"THE EFFECT OF PLAYING BINGO GAME IN THE COGNITIVE LEVEL OF THE ELDERLY WITH DEMENTIA"

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INTRODUCTION

World Health Organization

47.5 Million

47.5 million people have dementia

7.7 Million

7.7 million new cases every year

2050

This number is expected to triple by 2050
A research done at the Centre for Visual Cognition at Southampton University’s Psychology Department stated that playing bingo could help to enhance the speed and memory of the human brain. Since most Filipino people are fond in playing bingo, the researchers wanted to determine the effectiveness of bingo game in the cognitive level of elderly people.
CONCEPTUAL FRAMEWORK

- Enhancing the cognitive level of elderly with dementia
- Increase the cognitive level of demented patient in memory, thinking, orientation, comprehension, language and command.
- Assessing patient knowledge using ADAS tool
- Enhancing memory through playing Bingo games.
This study will determine the effect of playing bingo games in the cognitive level of older persons with dementia.

Specifically, this will answer the following specific problems:

- What were the profile of the patients according to:
  1.1 Age
  1.2 Educational Attainment

- What is the status of client during the pre and post treatment according to:
  2.1 Memory
  2.2 Thinking
  2.3 Orientation
  2.4 Comprehension
  2.5 Language
  2.6 Command
STATEMENT OF THE PROBLEM

- What is the difference in the status of the clients during the pre and post treatments phase according to:
  3.1 Memory
  3.2 Thinking
  3.3 Orientation
  3.4 Comprehension
  3.5 Language
  3.6 Command

- What is the comparison in the status of the clients during the post treatments according to:
  4.1 Memory
  4.2 Thinking
  4.3 Orientation
  4.4 Comprehension
  4.5 Language
  4.6 Command

- What is the effect of playing bingo games in the cognitive level of older persons with dementia?
METHODOLOGY

RESEARCH DESIGN: Quasi-Experimental Design

SAMPLING DESIGN: Purposive sampling

INCLUSION CRITERIA: The criteria were elderly individuals diagnosed with dementia, willing to participate and not in critical condition.

ETHICAL APPROVAL: Centro Escolar University Institutional Ethical Review Board
RESEARCH INSTRUMENTS

BINGO SET & ALZHEIMER’S DISEASE ASSESSMENT SCALE (ADAS) TOOL
STATISTICAL TREATMENT

MEAN AND FREQUENCY DISTRIBUTION

FRIEDMAN TEST

WILCOXON -SIGNED RANK TEST
Status of the respondents during the pre and post treatments according to memory

<table>
<thead>
<tr>
<th>Test</th>
<th>Pre test</th>
<th>Post test 1</th>
<th>Post test 2</th>
<th>Post test 3</th>
<th>Post test 4</th>
<th>Post test 5</th>
<th>Post test 6</th>
<th>Post test 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>3.33</td>
<td>4.67</td>
<td>5.56</td>
<td>4.78</td>
<td>5.78</td>
<td>7.11</td>
<td>6.67</td>
<td>6.44</td>
</tr>
</tbody>
</table>

Memory: Good, Moderate, Moderate, Very good, Very good, Very good, Very good, Very good.
Status of the respondents during the pre and post treatments according to thinking

<table>
<thead>
<tr>
<th></th>
<th>Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre test</td>
<td>11.89</td>
</tr>
<tr>
<td>Post test 1</td>
<td>13.22</td>
</tr>
<tr>
<td>Post test 2</td>
<td>14</td>
</tr>
<tr>
<td>Post test 3</td>
<td>14.89</td>
</tr>
<tr>
<td>Post test 4</td>
<td>14.11</td>
</tr>
<tr>
<td>Post test 5</td>
<td>14.33</td>
</tr>
<tr>
<td>Post test 6</td>
<td>15</td>
</tr>
<tr>
<td>Post test 7</td>
<td>14.67</td>
</tr>
</tbody>
</table>

Thinking:
- Very good
- Moderate
Status of the respondents during the pre and post treatments according to orientation

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Pre test</th>
<th>Post test 1</th>
<th>Post test 2</th>
<th>Post test 3</th>
<th>Post test 4</th>
<th>Post test 5</th>
<th>Post test 6</th>
<th>Post test 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>5.78</td>
<td>6.22</td>
<td>6.44</td>
<td>6.89</td>
<td>7</td>
<td>7.56</td>
<td>7.44</td>
<td>7.56</td>
</tr>
</tbody>
</table>
Status of the respondents during the pre and post treatments according to comprehension

<table>
<thead>
<tr>
<th></th>
<th>Pre test</th>
<th>Post test 1</th>
<th>Post test 2</th>
<th>Post test 3</th>
<th>Post test 4</th>
<th>Post test 5</th>
<th>Post test 6</th>
<th>Post test 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension</td>
<td>0.11</td>
<td>0.33</td>
<td>0.67</td>
<td>0.44</td>
<td>0.44</td>
<td>0.33</td>
<td>0.22</td>
<td>0</td>
</tr>
</tbody>
</table>

Excellent
Status of the respondents during the pre and post treatments according to language

<table>
<thead>
<tr>
<th></th>
<th>Pre test</th>
<th>Post test 1</th>
<th>Post test 2</th>
<th>Post test 3</th>
<th>Post test 4</th>
<th>Post test 5</th>
<th>Post test 6</th>
<th>Post test 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>0.44</td>
<td>1.11</td>
<td>0.78</td>
<td>0.67</td>
<td>0.56</td>
<td>0.44</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Status of the respondents during the pre and post treatments according to command

<table>
<thead>
<tr>
<th>Command</th>
<th>Pre test</th>
<th>Post test 1</th>
<th>Post test 2</th>
<th>Post test 3</th>
<th>Post test 4</th>
<th>Post test 5</th>
<th>Post test 6</th>
<th>Post test 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>3.78</td>
<td>4.44</td>
<td>4.56</td>
<td>4.67</td>
<td>4.89</td>
<td>4.89</td>
<td>4.56</td>
<td>4.89</td>
</tr>
<tr>
<td>Variable</td>
<td>Test on means</td>
<td>p–value</td>
<td>Significantly different at 5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------------------</td>
<td>---------</td>
<td>------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>Friedman Test Wilcoxon Signed Rank Test</td>
<td>0.000</td>
<td>Significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinking</td>
<td>Friedman Test Wilcoxon Signed Rank Test</td>
<td>0.000</td>
<td>Significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>Friedman Test Wilcoxon Signed Rank Test</td>
<td>0.003</td>
<td>Significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>Friedman Test Wilcoxon Signed Rank Test</td>
<td>0.157</td>
<td>Not Significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>Friedman Test Wilcoxon Signed Rank Test</td>
<td>0.002</td>
<td>Significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Command</td>
<td>Friedman Test Wilcoxon Signed Rank Test</td>
<td>0.000</td>
<td>Significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There is significant difference in the status of the respondents in memory, thinking, orientation, language and command between pre and post tests and between post tests (1–7). On the other hand, there is no significant difference in the status of the respondents in comprehension.
There is a significant difference in the status of the respondents in memory, thinking, orientation, language and command between pre and post tests and between post tests (1–7).

There is no significant difference in the status of the respondents in comprehension.

Researchers conclude that playing bingo games is effective in the improvement of the cognitive level of the elderly individual with dementia.
Acknowledgment

Centro Escolar University
Daughters of St. Paul
Thank You for Listening!
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