

EFFECTIVENESS OF BRAIN GYM EXERCISES ON DEMENTIA AMONG ELDERLY POPULATION

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ABSTRACT

Background of the Study: The brain gym exercise helps in improving cognition, memory loss & concentration. It shows effectiveness in dementia in the cognition impairment. This article was based on the effect of brain gym on the dementia and depression reduction of the elderly. Journal of year 2021, advanced pharmacy education and research. The publication is SPER publications and solution pvt. ltd. **Aim & Objective of the Study:** Aim of the study was to assess the effectiveness of Brain Gym exercises on dementia among elderly population. **Methodology:** This study consists of 30 samples who were divided into 2 groups, Group A consisting of 15 samples group B with 15 samples. Brain Gym exercises were given to group A (Experimental Group) and Breathing exercise was given to group B (Control Group) for the duration of 4 weeks. **Outcome Measures:** MMSE. **Result:** The pre and posttest values were measured using statistical analysis. **Conclusion:** Brain gym exercises was effective on dementia among the elderly population.

KEYWORDS: Braingym, Breathingexercise, Group, Dementia, MMSE.

INTRODUCTION

Worldwide around 50 million people live with dementia, and this number is projected to increase to 152 million by 2050,1 rising particularly in low-income and middle-income countries (LMIC) where around two-thirds of people with

dementia live. Dementia affects individuals, their families and the economy with global costs estimated at about US \$1trillion annually.^[1] One effort to inhibit cognitive decline due to aging and as a form of stimulation to improve brain ability is with exercise or Brain Gym Exercise.^[10-12] Brain Gym is a series of simple motion exercises and is an alternative therapy that aims to facilitate the flow of blood and oxygen to the brain and stimulate both hemispheres to work Denisson in.^[13]

AIM OF THE STUDY

Aim of the study was to assess the effectiveness of Brain Gym exercises on dementia among elderly population.

RESEARCH DESIGN AND METHODOLOGY

An experimental study design was conducted with 30 patients within the age group of 50 to 70 years who fulfilled the inclusion and exclusion criteria.

Inclusion Criteria

- 50-70 years of age
- Willing to participate
- Dementia patients
- Both male and female included

Exclusion Criteria

- Severe cognitive disorders that would interfere with study purpose (MMSE < 23/30)
- Non-cooperative patients
- Trauma
- Age below 40yrs

OUTCOME MEASURE: MMSE (Mini-Mental State Examination)

Procedure

The total 30 samples, who fulfilled the inclusion and exclusion criteria were recruited for the study. Written informed consent was obtained from the samples. The procedure were explained to the samples, they were divided into two groups namely GROUP A (Experimental Group)-15 samples and GROUP B (Control Group)-15 samples. Brain Gym exercises were given for the 15 samples (group A) and the Breathing Exercises were given for the 15 samples of (group B) for a duration of 45min per day for 5 days per week for a period of 4 weeks.

1) Marching in Place

Instructions are given as follows:

- Stand straight with your legs hip-width apart, shoulders rolled back, chest up and look ahead.
- Lift your right leg and bend your right knee slightly. Place your right leg softly on the floor.
- Lift your left leg and bend your left knees lightly. Place your left legs of on the floor.
- Do this 30 times. You can use a chair if you find it difficult to march without support.

2) Cross Crawl

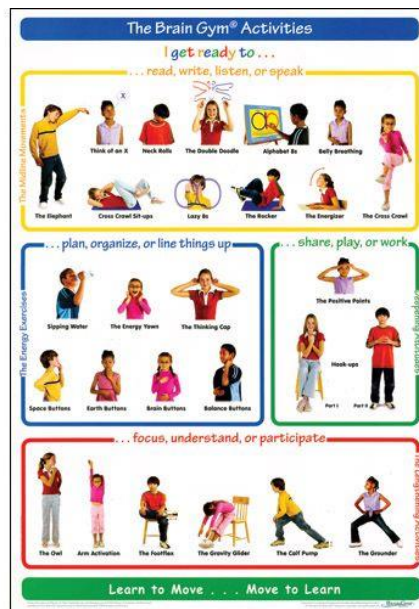
- Stand straight with your legs hip-width apart, shoulders rolled back and chest up. Look ahead.
- Lift your right hand above your head. This is your starting position.
- Lift your left leg off the floor and bend your left knee.
- Simultaneously, bend your right elbow and try to touch the left knee with your right elbow.
- Get back to the starting position. Do the same with your left hand and right leg.
- Do three sets with eight repetitions.

3) Neck Circles

- Stand or sit on a chair and close your eyes. Roll your shoulders back.
- Lower your head and tilt it to the right side.
- Roll your neck from the right to the back, from the back to the left, and then down in the centre. This completes one neck circle.
- Repeat 10 of these before doing the same on the left side.

4) Lazy Eights

- Draw a big infinity symbol on a whiteboard.
- Trace it 20-30 times.
- Fix your eyes on the tip of the marker and trace it with your eyes while drawing the lateral '8' or infinity symbol.
- Breathe. Close your eyes and relax.

**5) Positive Points**

- Gently touch the points above the eyes, halfway between the eyebrows and the hairline using your fingertips.
- Close your eyes.
- Breathe deeply and slowly for 10 seconds. Think of whatever is bothering you.
- Repeat this three times.

6) DOUBLE DOODLE

- Sit in a comfortable position and take a few deep breaths to calm your mind and body.
- Get paper and drawing tools like markers or colour pencils.
- Hold a pen or pencil in each hand.
- Create various shapes, lines and patterns using both hands, mirroring each other's movements.
- Once you have created some basic shapes, start filling them with colours.
- You can go with a colour scheme or just use your imagination.

7) HOOKUPS

- Find a comfortable seated or lying position.
- Cross your right ankle over your left ankle.
- Extend your arms in front of you and cross your right wrist over your left wrist, so your palms are facing each other.
- Interlace your fingers and then bring your hands towards your chest until they touch.
- Gently press your palms together while keeping your fingers interlaced.
- Relax your shoulders and breathe deeply and slowly.
- Focus on your breath and the sensations in your body for few minutes.
- Release the position slowly and return to a relaxed state.

8) THE ELEPHANT

- Stand straight. Keep one hand behind you and extend the other above your head such that your upper arm touches your ear and head.
- Bend your knees and extend your right hand in front of you.
- Trace a horizontal '8' or infinity symbol with your extended arm. Move your upper body and eyes while doing so.
- Do this 3-5 times.
- Repeat with the other hand.

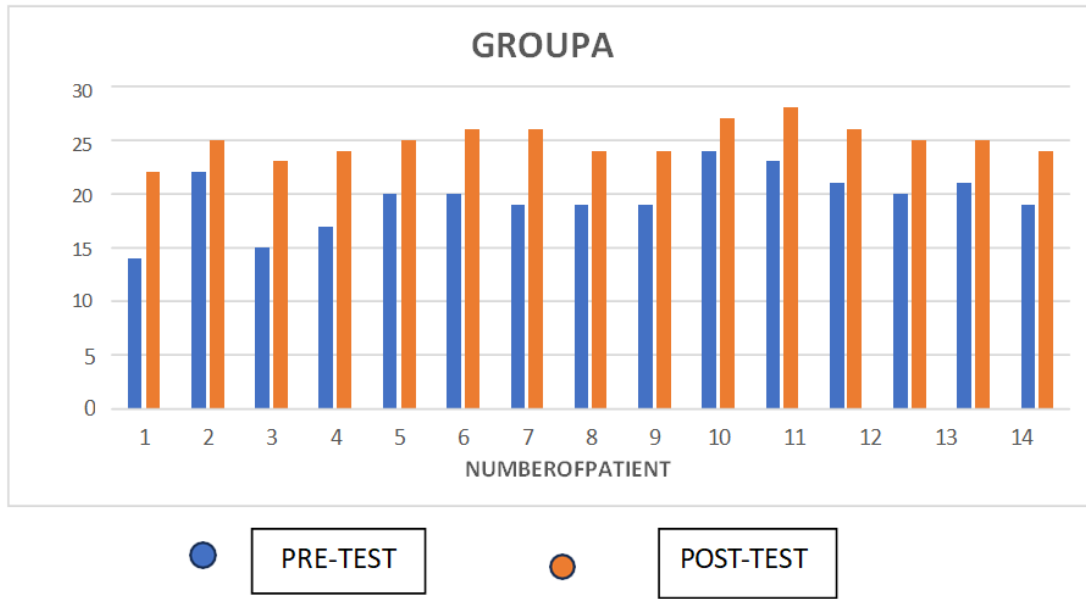
DATAANALYSIS

The collected data were tabulated and analyzed.

Group A: (Experimental Group-Brain Gym Exercise)

Table 1: Group–A (Experimental Group).

Group A		MMSE (Mini- Mentalstate Evaluation)
Pre-test	Post-test	
19.53	24.93	Mean
2.70	1.53	SD

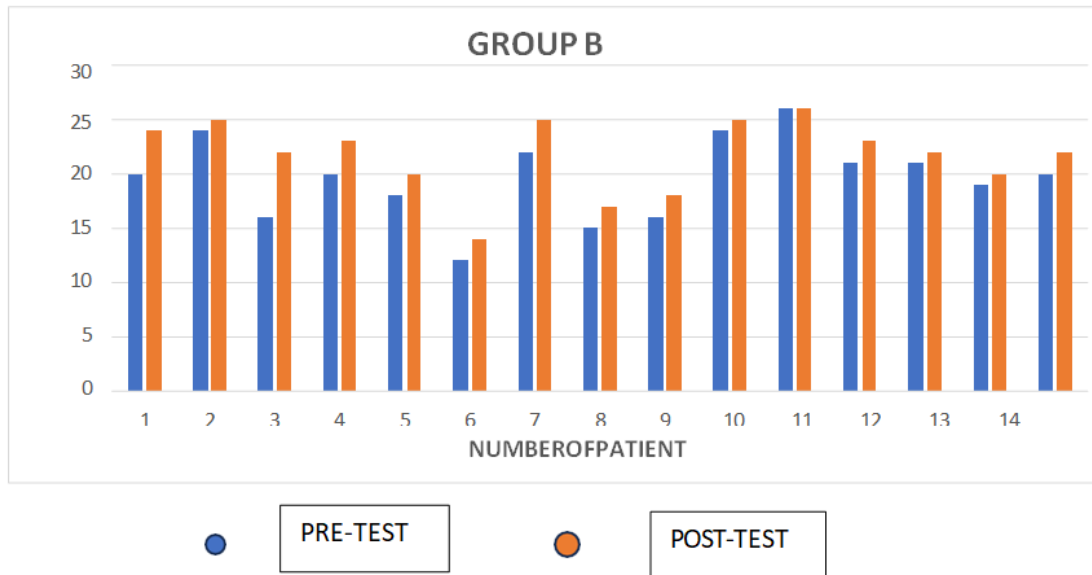


Graph No. 1: Group A.

Group B: (Control group – breathing exercise)

Table 2: Group B (Control group).

Group B		MMSE (Mini-Mental State Examination)
Pre-test	Post-test	
19.60	21.73	MEAN
3.76	3.39	SD

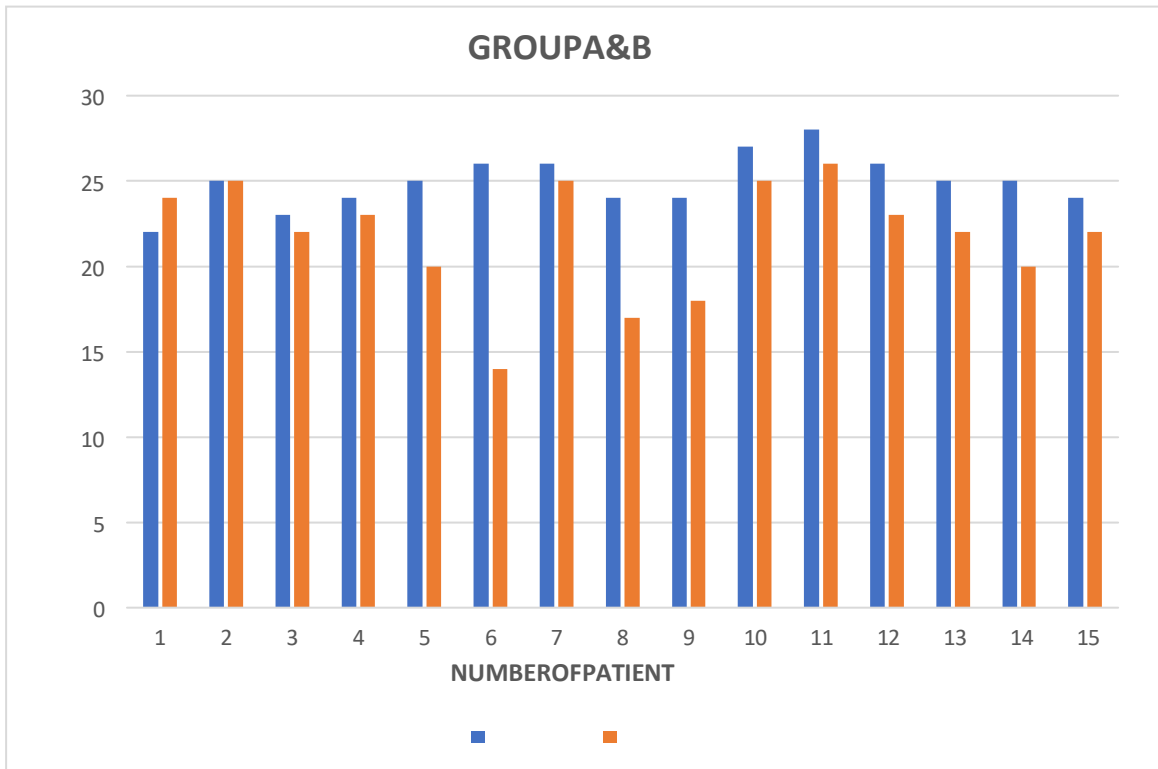


Graph No. 2: Group B (Control Group).

Group–A (Experimental Group) vs Group–B (Control Group)

Table 3: Group A & B.

Post-Test		MMSE (Mini – Mental State Examination)
Group A (Experimental Group)	Group B (Control Group)	
24.93	21.73	MEAN
1.53	3.39	SD



Graph No. 3: Group A & B.

RESULT

In Table 1, In Group A (experimental group) the mean values of pre-test (19.60) and post- test (24.93), showed highly significant improvement in the post-test.

In Table 2, In Group B (control group) the mean values of pretest (19.60) and post- test (21.73) showed highly significant improvement in the post-test.

In Table 3, On comparison of both the post-test (24.93) value of Group A and the post-test (21.73) value of Group B, it showed highly significant improvement in the post-test of Group A.

DISCUSSION

The study was conducted for 30 samples, where the Group A (Experimental Group) was given brain gym exercises and Group B (Control Group) was given breathing exercise. The post-test values of the Group A and B were significantly different, according to data collected. Despite the fact that both groups improved statistically, group A was more significant than Group B which showed that Brain gym exercises was effective on dementia among elderly population.

CONCLUSION

The study concluded that the brain gym exercise was more effective on dementia among elderly population.

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