A STUDY TO ASSESS THE PREVALENCE OF DEMENTIA AMONG ELDERLY AGED 60-90 YEARS IN A SELECTED COMMUNITY AT COIMBATORE

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A B S T R A C T

The study was undertaken to assess the prevalence of dementia among elderly aged 60 – 90 years in a selected community at Coimbatore. The samples of 100 were included for the study. GPCOG screening tool for dementia was used to assess the level of cognition. Majority of the participants (69% n=69) had mild impairment and further testing by a medical doctor is suggested, and (29%, n=29) denoted cognitive impairment is present and Further testing is recommended. The results showed that the prevalence of dementia symptoms are highly among the old age population.

Keywords:

1. Introduction

Dementia is a long term and progressive disease that affects all parts of the brain. Dementia is most common in elderly people; it is used to be called senility and was considered a normal part of aging. It is now known that dementia is not a normal part of aging but is caused by a number of underlying medical conditions that occur in both elderly and younger persons. It is the leading reason for placing elderly people in institutions such as nursing homes.

According to WHO, Worldwide, 35.6 million people have dementia and there are 7.7 million new cases every year. In 2010, there are 3.7 million (2.1 million women and 1.5 million men) Indians aged over 60 have dementia. Most people with dementia live in developing countries (60% in 2001, rising to 71% by 2040). Rates of increase are not uniform; numbers in developed countries are forecast to increase by 100% between 2001 and 2040, but by more than 300% in India, China, and their south Asian and western Pacific neighbours.

Dementia is a very serious condition that results in significant financial and human costs. In 2010, the total global societal costs of dementia was estimated to be US$ 604 billion. Many people with dementia totally become totally dependent on others for their care. They also experience declines in any or all areas of intellectual functioning, for example, use of language and numbers; awareness of what is going on around him or her; These losses not only impair a person's ability to function independently, but also have negative impact on quality of life and relationships. It is now clear that Alzheimer's disease is a major cause of dementia in elderly people as well as in relatively young adults.

2. Specific Objectives

1. To assess prevalence of dementia among elderly.
2. To find association between dementia with selected demographic variables.

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3. Operational Definition

Dementia - Dementia is decline in memory and at least one other cognitive domain such as language, visuo-spatial, or executive function sufficient to interfere with social or occupational functioning in an alert person.

Prevalence- The total number ofcases of at risk in a given population at the study time.

4. Assumptions

- All people at older age are at risk for dementia.

5. Delimitations

- The study is delimited to patients of only 60 to 90 years.
- The number of sample is small to be generalized.

6. Research Methodology

An evaluative approach was used to find the presence of dementia among risk population of the elderly. A descriptive study design was used to assess the prevalence of dementia people aged 60-90 years. After taking permission from the concerned authority the investigator went to the community bothmorning and evening and administered the tool by interviewing in their homes and also in the sub centre while they had their visit.

7. Setting of the Study

The setting of the study were the communities of Coimbatore at Mathialaganagar, Sulur and kodangipalayam. It has a target population of 2040 and 5000 respectively. Mathialaganagar is situated in front of RVS. College of Nursing, 2km from sulur town and kodangipalayam is 5 km from Sulur.

8. Sample Size

The sample consisted of 100 aged persons from both communities.

9. Sampling Technique

The technique used for the sampling was purposive sampling method.

10. Sampling Criteria

Inclusion criteria
People who were 60-90 years of age.
People who were able to speak and understand.

Exclusion criteria
People if diagnosis of depression or delirium;
People with poor language abilities, poor sight, or hearing.

11. Research Tool

The tools used for the collection of data were:

1. A Questionnaire
2. Modified GP COG screening tool for dementia

The Questionnaire was prepared to collect demographic data such as age, sex, education status, occupation. GP COG Screening tool for dementia.

It consists of 9 components such as address (5 items to remember),

Date=1,

Clock numbers=1,

Hands of a clock for 11:10=1,

Current event of last week=1

To repeat the 5 items=5

Table 1 - Scoring and interpretation.

Test	Top Score	If a subject scores:	Cutoff Score/Interpretation
GPCOG	9	9	No significant cognitive impairment and further testing not necessary.
		5-8	Further testing by a medical doctor is suggested.
		0-4	Cognitive impairment is indicated. Further testing is recommended.

12. Validity of the Tool

The research tool was validated by one physician, and three nurse experts. One nurse expert was an Associate professor of Psychiatric Nursing and other two nurse experts from Associate professor of Medical surgical Nursing.

13. Pilot Study

The pilot study was conducted one week prior to main study for the feasibility of tool and public. The aged people could not cope with the first tool mini mental status examination as they were from low education back ground, so the tool was changed discussing with the clinical psychologist into a simple questionnaire form.

14. Data Collection

Before commencing the data collection, permission was obtained from the concerned authority for home visit. The study was conducted during July 3rd week 2013. The investigator along with the health worker made home visit both in the morning and the evening to each aged persons' home and interviewed each elderly person introducing herself and the purpose of the study and they were willing to participate answering the questions while the tool was administered.

15. Results

Table 2 - Distribution of elderly as per the variables and cognition level.

S..No	Demographic variables	9 score F	5-8score F	0-4 score F	X^2 value
1.	Age in Years				1.174 NS
	60-70	2	44	18	df=1
	70-90	0	25	11	
2.	Sex				2.39NS
	Male	1	36	20	df=2
	Female	1	33	9	
3.	Educational Status				1.78NS
	Illiterate			13	df=2
		1	41	16	
		1	28		
4.	Occupation				6.64NS
	Working	2	46	13	df=1
	Retired	0	4	1	
	Not working	0	19	15	

15.1. Demographic variables

64% of the elderly were 60-70 years old, 36% of them belonged to 70 -90 years. 57% were male and 43% were female and 55% of the samples were illiterate and 45% were literate. 61% were workers, 5 of them retired, and 34% were house wives or not working.

15.2. Association between the level of cognition and the selected variables

The study revealed that among 60-70 years old age, 2 people had intact cognition of 9 score, 44 people had 5-8 score andonly 18 people had 0-4 score, but among 70-90 years no one had intact cognition, 25 of them had 5-8 score, and 11 people had only 0-4 score. So it is found that prevalence of dementia is more in 70-90 years than below 70 years. Other variables such as sex, occupation, education was not showing any association with the le vel of cognition.

Table 3 - Mean, standard deviation and mean percentage of level of cognition

Interpretation	Mean	Mean %	Std Deviation
Time orientation	0.82	82.0	0.386
Visuospatial functioning	1.28	64.0	0.682
Information	0.63	63.0	0.485
Recall test	2.55	51.0	0.968

According to Table 3, 82% of the sample was oriented to time that is the aged person able to tell the date correctly, 64% of them could tell the clock numbersdrawn in a picture and the time correctly which determined the visuospatial functioning, 63% could tell recent event happened in one week back which was called as information but only 51% could recall five items given in one address.
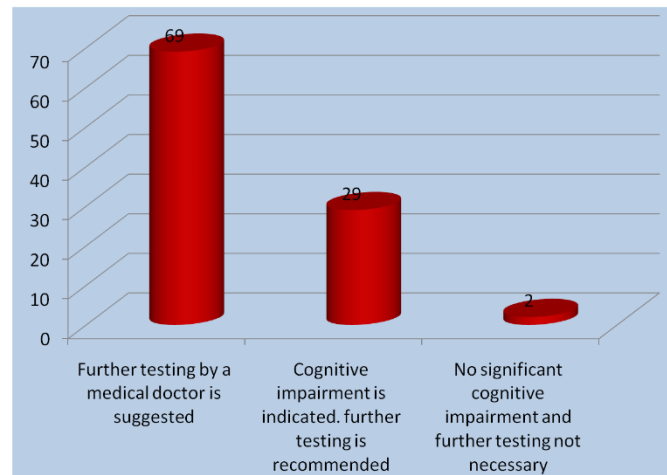
Fig.1 - Levels of cognitive impairment among the elderly

Fig - 1 shows the level of cognition among the elderly, 69% of them had 5-8 score which indicates further testing by a medical doctor suggested, 29% had 0-4 score which denotes cognitive impairment is indicated and further testing is recommended and only 2% having no significant impairment. This clearly shows that prevalence of dementia symptoms are high among the old age population.

15.3. Prevalence of dementia

Prevalence of dementia among the old age was categorized as scoring >8 or 9 as No significant cognitive impairment and further testing not necessaryor intact cognition (2%, n=2), 5-8 score (69%, n=69) which indicated mild impairment and further testing by a medical doctor is suggested and 0-4 score (29%, n=29) which indicated cognitive impairment is present and Further testing is recommended.

16. Discussion

The above study show the prevalence of dementia among elderly people aged 60 to 90 years. The findings of the study was consistent with the study conducted by D.Saldanha. et al (2010) to assess the prevalence of dementia in an urban center of Pune, Indiafor elderly aged 65 years of age. The prevalence of dementia was 4.1%. Socio-demographic factors which conferred a statistically higher risk for dementia were identified to be older age, low socio-economic status, low level of education, presence of family history, whereas, marriage was found to be protective. The other study conducted by Henry Brodaty et al (2006) to validate 'What Is the Best Dementia ScreeningInstrument for General Practitioners to Use?'at NSW, Australia, have concluded, TheGeneral Practitioner Assessment of Cognition (GPCOG), as one of the most suitable tool for routine dementia screening in general practice at community, population, or general practice samples, are easy to administer, and haveadministration times of 5 minutes or less. So it was recommended that GPs considerusing the GPCOG, when screening for cognitive impairment or forcase detection. The present study findings showed that prevalence of dementia was high among the old age people especially very old age 70-90 years. The findings of the study was consistent with those of Ritchie K et al (1992) to identify the relationship between age and the prevalence of senile dementia : a meta analysis of recent data. The study was conducted at Montpellier, France. An exponential increase with age was observed, with senile dementia prevalence diagnosed by Diagnostic and Statistical Manual (DSM-III) criteria doubling every 6 years and senile dementia of the Alzheimer's type (SDAT) every 4.2 years. The findings of the present study showed that there was no association between level of cognition and education. The findings of the study are consistent with those of Ivan Dimitrov,et al (2011)onBulgarian Population. They assessed the relationship between education and dementia, diagnosing according to DSM-IV criteria, as well as between education and neuropsychological test performance. While education affected MMSE scores, no statistically significant relationship with the diagnosis was found.

17. Conclusion

Prevalence of dementia was high among the old age people 60-90 years. As the majority of the participants were of 60-70 years the prevalence of cognitive impairment was high among all the participants. Hence there should be also likelihood of senile dementia and the need for further assessment by the psychiatrist or the neurologist. Nurses play a major role in identifying the risk cases of dementia and referring to physician in order to prevent major medical illness among the old age.

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