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Effect of brain gym exercises on the attention span in young adults

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ABSTRACT

Aim: to study the effect of brain gym exercises on the attention span in young adults. Purpose: to determine whether the brain gym exercises will improve the attention span in young adult's age between 18 and 24. Study design: an interventional study. Procedure: ethical approval taken from the ethical committee. 60 subjects were selected according to inclusion criteria out of all the subjects has completed the study. Approval and written consent taken from all the subjects. Pre-interventional attention span calculated by mindful attention awareness scale then brain gym exercises were thought to the subjects and continued for 1 month. The outcome measure for the subjects was the mindful attention awareness scale. Result: the data collected were statistically analyzed by paired t-test. From the result of the statistics, the attention span of the subjects was increased significantly (p=0.0005) conclusion: this study concludes that brain gym exercises are effective in the improvement of the attention span in young adults.

Keywords— Attention span, Brain gym exercises

1. INTRODUCTION

Attention is the ability to focus on certain aspects or objects. It includes the abilities to receive the information and to select what is relevant from the incoming stimulation. Attention is the perquisites of memory to communicate and execute brain function. These process will turn and determined what we had attended. Levels of attention are focused attention that is the ability to realize individual items of information (e.g. too aware of the environment). The second type is sustained attention that is commonly called as concentration. (E.g. during the lecture.). Another type is Selective attention that is the ability to void distractions from both internal and external stimulus (e.g. when we are doing things of personal interest). The next type is Altering attention which is the ability to respond to multiple tasks at the same time.

When an individual is conscious, she/he possesses two types of attention, active and passive. Active attention is a voluntary process of increased alertness, concentration, interest and needs of a person. Curiosity and hunger are the stimulants for active attention. Passive attention can be said to be an involuntary cognitive process which easily gets distracted by any external stimuli.³

Attention is said to the most powerful character of human being and if correctly used, it can have great benefits, at the same time it is very difficult to master as well as attention helps a person in gaining knowledge. A class having pin-drop silence represents a well attentive class and helps the students to pay full attention to the topic. It is important for the students to pay attention and concentrate because it enhances their competency and skill to memorize the content for a longer period of time.³

Brain gym the phrase usually describes a specific set of movements, processes, programs, materials, and educational philosophy. Improvements in areas such as Concentration and focus then memory also Academics, reading, writing, math, test taking also the physical coordination, self-responsibility, organization skills and attitude.⁴

Educational Kinesiology or Brain Gym, is an approach to learning directed toward Specific neurological effects, to the clarification and implementation of life goals. The word kinesiology means "the science of movement", and so Brain Gym is based on the principle that we can educate the whole person through movement.⁵

Brain Gym is used in school systems around the world to help students achieve more easily. Brain Gym is used in the business world to help workers at all skill levels to do their work more effectively and easily. Brain Gym is used in athletics, promoting both personal skill and team communication. Brain Gym is a wonderful personal growth tool, allowing people to make rapid changes in areas where they may have felt "stuck" for a long time.⁵

Possible factors for attention dysfunction in students are lack of attention, personal problems, physical problems, lifestyle, and overuse of technology, personal interest and external factors (environmental noise, teacher, and topic).⁶

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In the always-connected world of social media, smartphones and hyperlinks in the middle of everything you read, you can feel how difficult it is to stay focused. And there are statistics too. Some say that the average attention span is down from 12 seconds in the year 2000 to eight seconds now. That is less than the nine-second attention span of your average goldfish. These statistics have been seen in Time magazine, the Telegraph, the Guardian, USA. There are many effects from smartphones and the like on the human body which is never mentioned. Information technology (IT) is much more powerful in unrecognized ways than is generally acknowledged. Because these various IT devices are often very close to a person's body, and so they can and do have profound effects on the human bioelectric field.

Attention span is connected directly to the presence of mind necessary to sincerely engage in person-to-person interaction. How often do the younger generations give up the focus of personal interaction for the sake of not missing the internet events of the day? Things are now moving so quickly that many within the younger generations do not want to miss out on anything. Consequently, their attention spans are being shortened to accommodate that next -BIGI event which can only be experienced on the internet or by way of the smartphone.⁶

Essentially classroom teaching consists of a teacher who teaches and learners who learn. The simplicity of this relationship is influenced by a number of factors, both external and internal, which have an effect on the significance and the excellence of teaching and learning. The amount of time and effort spent in a classroom is worthless unless the learners are learning. This is manifested within the concentration span in a classroom.⁷

2. PROCEDURE

The study was approved by the institutional ethical committee. Written informed consent was obtained from all participants. Total 80 participants both male and female age group between 18 and 24 were included in the study. All the participants then screened and finally 60 were included in the study according to the inclusion and exclusion criteria. Then pre interventional assessment was taken by Mindful attention awareness scale and recorded all the readings. Participants then explain the brain gym exercises and showed them how it should be performed. Ask all the participants to continue the exercises for 1 month daily. Then after 1-month post, the interventional assessment was taken by the same scale that is Mindful attention awareness scale and readings recorded.



2.1 Protocol

Activities	Procedure	Frequency	Duration
1. Drinking water	-	Before the	-
		exercises start	
2.Cross crawl	Sit or stand and with your right-hand elbow touch your left knee and vice versa.	2 Times in a day	3 To 5 Minutes
3.Think OF "X"	Close your eyes think of letter x and visualize it on the body as a left shoulder to the right hip and right shoulder to the left hip.	2 Times in a day	3 To 5 Minutes
4. Lazy eight	Extend arm straight out in front it should be equal to shoulder level with thumb posing towards celling slowly pace the shape of 8	2 Times in a day	3 To 5 Minutes
5. Neck rolls	Drop down head in front simply try to make small rolls while breathing with clockwise and anti-clockwise.	2 Times in a day	3 To 5 Minutes

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6. Belly breathing	Put your hands on abdomen inhale deeply and exhale with a short puff of air thinking feather to float in the air.	2 Times in a day	3 To 5 Minutes
7. Brain buttons	Put your right hand on your sternum and place left hand on the abdomen and slowly breathe in and out.	2 Times in a day	3 To 5 Minutes
8. The thinking cap	Using one hand at the top of your every ear try to unroll the curved part of both ears till you reach the bottom ear.	2 Times in a day	3 To 5 Minutes
9. Calf pumps	Place your 1 leg in front and another back of it try to lung down and contract the calf of backside leg.	2 Times in a day	3 To 5 Minutes
10. The Energizer	Place your head on the desk in front exhale and inhale while coming up and try to hyperextend the neck carefully.	2 Times in a day	3 To 5 Minutes



Fig. 1: Procedure

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Fig. 2: Result outcomes

3.1 Results

- The result of the mindful attention awareness scale shows, mean pre-intervention was 6.00 and post-intervention was 3.15.
- Pre intervention all population has grade 6.
- Out of 60 populations 26 subject's i.e. 43.33 percent show grade 4, 16 subjects i.e. 26.67 percent show grade 3, 18 subjects i.e. 30 percent show grade 2.
- P = 0.0001 and t = 26.27 after comparing within the group it is observed that pre and post-intervention was considered as to be significant.

4. DISCUSSION

The main findings of the study are discussed below. Attention is the ability to focus on certain aspects or objects. It includes the abilities to receive the information and to select what is relevant from the incoming stimulation. Attention is perquisites of memory which communicate and execute brain function.¹

Brain gym the phrase usually describes a specific set of movements, processes, programs, materials, and educational philosophy. It includes several sets of exercises. When we implement the brain gym exercises on subjects it showed positive results towards the hypothesis. Brain gym exercises like drinking water show efficient action between the brain and nervous system efficient storage and retrieval of information. Also, relive from the anxiety as well as get rid of dehydration. These sets of brain gym exercises are useful for stress release and achievement of goals as well as organizational skills and performance skills. In the set of brain gym exercises cross crawl improves academic skills in spelling, writing, listening, reading and comprehension.⁴

It also has a good effect on clear listening and speaking, test taking and similar challenges, work at the keyboard were increased with the practice of brain gym exercises. The lazy 8 exercises will help to enhance the mechanics of reading, the decoding of written language, Reading comprehension and the mechanics of writing. The impact of these exercises also shown the enhancement in the strength of eye and hand coordination as well as Clear eye strain & sore neck & shoulders and strengthen inner eye muscles & help to focus simultaneously on the same central point while reading. It will also help in assisting short term working memory, aiding silent speech and thinking skills.⁵

Brain gym helps in waking up a hearing mechanism so that we can hear with both ears together, remembering the study before/during a test. Brain gym exercises show that it can activate the whole mind & body. The figure of 8 exercises strengthens hand/eye coordination. It also helps to improve attention & can be very beneficial for learners with ADHD. Practising brain gym exercises improves balance & equilibrium. The subjects also showed that the brain gym exercises help communication become free and can be of particular help with speech impaired and autistic learners. Exercises like energizes- wakes up the system after sitting for a long time at a desk or in front of a computer, increases oxygen flow, relaxes neck & shoulder muscles as well as reactivates focus. Exercises like the energy Yawn Addresses skills that require the use of verbal communication and Provides increased energy and alertness.⁵

Brain gym develops the brain's neural pathways the way nature does through movement. And also enhances learning and performance skills in all areas it helps the learners with specific learning & behavioural problems. Subjects are reported to us that, self-confidence, self-esteem, coordination, communication is improved by the brain gym exercises. There are almost 50% of nerves in the body are related to head & face and as tension is frequently held in the jaw muscle, this is highly beneficial for relaxing & calming the nervous system to relieve stress & tension and increases sensory intake.⁴

Our subjects also reported that brain gym helps to increase concentration and memory as well as it is also useful in the overcoming hyperactivity and excessive daydreaming.

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Kulkarni Chaitanya, Khandale Sanjivani Ramesh; International Journal of Advance Research and Development 5. CONCLUSION

According to findings, the study concludes that there is an improvement in attention span after giving brain gym exercises program to young adults.

6. LIMITATIONS

- Small sample size.
- Limited follow-up period.
- Should be implemented for a longer period of time.

7. RECOMMENDATION AND FUTURE SCOPE OF THE STUDY

- The brain gym exercises program can be implemented clinically.
- The study can be conducted on the larger population
- The study can be done on the 10th and 12th std. Students.

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