaluate their past life events, has the potential to strengthen the personal value of the institutionalized individual and foster their sense of identity. Listening to others, responding to them, and feeling close to life events of other people could provide a benefit in the quality of life; the elderly would find a safe place where they can experience positive interactions <sup>(24)</sup>.

Therefore, the evaluation of the effect of reminiscence group therapy on level of depression among institutionalized elderly is regarded as the basic aim of this study. The present study results revealed a Statistically significant decreased in depression scores compared before, immediately and three months after the implementation of reminiscence group therapy; this can be explained by the fact that the institutionalized elderly exploit any opportunity allows them to interact with others and express feelings; also the supportive atmosphere of the group created a sense of togetherness, of being accepted and being a valued group member. Further stated that reminiscence group therapy have had a substantial positive effect on feelings of accomplishment, a sense of a job well done, and a desire to fulfill the time left in life, thus effectively reducing symptoms of depression among elderly. The results are in agreement with a study done in Iran by **Sharif et al 2010**<sup>(13)</sup>, Also **Song et al 2014**<sup>(25)</sup> reported that; Group reminiscence provided significantly greater relief of depressive symptoms than did

the control intervention immediately after and 3 months after the intervention . This finding was consistent with the results in several studies even observed improvement among older adults who were clinically depressed <sup>(26-<sup>32)</sup>. Another study conducted in Egypt by **Osman et al 2012**<sup>(33)</sup> revealed lower level of depression among the studied sample especially for those with severe level of depression after applying the reminiscence intervention. Moreover a study conducted **by Karimi et al 2010**<sup>(34)</sup> reported a drop in depressive symptoms in an institutionalized elderly population compared to a control group after reminiscence therapy. The same results reported by some former studies <sup>(35-40)</sup>. In contrast to these results a study conducted by **Chao et al 2006**<sup>(41)</sup>; reported that group reminiscence therapy significantly improved self esteem , but the effect on depression and life satisfaction were not significant; this contradiction cloud be explained by the fact that their study was conducted in nursing home and the average stay in the nursing home was only slightly over two months and the loss of participants not only influenced the statistical power level, but might also have biased effects, because the time available for a subject to share his or her experiences was not consistent.</sup>

The present study results reported that there is no statistically significant difference between demographic characteristics of the elderly and the decrease in mean geriatric depression score before and after the intervention (table 6) this is in agreement with what **Sharif et al 2010** <sup>(13)</sup>, mentioned in their study, yet only marital status showed a statistically significant difference in depression scores comparing before and after the intervention ; this can be explained by the fact that their study was conducted in a day center where elders live with their wives, but the present study is conducted in elderly home where the elderly live alone .

## V. Conclusions

It can be concluded from the present study that reminiscence group therapy decrease the level of depression among older people residents in governmental elderly homes.

## VI. Recommendations

According to the finding of the present study the following recommendations are recommended:-

- Replicating the study using different group settings as community, with a larger sample size.
- Encouragement of social interaction among residents of elderly home.
- in service training program to all care providers especially nurses about reminiscence therapy

## Limitation of the study:-

A small sample size

## Acknowledgements

The authors are thankful to all elders Residents in governmental elderly homes at Dakahlia governorate who are participating in this study also they appreciate help provided by nursing and social workers staff in elderly homes in conduction of the study.

## Reference

- [1]. Wold G. Basic Geriatric nursing .5<sup>th</sup> ed.. China, st Louis Mospy Company, 2012; 225-27.
- [2]. Rangaswamy SM. Switzerland: The World Health Organization; World Health Report on Mental Health: New understanding New Hope. *Indian J Psychiatry2001; 43(1): 1–4.*
- [3]. Singh A and Misra N. A study on Loneliness, Depression and Sociability. Industrial Psychiatry journal 2009; 18(1): 51-52.
- [4]. Shehatah A, El-Okda E, Rabie M. Prevalence of Depression and Association of Cognitive Impairment in Elderly in Suburban Community in Egypt. *Current Psychiatry 2009;16(2):192-199*.
- [5]. Abd El-Rahman S. A Comparison of Depressional Status and Associated Factors among Residents of Geriatric Homes and Elderly Attending Outpatient Clinics in Suburban Community. *Journal of American Science.* 2013;9(6):327-337.
- [6]. Steffens DC, Skoog, Norton MC, Hart AD, Tschanz JT, Plassman BL, Wyse BW, Welsh-Bohmer KA, and Breitner JC. Prevalence of depression and its treatment in an elderly population: the Cache County study. Arch Gen Psychiatry 2000 Jun; 57(6):601-7.
- [7]. Cully J., Lavoie, D., & Gfeller, J. Reminiscence, personality, and psychological functioning in older adults. Gerontologist 2001; 41 (1): 89-95.
- [8]. Agronin Marce E and Maletta Gabe J. Principles and Practice of Geriatric Psychiatry. USA. Lippincott Williams and Wilkins 2006; 191-93.
- [9]. Vivero-Chong, R. Reminiscence therapy: The group approach in long-term care. Canadian Nursing Home 2002; 13(3), 5-12.
- [10]. Wang, J. J. The comparison effectiveness among institutionalized and non-institutionalized elderly people in Taiwan of reminiscence therapy as a psychological measure. The Journal of Nursing Research2004; 12(3), 237-245.
- [11]. Stinson CK and Kirk E. Structured reminiscence: an intervention to decrease depression and increase self-transcendence in older women. *J Clin Nurs 2006 Feb; 15(2):208-18.*
- [12]. Ayalon L, Gum AM, Feliciano L, Arean PA, Ayalon L, Gum AM, Feliciano L, et al. Effectiveness of nonpharmacological interventions for the management of neuropsychiatric symptoms in patients with dementia: a systematic review. *Arch Intern Med*, 2006; 166:2182–8
- [13]. Sharif F, Mansouri A, Jahanbin I, and Zare N. Effect of group reminiscence therapy on depression in older adults attending a day centre in Shiraz, southern Islamic Republic of Iran. *East Mediterr Health J 2010; 16(7):765-70.*

- [14]. -Lin, Y.C., Dai, Y.T., and Hwang S.L. The effect of reminiscence on the elderly population: A systematic review. *Public Health Nursing 2003, 20, 4, 297-306.*
- [15]. Stinson, C. Structured group reminiscence: An intervention for older adults. The Journal of Continuing Education in Nursing 2009; 40 (11): 521-528.
- [16]. Folstein, M. F, Folstein, S. E., & McHugh, P. R. Mini-mental state: A practical method for grading the cognitive state of patients for the clinician. Journal of Psychiatric Research 1975; 12, 189-198.
- [17]. Elokl M. Prevalence of Alzheimer disease and other types of dementia in Egyptian elderly. Unpublished Master Thesis, Ain Shams: University, Faculty of medicine, 2002.
- [18]. Sheikh, J. I., & Yesavage, J. A. Geriatric Depression Scale (GDS): Recent evidence and development of a shorter version. Clinical Gerontology: A Guide to Assessment and Intervention 1986; 165-73. Retrieved on May17, 2014 from the web: http://www.stanford.edu/yesavage/GDS.html.
- [19]. Elhusseini S. Effect of Self Care intervention on Quality of Life of Older Adults with Heart Failure. Unpublished Doctorate Thesis. Alexandria University, Faculty of Nursing. 2013.
- [20]. Burnside, I. Themes in reminiscence groups with older women. *International Journal of Aging and Health Development, 1993; 37,* 177.
- [21]. Cook, E. The effects of reminiscence on psychological measures of ego integrity in elderly nursing home residents. Archives of Psychiatric Nursing, 1991; 5(5), 292-298.
- [22]. Fry, P. Structured and unstructured reminiscence training and depression among the elderly. *Clinical Gerontology*, 1983; 1(3), 15-37.
- [23]. Weyerer S, Eifflaender-Gorfer. S, Kohler L, Jessen F, Maier W, Fuchs A, et al. Prevalence and risk factors for depression in nondemented primary care attenders aged 75 years and elder. J Affect Disord, 2008; 111(2, 3): 153-63.
- [24]. Pinquart M and Forstmeier S. Effects of reminiscence interventions on psychosocial outcomes: a meta-analysis. *Aging Ment Health*, 2012; 16:541–558.
- [25]. Song D, Shen Q, Tu-Zhen Xu, and Qiu-Hua Sun. Effects of group reminiscence on elderly depression: A meta-analysis . International journal of nursing sciences, 2014; 416-422.
- [26]. -Kai-Jo Chiang, Chu H, Chang H, Chung, M, Chen C, Hung-Yi Chiou and Chou K. The effects of reminiscence therapy on psychological well-being, depression, and loneliness among the institutionalized aged. Int J Geriatric Psychiatry, 2010; 25: 380– 388.
- [27]. Korte J, Bohlmeijer E. T. Cappeliez P., Smit F., and Westerhof G. J. Life review therapy for older adults with moderate depressive symptomatology: a pragmatic randomized controlled trial. *Psychological Medicine*, 2012, 42, 1163–1173.
- [28]. Ashida S. The effect of reminiscence music therapy sessions on changes in depressive symptoms in elderly persons with dementia. J Music Ther, 2000; 37: 170–182.
- [29]. Haight BK, Miche Y, Hendrix S. The extended effects of the life review in nursing home residents. Int J Aging Hum Dev, 2000; 50: 151–168.
- [30]. Beth MS. Testing therapeutic life review offered by home care workers to decrease depression among home-dwelling older women. Issues Ment Health Nurs, 2006; 27: 1037–1049.
- [31]. Hsieh CJ, Chang C, Su SF, Hsiao YL, Shih Y, Han W, and Lin C. Reminiscence Group Therapy on Depression and Apathy in Nursing Home Residents With Mild-to-moderate Dementia. J Exp Clin Med, 2010; 2(2):72–78.
- [32]. Serrano, J.P., Latorre, J.M., Ros, L., Navarro, B., Aguilar, M.J., Nieto, M., and Gatz, M. Life review therapy using autobiographical retrieval practice for older adults with clinical depression. *Psicothema*, 2012; 24, 224-229.
- [33]. Osman Z; Khalil N; Arafa M, and. Gaber N. The Effect of Reminiscence on Self-Esteem, and Depression among Elderly People. *Journal of American Science*, 2012; 8(4).
- [34]. Karimi, H. H., Dolatshahee, B. B., Momeni, K. K., Khodabakhshi, A. A., Rezaei, M. M., & Kamrani, A. Effectiveness of integrative and instrumental reminiscence therapies on depression symptoms reduction in institutionalized older adults: An empirical study. Aging & Mental Health, 2010. 14(7), 881-887
- [35]. Plastow, N.A. Libraries of life: Using life history books with depressed care home residents. *Geriatric Nursing*, 2006, 27, 4, 217-221.
- [36]. Jones, E. Reminiscence Therapy for older women with depression. Journal of Gerontological Nursing, 2003 29, 7, 27-33.
- [37]. Annie M.H. Chin. Clinical Effects of Reminiscence Therapy in Older Adults: A Meta-Analysis of Controlled Trials. Hong Kong Journal of Occupational Therapy, 2007; 17(1):10–22.
- [38]. Wang, J.J. The effects of reminiscence on depressive symptoms and mood status of older institutionalized adults in Taiwan. *International Journal of Geriatric Psychiatry*, 2005.1, 57-62.
- [39]. Meléndez-Moral J, Charco-Ruiz L, Mayordomo-Rodríguez T and Sales-Galán A. Effects of a reminiscence program among institutionalized elderly adults. *Psicothema*, 2013, Vol. 25, No. 3, 319-323.
- [40]. Ghanbarpanah I, Khoshknab M, and Shahbalaghi F. Effects of 8 weeks (8 Sessions) group reminiscence on mild cognitive impaired elders' depression. *International Journal of Biosciences*, 2014; Vol. 4, No. 5, 11-22.
- [41]. Chao S, Liu H, Wu C, Jin S, Chu T, Huang T, and Mary Jo Clark. The Effects of Group Reminiscence Therapy on Depression, Self Esteem, and Life Satisfaction of Elderly Nursing Home Residents. *Journal of Nursing Research Vol*, 2006; 14, No. 1.