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EFFECTS OF BRAINGYM EXERCISES VERSUS SUPER BRAIN YOGA ON COGNITION AMONG COLLEGE STUDENTS

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ABSTRACT

Background of the study: Cognition is a term for the mental processes that take place in the brain which include attention, memory, concentration, imagination, and creativity. According to Dr. Shamla Pazare, Brain Gym Exercises improves cognition. It stimulates specific brain pathways and promotes neural adaptation and reorganization. Super Brain Yoga has emerged as a promising complementary therapy for improving mental health and cognitive function. **Aim of the study**: The aim of the study was to compare the effects of brain gym exercises versus super brain yoga on cognition among college students. **Objective of the study**

- To assess the effects of brain gym exercises on cognition among college students.
- To assess the effects of Super brain yoga on cognition among college students
- To compare the effects of brain gym exercises versus Super brain yoga on cognition among college students.

Methodology: This study consists of 30 samples of age 18-23 years who were separated into two groups. Group A consisting of 15 subjects and Group B with 15 subjects. Brain gym exercises was given to Group A for a period of six weeks, 45 minutes per day for 5 days a week. Super Brain Yoga was given to Group B for 3 sets of 21 repetitions per day for 5 days a week for a period of six weeks. **Outcome measures**: Mindful Attention Awareness Scale (MAAS) and the concentration questionnaire. **Result:** The results were statistically analysed

based on the pre-test and post-test values of MAAS and Concentration questionnaire. **Conclusion:** Brain gym exercise showed a significant improvement on Cognition among college students.

KEYWORDS: Cognition, Brain Gym, Super Brain Yoga, Attention, concentration.

INTRODUCTION

Cognition refers to the mental activities occurring within the brain, encompassing processes such as thinking, attention, language, learning, memory, and perception. These processes are not isolated capabilities; rather, they represent a complex interplay of various skills that collectively enable us to operate effectively as well-adjusted adults (Module in Biomedical Sciences M.G. Mehedint, A. Gulledge). Cognition is managed by specific brain circuits supported by various neurotransmitter systems. Some studies outline that sleep, exercise, nutrition, lack of stress management, health issues, lifestyle choices, and outside influences like background noise[5] affect the brain's cognitive and executive functions.[4] Some signs of cognitive impairment are the memory issues, challenges in recalling information, such as recent occurrences or well- known details, issues with Attention and concentration, challenges in maintaining focus, staying attentive, or adhering to directions, lack of awareness to environment.

The term "**Brain Gym**" refers to a series of workouts that impact the attention and memory regions. Brain gym exercises can significantly improve the cognitive function of the adults. Enhancing learning through mind-body activities was the original goal of Brain Gym exercises [2]. Brain gym exercise increases the blood flow to the brain. Exercise at the brain gym can help enhance neurological processes, making certain parts of the brain more accessible and well-connected for any activity. Individuals will experience a sense of improved well-being due to lower stress levels and enhanced learning and work effectiveness through brain gym.[2]

Super Brain Yoga is an encouraging complementary therapy aimed at enhancing mental health and cognitive abilities. It combines physical movements with specific breathing techniques. It is thought to enhance mental clarity, memory, and focus. Repetitive movements, breath control, and the crossing of body parts promote neuroplasticity by activating both hemispheres of the brain. This practice combines elements of Chinese acupuncture and Indian Ayurveda, positing that the earlobes contain all our life energy linked to the head. It enhances the brain’s function by channeling energy from the lower body to the

higher centres, improving thought processes, focus, and the coordination of alpha waves in the brain. This technique increases intelligence and creativity, allowing the brain to operate more effectively.[1]

AIM OF THE STUDY: The aim of the study was to compare the effects of brain gym exercises versus super brain yoga on cognition among college students.

OBJECTIVES OF THE STUDY

- To assess the effects of brain gym exercises on cognition among college students
- To assess the effects of Super brain yoga on cognition among college going students.
- To compare the effects of brain gym exercises versus Super brain yoga on cognition among college going students

RESEARCH DESIGN AND METHODOLOGY

An experimental study design was conducted with 30 samples within the age group ranging between 18 and 23 years who fulfilled the inclusion and exclusion criteria.

INCLUSION CRITERIA

- Age group 18-23
- Mild cognitive impairment
- Inattentive people
- Low physical activity
- Poor memory

EXCLUSION CRITERIA

- Hearing problems
- Visual impairments
- Psychiatric problems
- H/O regular medication
- Neurological deficit

OUTCOME MEASURES

- Mindful Attention Awareness Scale (MAAS)
- Concentration Questionnaire

PROCEDURE

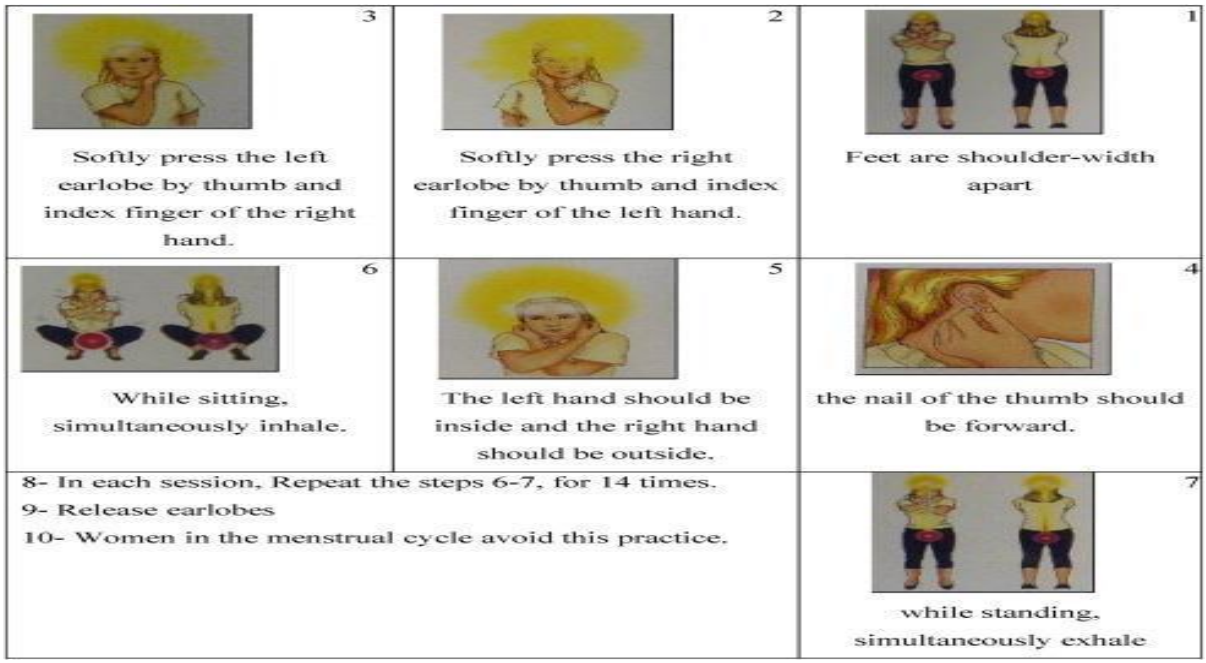
The total 30 samples who fulfilled the inclusion and exclusion criteria were recruited for the study. Written informed consent was obtained from the samples. The procedures were explained to the samples, they were divided into two groups namely group A -15 samples (Brain gym exercise) and group B -15 samples (Super Brain Yoga).Brain gym exercise was given to Group A for a period of six weeks, 45 minutes per day for 5 days a week. Super Brain Yoga was given to Group B for 3 sets of 21 repetitions per day for 5 days a week for a period of six weeks.

INTERVENTION

GROUP A BRAIN GYM EXERCISES

- Marching at place
- Cross crawl
- Thinking caps
- Cooks hooks up
- Brain buttons
- Lazy eight
- Doodle Doodle
- Neck circles

Group-B (Super Brain Yoga)



Super brain yoga

DATA ANALYSIS AND INTERPRETATION

GROUP A- Table 1: Comparison of Pre and post-test values of Group-A MAAS-Scale.

Group-A MAAS Scale	MEAN		SD		t-value	p-value
	Pretest	Post test	Pretest	Post test		
	2.2867	4.9107	0.5330	0.3005	26.4874	0.0001

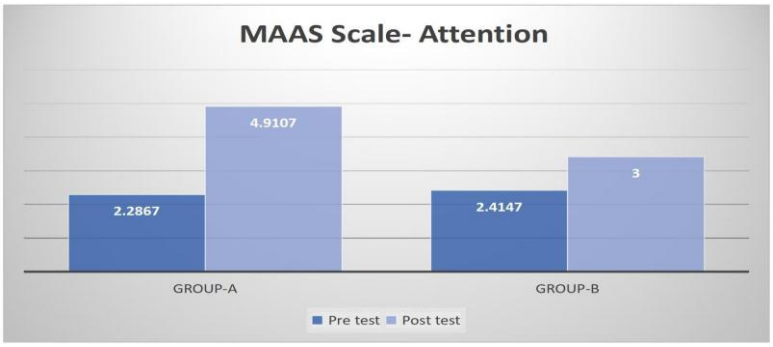
Table 2: Comparison of Pre and post-test values of Group-B MAAS Scale.

Group-B MAAS Scale	MEAN		SD		t-value	p-value
	Pretest	Post test	Pretest	Post test		
	2.4147	3.4153	0.5344	0.5451	13.5077	0.0001

Table 3: Comparison of Pre and post-test values of Group-A vs Group-B Attention MAAS-Scale.

	MEAN		SD		t- value	p-value
	Pretest	Post test	Pretest	Post test		
Group-A	2.2867	4.9107	0.5330	0.3005	26.4874	0.0001
Group-B	13.20	6.07	1.86	1.53	13.5077	0.0001

Comparison of Pre and post-test values of Group-A and Group-B Attention MAAS-Scale



Graph-1 Comparison of Pre and post-test values of Group-A and Group-B Attention MAAS-Scale.

Table 4: Comparison of Pre and post-test values of Group-A Concentration questionnaire.

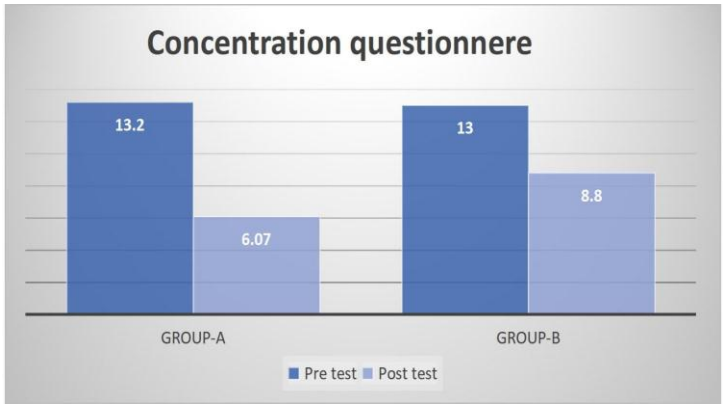
Group-A Concentration questionnaire	MEAN		SD		t-value	p-value
	Pretest	Post test	Pretest	Post test		
	13.20	6.07	1.86	1.53	12.7500	0.0001

Table 5: Comparison of Pre and post-test values of Group-B Concentration questionnaire.

Group-B Concentration questionnaire	MEAN		SD		t-value	p-value
	Pretest	Post test	Pretest	Post test		
	13.00	8.80	4.09	1.90	4.2365	0.0008

Table 6: Comparison of Pre and post-test values of Group-A vs B Concentration questionnaire.

	MEAN		SD		t- value	p-value
	Pretest	Post test	Pretest	Post test		
Group-A	13.20	6.07	1.86	1.53	12.7500	0.0001
Group-B	13.00	8.80	4.09	1.90	4.2365	0.0008



Graph 2: Comparison of Post test values of Group A and Group-B in concentration questionnaire.

RESULT

The results showed that Group-A (brain gym exercise) P values for MAAS Scale and Concentration questionnaire value was less than 0.001 which was highly significant than when compared to Group B (Super brain yoga). Cognition had improved in both the groups, but however it is, Group -A (brain gym exercise) was more effective on cognition among college students than when compared to Group B (super brain yoga).

DISCUSSION

The purpose of the study was to assess the effects of brain gym exercises versus super brain yoga on cognition among college students. This study consists of 30 samples of age 18-25 years separated into two groups. Group A consisting of 15 subjects and Group B with 15 subjects. Neuroplasticity based Brain gym exercise was given to Group A for a period of six weeks, 45 minutes per day for 5 days a week. Super Brain Yoga was given to Group B for 3 sets of 21 repetitions per day for 5 days a week for a period of six weeks. Both the group showed a significant cognitive improvement but Comparatively Group-A samples who were given brain gym exercises showed a greater level of significant improvement on Cognition among college students. Lubna Khan, et.al; [2024] concluded that there's a significant effect of brain gym exercises in improving attention. Titi Sulastri, et, al. [2023], concluded that Brain exercise involves physical movement and brain exercise that stimulates blood flow and the release of chemicals which plays a role in improving concentration and focus.

CONCLUSION

The study concluded that brain gym exercises was more effective on cognition among college students than when compared to super brain yoga.

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