

## Association between Psychosocial Factors and Memory Problems among Elderly

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### ABSTRACT

The older age group is increasing in size relative to the younger generation. The trend is expected to continue, a time associated with increasing health complications, including depression and cognitive impairment. This study aimed to assess association between memory problems and psychosocial factors among elderly resident in geriatric home. A descriptive design was used. Data were collected from two residential homes (Dar Elamal and El Noor (private home), Dar El Helal (governmental home) at Benisuef (East and North). A purposive sample of 50 elderly was included in this study. Data were collected through: 1) an interview questionnaire sheet to assess socio-demographic characteristics of the elderly. It included socio-demographic data of elderly such as age, sex, and level of education, 2) Mini mental state examination to assess cognitive function and memory problems of the studied sample. 3) Psychosocial condition assessment. Results showed that the majority of the sample had inappropriate psychosocial condition and it showed that more than half of subjects have appropriate memory. Results of this study concluded that, there was no significant relationship between memory problems and psychosocial condition of elderly. The study highlighted the need for further research to assess psychosocial needs of the elderly.

**Key words:** Psychosocial factors, memory problems, elderly.

### Introduction

Nowadays, with the increase in the number of older people there is a need to expect their numbers in order to develop strategies and future plans for them. Demographic transition was fast, particularly the rapid decline in mortality rates during the latter half of the twentieth century. With century changes in the age structure of population, there is an increase in the number of elderly people and a decreased trend of their mortality rates, which is considered as a natural result of reducing of diseases spread among

the elderly and the efforts of health care for them (Yochim et al., 2013).

Mild Cognitive Impairment (MCI) is a stage of decline in memory or other cognitive function greater than expected for normal aging. It is quite common for individuals with MCI to have fluctuations in cognition. Over time, some patients diagnosed with MCI revert back to normal cognition, and some remain mildly cognitively impaired without developing dementia. However, a person with MCI is at increased risk for developing Alzheimer's disease or other types of dementia (Brucki and Nitrini, 2014).

Some memory issues are due to stress, anxiety, or depression. A traumatic life event, such as the death of a spouse, can lead to changes in lifestyle and can leave an elderly person feeling unsure of themselves, sad, and lonely. Dealing with such drastic life changes can therefore leave some people confused or forgetful. While in some cases these feelings may fade, it is important to take these emotional problems seriously. By emotionally supporting a struggling relative and seeking help from a doctor or counselor, the forgetfulness can be improved (Eliopoulos et al., 2014).

The nurse working with elderly should assess psychosocial needs which include cognitive function, financial status, social support systems, interpersonal interaction, coping with multiple losses, and maintaining independence. The mental status examination, one of the most important diagnostic screenings measures available for nurses, is designed to assess mental functioning level and estimate the effectiveness of capacity of elderly (Hsiao et al., 2014).

### **Significance of the study:**

Old age has special characteristics that may affect an individual's mental health, such as psychological effects of retirement, deteriorating physical health, loss and grief over previous capacity, loss of friends or family. Loss of interest, diminished social activities, and apathy may be associated with cognitive deficit, and impairment in memory functions. There is also the challenge of memory lapse in the early stages of dementia that may underline the patient's personal report of depressive symptoms. Memory impairment is also associated with difficulties in communication (Craik, 2012), hence it's important to investigate the relationship between memory problems and psychosocial factors among elderly in geriatric home.

### **Aim Of The Study**

The overall goal of the study is to assess the association between psychosocial factors and memory problems among elderly.

#### ***It was achieved through:***

- 1- Assess memory problems among elderly resident in geriatric home.
- 2- Assess psychosocial factors among elderly resident in geriatric home
- 3- Investigate association between memory problems and psychosocial factors among elderly resident in geriatric home.

#### **The aim of the study was achieved through answering the following question:**

What is the association between memory problems and psychosocial factors among elderly?

### **SUBJECTS AND METHODS**

**Subjects and methods of this study were portrayed under four main topics as follows:**

- I. Technical design
- II. Operational design
- III. Administrative design
- IV. Statistical design

#### **I. Technical Design**

Technical design for this study includes research design, research setting, subjects of the study and tools of data collection.

**Research design:**

An exploratory descriptive research design was adopted to fulfill the aim of the study and answer the research questions. It helps the investigator to describe and document aspects of a situation as it naturally occurs. As well, this design helps to establish a database for future research.

**Research setting:**

The study was conducted at two geriatric homes. These homes are geographically representing two sectors in Beni-suef as: East and North as following:

1. Dar Elamal and El Noor (private home).
2. Dar El Helal (governmental home).

**Sample:**

Only subjects who fulfilled the following inclusion criteria were included:

- 1- Age 60 years and above.
- 2- Had no severe cognitive impairment and could respond to questions.
- 3- Not suffering from complete hearing or vision impairment.
- 4- Agree to participate in the study.

The sampling method was purposive sampling. Residents from both gender in the previously mentioned study settings were involved in the study. Their total number was 50 (30 residents in Dar ElAmal and El Noor, 20 residents in Dar El Helal). The total number of all elders in two geriatric homes were 60 (37 residents in Dar ElAmal and El Noor, 25 residents in Dar El Helal). Eight of elders refused to participate in the study and four of them had vision and hearing impairment.

**Tools of data collection:**

Data were collected using the following tools:

**1-Interviewing Questionnaire:**

This tool was developed by **Afeife (2008)** based on review of related literatures. It included socio-demographic data of elderly such as age, sex, level of education, marital status, occupation, number of children, income per month, source of income and income satisfaction. It also included the elderly social relation such as persons regularly visiting, visiting his/her relatives /friends, and information related to residential homes such as reasons for institutionalization, duration of stay, and living in single / or shared room.

**2- Questionnaire for assessing elderly psychosocial condition:**

It was developed by **Afeife (2008)**. This questionnaire is a combination of 9 items social egogram (**Sugita, 1985**) and 15 geriatric depression scale (GDS) items (**Yesavegeetal., 1983**). This questionnaire assessed different items such as elderly preferring to do things in an exact manner, looking at the good points of the person rather than the bad points, frequency suppressing themselves without saying "no", preferring social gatherings satisfying with their life, feeling full of energy.... etc. The questions were yes/no questions where negative answers were: "no" in numbers 1, 5, 7, 11, 13, and "yes" in numbers 2, 3, 4, 6, 8, 9, 10, 12, 14, 15, for each of them subject was given 1 point. The total score equaled 24. Satisfied score was  $\geq 12$  and unsatisfied score was  $< 12$ .

**3-Standardized mini-mental state examination (SMMSE):**

It was developed by **Folstein et al. (1975)**. Cognitive status was evaluated by

using the MMSE, a 30-point item assessment. The Mini-Mental State Examination (MMSE) was performed to assess global cognitive function. A brief screening tool for MCI with high sensitivity and specificity, was used to categorize participants as with, or without MCI. It is a 30-point test covering 8 cognitive domains: 1) attention and concentration, 2) executive functions, 3) memory, 4) language, 5) visuo-constructional skills, 6) conceptual thinking, 7) calculations and 8) orientation. Scores below 25 were considered to be indicative of inappropriate memory function. Scores above 25 were considered to be indicative of appropriate memory.

## **II- Operational Design:**

The operational design for this study included preparatory phase, pilot study, fieldwork, limitations of the study and ethical considerations. This study was conducted from August 2015 to January 2016.

### **A- Preparatory phase:**

It included reviewing past, current, local and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines.

### **B- Pilot study:**

The pilot study was conducted on five elderly from the geriatric homes. They represent 10% of total sample to ensure the clarity of questions, applicability of the tools and the time needed to complete them.

### **C- Fieldwork:**

The actual fieldwork for the process of data collection consumed six months started at the beginning of August 2015 and was completed by end of January 2016. Data were collected in 2 days per week average with 2 elderly a day at morning and afternoon shifts. Each interview lasted for 60

minutes, depending on the response of the participants. Each elderly was interviewed individually in his room. The investigator explained the aim and objectives to the studied elderly.

### **D. Ethical considerations:**

The ethical research considerations in this study included the following:

1. Prior to the actual work of research study, ethical approval was obtained from the Scientific Research Ethical Committee of faculty of Nursing, Ain-Shams University.
2. The research approval of each elder to share in the study was taken.
3. The investigator cleared the objective and aim of the study to subjects.
4. The investigator maintained on anonymity and confidentiality of subjects.

### **III- Administrative Design:**

Official letters were issued from Faculty of Nursing, Ain Shams University to get permission from the directors of geriatric homes for gathering data of the research.

### **IV- Statistical Design:**

The data were collected and coded. Then the collected data were organized, analyzed using appropriate statistical significance tests using the Computer Statistical Package for Social Science (SPSS), version 21. Data were presented using descriptive statistics in the form of frequencies and percentages. Chi square test was used to compare the frequencies and the correlation between study variables.

Degrees of significance of results were considered as follow:

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p-value > 0.05    Not significant (NS)  
 p-value ≤ 0.05    Significant (S)  
 p-value ≤ 0.01    Highly Significant (HS)

**Limitations of the study:**

Some elderly refused to participate in the study. Also some elderly wanted to get some money to agree participate in the study.

**Results**

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**Table (1):**Socio-demographic characteristics of studied elders

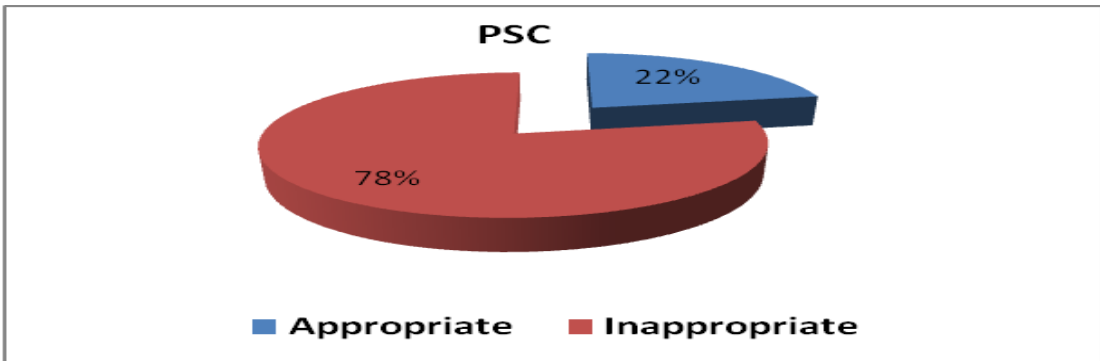
Characteristics		Frequency	Percent
Age	≤70 years	26	52.0
	>70 years	24	48.0
Sex	Males	30	60.0
	Females	20	40.0
Off-spring	Yes	26	52.0
	No	24	48.0
Marital Status	Married	12	24.0
	Divorced	6	12.0
	Widow	10	20.0
	Not married	22	44.0
Education	Illiterate	8	16.0
	Literate	42	84.0
Income	≤1500 Pound	28	56.0
	>1500 Pound	22	44.0
Enough Income	Yes	27	54.0
	No	23	46.0
Duration of Stay	≤4 years	29	58.0
	>4 years	21	42.0

Table 1 shows the socio-demographic characteristics of the studied elders. As shown, 48% of the studied elders were older than 70 years. Adding to that almost two thirds (60%) of the studied elders are males while 40% are females and only 52% reported having children. Regarding Marital Status 24% of studied elders were married while 12% of them were divorced, 10% were widows, and 22% were not married. Besides, most of studied elderly 84% could read and write, and 16% are illiterate. Only less than half of studied elders (44%) reported having pensions more than 1500 pounds/ month, however 56% stated that their income was enough. The results also showed that less than two thirds of studied elders (58%) have been staying in the elderly home for less than 4 years while 42% of studied elders exceeded this period.

**Table (2):** Descriptive analysis of psychosocial condition of studied elders(no.50)

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Psychosocial condition (Total score = 24)	Value (%)
Appropriate ( $\geq 12$ )	11 (22.0)
Inappropriate ( $< 12$ )	39 (78.0)
Mean	9.88
Median	9.00
Std. Deviation	2.61
Minimum	3.00
Maximum	18.00
Range	15.00



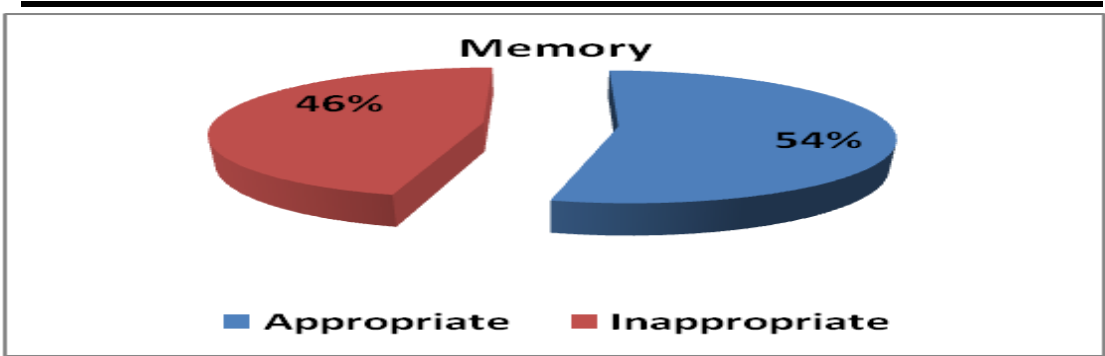
**Figure (1):**Distribution of psychosocial condition of studied elders(no.50).

Table (1) and figure (1) show that only (22%) recorded the appropriate psychosocial condition of studied elders score compared to 78% who could not reach half of the total score (Figure 1). The psychosocial condition of studied elders ranged between 3 and 18 out of 24 with a mean score  $9.88 \pm 2.61$  and median 9.

**Table (3):**Descriptive analysis of Mini mental status examination of subjects(no.50)

Mini mental state examination (Total Score = 30)	Value (%)
Appropriate ( $\geq 25$ )	27 (54.0)
Inappropriate ( $< 25$ )	23 (46.0)
Mean	22.30
Median	25.00
Std. Deviation	7.96
Minimum	2.00
Maximum	30.00
Range	28.00

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**Figure (2):** Distribution of mental mini status examination of studied elders(no.50).

Table (2) and figure2 show that more than half of studied elders (54%) recorded the appropriate MMSE score compared to 46% of them with inappropriate score (Figure 2). The MMSE of the studied elders ranged between 2 and 30 out of 30 with a mean score  $22.30 \pm 7.96$  and median 25.

**Table (4):** Relationship between psychosocial condition and Mini mental status examination of studied elders

MMS		PSC
	Correlation Coefficient (r)	-0.239-
	P value	0.095
	N	50

**HS= Statistically highly significant at  $p \leq 0.001$  S= Statistically significant at  $p \leq 0.05$**

**NS= Statistically not significant at  $p > 0.05$**

**Figure (3):**Relationship between psychosocial condition and Mini mental status examination of studied elders.

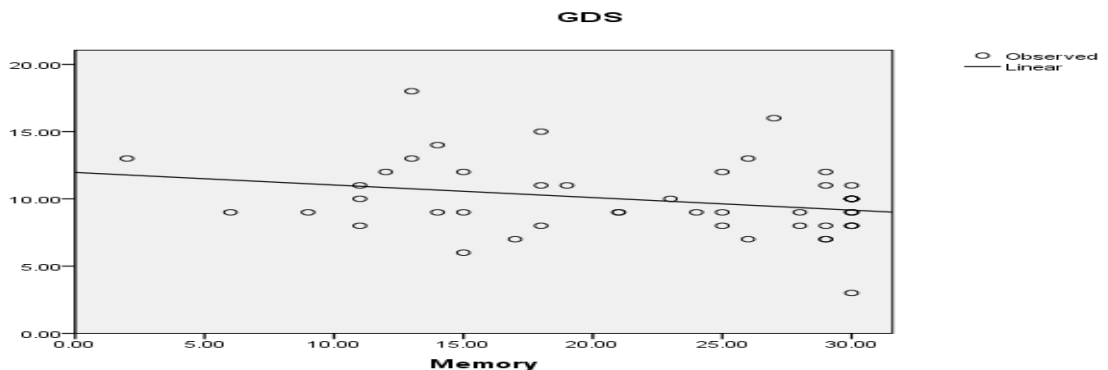


Table 3 and figure3 show that there was no statistically significant correlation between mini mental status examination and psychosocial condition ( $p > 0.05$ ) (Figure 3).

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## Discussion

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### **Part I: Psychosocial condition of studied elders**

The present study also referred that, a high percentage of the studied elders had inappropriate psychosocial condition. Most of the studied elderly were afraid of something bad to happen. It could be due to having inadequate financial, social support and being afraid that one day they would become frail and disable, and no one can help them.

These results are supported by **Levesque et al. (2011)** who suggested that the majority of elderly under study reporting that there are unmet needs for help regarding activities of daily living, home safety, and medical check up which had a negative relation to the psychosocial condition among elderly subjects.

This result is inconsistent with **Reid et al. (2008)** who stated that geriatric home provide support services such as psychosocial support, personal assistance, basic nursing tasks, and assistance with instrumental activities of daily living. Geriatric home services can bring client satisfaction and an increase of quality life.

### **Part II: Memory functions of studied elders**

Concerning memory functions of the studied elders, the present study revealed that more than half of studied elders have appropriate memory. This result could be due to elderly in Upper Egypt like to talk about their past experiences and accomplishments that stimulate their cognitive functions and maintain memory. This result is inconsistent with **Grossman et al. (2014)** who made longitudinal study on elderly people resident in geriatric homes and found that most of elderly had memory impairment.

This result is consistent with **Nenette (2015)** who performed longitudinal study on elderly people to examine effect of cognitive status on quality of life of elderly and found that most of them have appropriate memory.

### **Part III: Relationship between psychosocial condition with memory functions of subjects:**

Regarding relationship between psychosocial condition with memory functions of studied elders, the present study showed that there was no statistically significant relationship between memory functions and psychosocial conditions of studied elders. This result could be due to most of studied elders had effective coping skills. Also this result could be due to that the services offered in geriatric homes are vital in maintaining and increasing resilience for cognitive capacity of the elderly.

This result is consistent with **Barrios et al. (2012)** who stated that depression, has no influence in self-reported memory complaints and memory performance among the elderly. Also a similar finding was reported in a study carried out by **Teng et al. (2012)**, who found that non-statistically significant levels of correlation between MMSE scores and GDS scores among older adults.

The previous result is incongruent with **Chand (2013)**, who reported that depression contribute significantly to the cognitive deterioration observed in clients with memory impairment.

### **Based upon the findings of the current study, the following recommendations can be deduced:**

According results of current study, many nursing programs should be implemented to improve memory functions of elderly.

Many nursing programs should be implemented for meeting psychosocial needs



of the elderly and decrease late life depression.

Further researches should be applied to the people before retirement to prepare them how to obtain successful aging and what steps or accomplishments needed to be obtained in order to realize this stage of life.

### Conclusion

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In the light of the present study findings, it can be concluded that the majority of elderly people residents in geriatric homes included in this study suffer from inappropriate psycho-social conditions (depression & anxiety). Meanwhile more than half of them have appropriate memory. However, there was no significant relation between psychosocial condition and memory functions of elderly people under study. However there was no significant relationship between psychosocial condition and socio-demographic characteristics of studied elders. There was no relationship between memory functions and socio-demographic characteristics of studied elders.

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