A Pre-Experimental study on the Effectiveness of IEC Package on Knowledge and Attitude regarding Memory Loss among Middle Age Adult (males) of selected Army Area of Annandale, Shimla, 2016-2017

Komal Kumari, Kanchan Bala, Kirti Koundil, Kritika Shama, Preeti Sharma, Mamta, Manju, Neha Guleria and Ritika Soni

Abstract
Memory loss among middle age group is one of the world’s fastest growing diseases and worldwide there are estimated 24 million people living with mild cognitive impairment. There are various common causes of memory loss like aging stress alcoholism, smoking, nutritional deficiencies and lack of sleep. The objective of study was to enhance the knowledge and attitude among middle age adult (males) after administering the IEC package regarding memory loss. Quantitative research approach was used with pre-experimental one group pre-test and post-test design. The sample size for the study was 30 samples. Non-probability convenient sampling technique was used for selection of samples. The result of study showed the pre-test mean of knowledge score was 17.3 and attitude score was 39.66. And post-test mean of knowledge and attitude score was 29.5 and 45.36. Then the comparison of pre test and post test scores was done by using “t” test and the value of knowledge and attitude score was 15.86 and 3.27 which is considered to be significant. So the researchers reject the null hypothesis. The findings of the study showed the main improvement in knowledge and attitude regarding memory loss among middle age adult (males).

Keywords: Effectiveness, Knowledge, Attitude, Memory loss, Middle age adult, IEC Package

Introduction
Memory loss is a common complaint in the primary care setting. It is particularly common among the elderly but also may be reported by younger people. Clinicians and patients are often concerned that the memory loss indicates impending dementia such concern is based on the common knowledge that the first sign of dementia typically is memory loss. Most people experience some worsening of memory with aging. So the prevention of memory loss is essential among elderly. Therefore by providing ICE package to the middle age adult (males) investigators make them aware about early signs of memory loss and increase the knowledge and change attitude about memory loss.

Need of study
“We cannot change our memories, but we can change their meaning & the power they have over us.”

David Seamen

“Memory is the means by which we draw on our past experiences in order to use this information in the past. Memory loss (amnesia) is unusual forgetfulness in which the person not be able to remember new events, recall one or more memories of the past, or both. The memory loss may be for a short time & then resolve (transient) or, it may not go away & depending on the cause, it can get worse over time. The need of this research study for researchers is to provide awareness regarding the memory loss especially in middle age group.
Memory loss mostly occurs in middle age group due to stress, excessive use of alcohol & drugs, smoking, tobacco; sleep deprivation, head injury, nutritional deficiency, & some medical conditions (stroke, HIV). By providing primary health care services & health education to idle aged group, sign & symptoms( confusion, partial & complete memory loss, inability to recognize families faces or places, anxiety, embarrassment ) appeared during amnesia can be eliminated. To increase or upgrade the level of knowledge regarding amnesia & also enhance the knowledge and attitude regarding memory loss among middle age group.

2.4 – 4.5 million people in U.S have Alzheimer's disease According to National institute of aging
So researchers concluded that memory loss is more prone in middle age group (40-65). So this study provides encouragement and awareness to middle aged group to take care of their health and issues. The investigators also found that there is lack of inferential statistics regarding the knowledge & attitude toward memory loss in middle age group.

Objectives
- To assess the existing knowledge level regarding memory loss among Middle Age Adult (males).
- To assess the Attitude level regarding memory loss among Middle Age Adult (males).
- To administer the IEC package regarding memory loss among Middle Age Adult (males).
- To evaluate the effectiveness of IEC package regarding memory loss among Middle Age Adult (males).
- To assess & compare the pre-test, post-test knowledge & attitude score regarding memory loss among Middle Age Adult (males).

Research methodology
Research approach
Quantitative Research Approach was applied for present study.

Research design
Research design selected for the study was pre experimental-one group pre- test post-test design. This study fulfills the criteria such as only manipulation, no control group and there is no randomization. Sample was selected by non-probability convenience sampling technique.

<table>
<thead>
<tr>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
</tbody>
</table>

O₁: Assess the existing level of knowledge and attitude regarding memory loss.
X: IEC package regarding memory loss.
O₂: Assess the post-test level of knowledge and attitude regarding memory loss.

Setting of the study
Annandale, a historic playground, is a favorite spot for cricket and the princely game of polo. Located at a distance of 4 kilometers from the Ridge, the playground and race-course is positioned in a deep wide valley of the suburban village called Kaithu. This village lies in the west region of Shimla.

Standing at a height of 6,117 feet above sea level, the round playground on a small patch of table-land is spread over a circumference of three-quarters of a mile. Captain Charles Pratt Kennedy, one of the first incomers to the place, named it Annandale, which is nowadays misspelt as Annandale.

Since the 1830s, Annandale has been an important center of Anglo-Indian playful activities, amusement and entertainment. Tourists visit the place for picnic parties, fêtes, birthday-balls, fancy-fairs flower, races and polo matches. The polo tournament at the playground was the annual feature, which was eventually shifted to Kolkata.

Moreover, Lord William Beresford, the Military Secretary to Lord Dufferin expanded the ground to feature a pavilion for cricketers and a polo field for polo players. At present, the playground hosts army exercise and parades, sports and Dussehra festival celebrations. Besides, the field is utilized as one of the heliports in the city.

Study population
Army middle age adult (males) of Annandale Shimla include: Middle age adult (males) i.e. 30 people.

Sample population
Army Middle Age Adult (males), Annandale, Shimla.

Sample size
30 Middle Age Adult (Males)

Sampling technique
The non-probability convenience sampling technique was used for data collection.

Development and description of tools
With the extensive review of literature and discussion with the experts and with the investigator personal and professional experience a structured knowledge questionnaires regarding memory loss was developed to assess the effectiveness of the IEC package on Knowledge and attitude regarding memory loss. The tools for the data collection consist of three sections.

Section A
This section deals with demographic variables like Age, gender, marital status, religion, education status, occupation status, family monthly income, type of family, residential type, previous exposure about awareness regarding memory loss.

Section B
Structured questionnaires to assess the knowledge among middle age adult (males) regarding memory loss. Total 40 questions were formulated.

Interpretation of Scoring key
Total questions: 40

<table>
<thead>
<tr>
<th>S.no</th>
<th>Score</th>
<th>Level of knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28-40</td>
<td>Adequate knowledge</td>
</tr>
<tr>
<td>2</td>
<td>10-28</td>
<td>Moderate knowledge</td>
</tr>
<tr>
<td>3</td>
<td>&lt;10</td>
<td>Inadequate knowledge</td>
</tr>
</tbody>
</table>

Section C
Likert’s scale regarding memory loss to assess the level of attitude among middle age adult (males).
Total Statements: 20
1-12: Positive statements (Disagree - 1, Uncertain - 2, Agree -3)
13-20: Negative statement (Disagree -3, Uncertain - 2, Agree -1)
Total score: 60
Maximum score is about 60 marks and minimum score is 20 marks.

Interpretation of score
The total score is interpreted as

<table>
<thead>
<tr>
<th>S. No</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Favorable Attitude</td>
<td>48-60</td>
</tr>
<tr>
<td>2</td>
<td>Moderately Favorable Attitude</td>
<td>36-47</td>
</tr>
<tr>
<td>3</td>
<td>Unfavorable Attitude</td>
<td>24-35</td>
</tr>
</tbody>
</table>

Section D After an extensive review of literature and discussion with psychologist, the IEC Package on memory loss was prepared.
‘The IEC Package’ was developed by the investigator.

AIMS
To improve the knowledge regarding memory loss and to change the attitude of middle age adult regarding memory loss.

Philosophy
The philosophy underlying IEC adds value to the process of learning, organization and management of certain situations. There are several benefits of IEC package such as, empower people to make decision, modified behavior, change social condition.

Objectives
- To assess the knowledge regarding memory loss among middle age adult (male).
- To educate the middle age adult (male) regarding memory loss.
- To evaluate the effectiveness of IEC package among middle age adult (male).

Data collection procedure
Investigators had collected data in 2 sections i.e. pre-test and post-test. Before data collection formal written permission was taken from Commanding officers of Raavi Terriers of Annandale Shimla. The investigators personally met the Commanding Officer and explain about the study to ensure Maximum Corporation.
Self-introduction and introduction regarding research study was given to middle age adult (males) of army area Annandale Shimla. The purpose of study was explain to the study subjects and was assured about the confidentiality of responses. Pre-test was conducted on 27.06.2017. Among middle age adult (males). After conducting pre-test, knowledge was provided to the Army middle age adult (males) through IEC package. After giving teaching, the post test was taken on 29.06.2017 in order to assess the effectiveness of IEC package in enhancing knowledge and attitude among middle age adult (males) regarding memory loss. After that the analysis was done by using descriptive and inferential statistics.

Ethical consideration
- Written permission was obtained from the head of nursing college.
- Written permission was obtained from the commanding officer.
- The purpose and details of the study was explained to the subjects.
- Assurance was given regarding the confidently of the data collected.
- Verbal consent was taken from the study subject.

Plan of data analysis
Data collection will be analysed by using both descriptive and inferential statistics.

Descriptive statistics
1. Frequency and percentage distribution will be used to analyse the demographic variables of the middle age adults (males).
2. Mean and standard deviation will be used to assess the effectiveness of pre-test and post-test in middle age adults (males).

Inferential statistics
Paired ‘t’ test will be used to analyse the difference between pre and post-test level of knowledge and attitude level among middle age adults (males).

Result
a) To assess the pre-test level of knowledge
The pre-test score was 17.3 and it revealed a majority of 0(0%) had adequate knowledge regarding memory loss, a majority of 29 (96%) had moderate knowledge regarding memory loss, a majority of 1(3%) had inadequate knowledge regarding memory loss.

Table 1: Depicts frequency and percentage distribution of pre-test knowledge score among middle age adult (males), N=30

<table>
<thead>
<tr>
<th>S. No</th>
<th>Knowledge Score</th>
<th>No</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Adequate</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Moderate</td>
<td>29</td>
<td>96%</td>
</tr>
<tr>
<td>3.</td>
<td>Inadequate</td>
<td>1</td>
<td>3%</td>
</tr>
</tbody>
</table>

Fig 1: Frequency and distribution of study subjects as per pre-test knowledge score.

b) To assess the post-test level of knowledge
The post-test score was 29.3 and it revealed that a majority of 20(66%) had adequate knowledge regarding memory loss, a majority of 10 (33%) had moderate knowledge regarding memory loss, a majority of 0(0%) had inadequate knowledge regarding memory loss.

Table 1: Depicts frequency and percentage distribution of pre-test knowledge score among middle age adult (males), N=30

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<tbody>
<tr>
<td>1.</td>
<td>Adequate</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Moderate</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Inadequate</td>
<td>1</td>
<td>3%</td>
</tr>
</tbody>
</table>

Fig 1: Frequency and distribution of study subjects as per pre-test knowledge score.
Table 2: Depicts frequency and percentage distribution of post-test knowledge score among middle age adult (males), N=30

<table>
<thead>
<tr>
<th>S. No</th>
<th>Knowledge score</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adequate</td>
<td>20</td>
<td>66%</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
<td>10</td>
<td>33%</td>
</tr>
<tr>
<td>3</td>
<td>Inadequate</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Fig 2: Frequency and distribution of study subjects as per post-test knowledge score.

c) To compare the pre-test and post-test knowledge score
After conducting pre-test and post-test there is significantly improvement in the result. The pre-test score was 17.3 and post-test score was 29.3. The knowledge among middle age adult (males) is significantly improved to some extent regarding memory loss.

Table 3: Depicts comparison of the pre-test and post-test knowledge score on the effectiveness of IEC package, N=30

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>S.D</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>17.3</td>
<td>3.11</td>
<td>15.86</td>
</tr>
<tr>
<td>Post-test</td>
<td>29.3</td>
<td>3.28</td>
<td></td>
</tr>
</tbody>
</table>

***p< 0.05, S - Significant

d) To assess the pre-test level of attitude score
The pre-test score was 39.66 and it revealed a majority of 2 (6.66%) had favorable attitude regarding memory loss, a majority of 22 (73.33%) had moderately favorable attitude regarding memory loss, a majority of 6 (20%) had unfavorable attitude regarding memory loss.

Table 4: Depicts frequency and percentage distribution of pre-test attitude score among middle age adult (males), N=30

<table>
<thead>
<tr>
<th>S. No</th>
<th>Level Of Attitude</th>
<th>Score</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Favorable Attitude</td>
<td>48-60</td>
<td>2</td>
<td>6.66%</td>
</tr>
<tr>
<td>2</td>
<td>Moderately Favorable Attitude</td>
<td>36-47</td>
<td>22</td>
<td>73.33%</td>
</tr>
<tr>
<td>3</td>
<td>Unfavorable Attitude</td>
<td>24-35</td>
<td>6</td>
<td>20%</td>
</tr>
</tbody>
</table>

Fig 3: Frequency and percentage distribution of study subjects as per pre-test attitude score.

Table 5: Depicts frequency and percentage distribution of post-test attitude score among middle age adult (males), N=30

<table>
<thead>
<tr>
<th>S. No</th>
<th>Level Of Attitude</th>
<th>Score</th>
<th>No.</th>
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<tr>
<td>1</td>
<td>Favorable Attitude</td>
<td>48-60</td>
<td>10</td>
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<td>2</td>
<td>Moderately Favorable Attitude</td>
<td>36-47</td>
<td>20</td>
<td>66.66%</td>
</tr>
<tr>
<td>3</td>
<td>Unfavorable Attitude</td>
<td>24-35</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Fig 4: Frequency and percentage distribution of study subjects as per post-test attitude score.

e) To assess the post-test level of attitude score
The post test score was 45.36 and it revealed a majority of 10 (33.33%) had favorable attitude regarding memory loss, a majority of 20 (66.66%) had moderately favorable attitude regarding memory loss, a majority of 0 (0%) had unfavorable attitude regarding memory loss.

Table 6: Depicts comparison of the pre-test & post-test attitude score on the effectiveness of IEC package, N=30

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>S.D</th>
<th>‘T’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>39.66</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>Post-Test</td>
<td>45.36</td>
<td>3.46</td>
<td>3.27</td>
</tr>
</tbody>
</table>

***p<0.05, S – Significant

Discussion
This chapter is concentrating on the findings derived from the statistical analysis. The objectives of study were

a) To assess the pre-test level of knowledge
The pre-test score was 17.3 and it revealed a majority of 0(0%) had adequate knowledge regarding memory loss, a majority of 29 (96%) had moderate knowledge regarding memory loss, a majority of 1(3%) had inadequate knowledge regarding memory loss.

b) To assess the post-test level of knowledge
The post-test score was 29.3 and it revealed that a majority of 20(66%) had adequate knowledge regarding memory loss, a majority of 10 (33%) had moderate knowledge regarding memory loss, a majority of (0%) had inadequate knowledge regarding memory loss.
c) To compare the pre-test and post-test knowledge score
After conducting pre-test and post-test there is significantly improvement in the result. The pre-test score was 17.3 and post-test score was 29.3. The knowledge among middle age adult (males) is significantly improved to some extent regarding memory loss.

The present study finding is supported by Mahoney.DF. (2002) who conducted a study regarding to evaluate the effectiveness of C.D-ROM based multimedia programme on knowledge regarding memory loss in adult. This study concluded that the multimedia CD-ROM programme provides an effective means of teaching older adult about memory loss.

A study conducted by Braul L Kathryn et al (1993) to developing and testing the effect of outreach materials on Alzheimer’s disease for Asian and Pacific Islander Americans. Aim of study was to assess the effectiveness of the teaching aids on improving knowledge regarding Alzheimer’s disease. The sample size was 80 older adult. Native language videos and brochures regarding specific perception of dementia were developed and tested. Findings for the study suggested that these tools were appropriate and when used in combination with discussion helped to increase the awareness and knowledge of Alzheimer’s disease.

d) To assess the pre-test level of attitude score
The pre-test score was 39.66 and it revealed a majority of 2 (6.66%) had favorable attitude regarding memory loss, a majority of 22 (73.33%) had moderately favorable attitude regarding memory loss, a majority of 6 (20%) had unfavorable attitude regarding memory loss.

e) To assess the post-test level of attitude score
The post test score was 45.36 and it revealed a majority of 10 (33.33%) had favorable attitude regarding memory loss, a majority of 20 (66.66%) had moderately favorable attitude regarding memory loss, a majority of 0 (0%) had unfavorable attitude regarding memory loss.

f) To compare the pre-test and post-test knowledge score
After conducting pre-test and post-test there significantly improvement in the result. The pretest score was39.66 and post test score was 45.36. The attitude of middle age adult (males) is significantly improved to some extent regarding memory loss.

The present study finding is supported by Anderson (2009) who conducted descriptive study regarding knowledge and attitude about Alzheimer’s disease among the adult in U.S. The study sample was 1324 adult. The study concluded that adult having lack of knowledge and attitude regarding the memory loss.

A study conducted b V. Khonje, C. Milligan et al (4, June, 2015) descriptive cross-used section study on attitude about dementia in division of Geriatric Medicine, Department of Medicine, University of Cape Town, and Cape Town, South Africa. The study sample size was 100 individuals surveyed door-to-door. The study was using cluster random sampling methods. The study showed that attitude about dementia was limited with no relationship to attitudes of high tolerance toward people with dementia.

Conclusion
The conclusion of the study revealed that there was a significant improvement in the knowledge and attitude among middle age adult (males) after providing the IEC package.

Acknowledgement
Words are often too less to reveal ones deep regards. An understanding of the work like this is never the outcome of the efforts of single person. I take this opportunity to express my profound sense of gratitude and respect to all those who helped me to complete this thesis successfully.

We indebted to our parents whose great support and blessing encourage us to perform better in each and every field. Their humble and motivating were always there to boost up.

We would like to express our Guide/Advisor Ms. Ritika Soni (H.O.D. of psychiatry) whose zealus interest, sustained availability, timely support and expert guidance made it possible for us to pursue and complete this study.

We wish to acknowledge our Principal mam, entire Teaching and non-teaching staff, who willingly gave their valuable time and constructive criticism throughout the research project.

We would like to thanks Commanding Officer Kernal Rajesh Sharma, of army area of Annandale, Shimla. And also thanks to Major Mr. Harpreet Singh who gives us permission to conduct research.

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