A study to identify the risk for Alzheimer’s disease among geriatric people in Venkatachalam, Nellore

Kalavathi B, Suchitra S, Latha P and Dr. Indira Arumugam

Abstract

**Background:** Alzheimer’s disease is a progressive irreversible degenerative neurological disease that begins insidiously and is characterized by gradual losses of cognitive functions and disturbance in behavior and affect. It begins with gradual decrease in memory, emotional, stability and general functioning. The initial symptoms usually appear between the ages of 40 to 60. Intellectual ability and personality functioning gradually decrease.

**Aim:** The aim of the study was to assess the prevalence of autism among school children in selected schools.

**Objectives:** 1. To determine the prevalence of autism among school children in selected schools at Nellore. 2. To find the association between prevalence of autism among school children with their socio demographic variables.

**Methodology:** 100 geriatric people in Venkatachalam were selected by using Non-probability convenience sampling technique method.

**Results:** Among 100 samples, 68(68%) have no signs, 21(21%) had mild signs, 11(11%) have moderate signs and none of them had severe signs of Alzheimer’s disease.

**Keywords:** Identify, risk, Alzheimer’s disease, geriatric

**Introduction**

Alzheimer’s disease is a progressive irreversible degenerative neurological disease that begins insidiously and is characterized by gradual losses of cognitive functions and disturbance in behavior and affect. It begins with gradual decrease in memory, emotional, stability and general functioning. The initial symptoms usually appear between the ages of 40 to 60. Intellectual ability and personality functioning gradually decrease\(^1\).

It is primarily affects the cerebral cortex, with is involved in conscious thought and language, the production of acetylcholine and the hippo campus, essential to memory storage. In the regions attacked by this disease the neurons degenerate and loss their synaptic connections to their neurons impairing a person’s abilities to govern emotions, recognize errors and patterns co-ordinate movement and remember, at the last an afflicted persons loses all memory and mental functioning\(^2\).

Alzheimer’s disease is the most common form of dementia. Dementia is the loss of intellectual function. So severe that it interferes with an individual daily activity and eventually results in death. In general patient with Alzheimer’s disease will experience determination of all “high cortical” functions in parallel. This process is painless, although in the stages the patient may be aware of and profoundly disturbed by the insidious loss of intellectual faculties. In the advanced stages (5-10 years) the patient has lost not only all cognitive abilities but distinctive personality traits and may require constant care\(^3\).

The average duration of the illness before death in eight years, complications include injury from the patient’s own violent behavior or from wandering or unsupervised activity, pneumonia and other infections, especially if the patients get in sufficient exercise, malnutrition, and dehydration and aspiration. It is tragic illness that is not only emotionally but also financially devastating for the patient and the family\(^4\).

**Need for the Study**

Alzheimer’s disease is a progressive irreversible, degenerative neurological disease. This condition begins with gradual decrease in memory, emotional stability and general functioning. The initial symptoms usually appear between the ages of 40-50 years\(^5\).

It is a neurological disorder worldwide with up to 80% of the world population living in epidemic regions. In India incidence rate per 1000 person years of Alzheimer’s disease with
3.24 for those aged >65 and 1.74 for those ages > or 55 years standardized against the age distribution of the 1990 US census. The overall incidence rate in those aged > or = 65 years was 4.7/1000 persons years substantially lower than the corresponding rate 17.5 person years in Monongahela valley[46]. In Andhra Pradesh 2% of people over age 65 have a severe form of this disease, and 6% suffer from mild to moderate dementia, because this is a primary progressive disease, the prognosis is poor[7].

A longitudinal study was conducted to clinically diagnosed Alzheimer’s disease and other demanding illness were assessed in a geographically defined US community of 3623 persons 80(80% of all community residents over 65 years of age) who had brief memory testing in their homes, a stratified sample of 467 persons underwent neurological, neuropsychological an laboratory examination. Prevalence rates of Alzheimer’s disease was estimated as 10.3% (95% confidence limits, 8.1% and 12.5%) had probable Alzheimer’s disease. The prevalence rate was strongly associated with age of those 65 to 74 years old, 3.0% and 5.2) had probable Alzheimer’s disease, compared with 18.7% (95% confidence limits, 13.2 and 24.2) of those over 85 years. Other demanding conditions were uncommon community residents with moderate or severe cognitive impairment, 84.1% had clinically diagnosed Alzheimer’s disease as the only probable diagnosis. The data suggest that clinically diagnosed Alzheimer’s disease is a common[8].

**Problem Statement**

A study to identify the risk for Alzheimer’s disease among geriatric people in Venkatachalam, Nellore.

**Objectives**
- To identify the risk for Alzheimer’s disease among geriatric people.
- To find out association between the risk for Alzheimer’s disease and the selected demographic variables.

**Delimitations**
- Geriatric people living in Venkatachalam Village at Nellore.
- Sample size of 100.

**Methodology**

**Research Approach**
A quantitative approach was adopted to determine the research study.

**Research Design**
The present study was conducted by using descriptive research design

**Setting of the Study**
The study was conducted at rural area in Venkatachalam Village, Nellore.

**Target Population**
The target population for the present study was geriatric people.

**Accessible Population**
The accessible population for the present study was geriatric people in Venkatachalam at Nellore and who fulfilled the inclusion criteria.

**Sample Size**
The samples consists of 100 geriatric people at Venkatachalam.

**Sampling Technique**
Non-probability convenience sampling technique was adapted for the study.

**Criteria for Sampling Selection**

**Inclusion Criteria**
- The geriatric people with the age group of 50-85 yrs.
- Geriatric people living at Venkatachalam Village.
- Geriatric people both male and females.

**Exclusion Criteria**
- Geriatric people who are not available in village at the time of data collection
- Care giver of geriatric people who are not willing to participate in the study.
- Care giver of geriatric people who does not know Telugu.

**Description of the Tool**

**Part-I:** Socio demographic variables such as age, sex, education, occupation, religion, income type of family, sleeping pattern and sleeping hours.

**Part-II:** This consists of observational checklist to assess the risk for Alzheimer’s disease.

**Data Analysis and discussion**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Prevalence of Alzheimer’s disease</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No signs of Alzheimer’s disease</td>
<td>68</td>
<td>68%</td>
</tr>
<tr>
<td>2.</td>
<td>Mild signs of Alzheimer’s disease</td>
<td>21</td>
<td>21%</td>
</tr>
<tr>
<td>3.</td>
<td>Moderate signs of Alzheimer’s disease</td>
<td>11</td>
<td>11%</td>
</tr>
<tr>
<td>4.</td>
<td>Severe signs of Alzheimer’s disease</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 2: Mean and standard deviation of prevalence of Alzheimer’s disease. (N=60)

<table>
<thead>
<tr>
<th>Prevalence of Alzheimer’s disease</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geriatric people</td>
<td>4.45</td>
<td>1.336</td>
</tr>
</tbody>
</table>

Major Findings of the Study

- Among 100 samples, 68 (68%) had no signs, 21 (21%) had mild signs, 11 (11%) have moderate signs and none of them had severe signs of Alzheimer’s disease.
- The mean prevalence rate of Alzheimer’s disease among geriatric people was 4.45 and standard deviation was 1.336.
- Regarding association with demographic variables, age, sex, education, occupation, type of family, sleeping pattern and sleeping hours had significant association with prevalence rate at $P<0.05$ level.

Conclusion

The study concluded that majority of the geriatric people, 68 (68%) had no signs of Alzheimer’s disease.

References

2. Donna Lginalavicius D, Linda Workmon M. Mary A Mishler, Text Book of Medical and Surgical Nursing, 2nd edition copyright by W.B. Jaypee Brothers, Page No. 578-582.