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Research Article

Efficacy of OM Chanting on Visual Short Term Memory, Concentration and Attention Among Young Adults

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Abstract

Background: This research delves into the potential impact of Om chanting on visual short-term memory, attention and concentration among young adolescents, recognizing the significance of cognitive development during this crucial stage. Om chanting, rooted in ancient traditions, involves the rhythmic repetition of the sacred sound "Om" and has been associated with meditative and cognitive benefits [1]. Given the dynamic cognitive changes occurring during adolescence, exploring how this contemplative practice may influence visual short-term memory becomes pertinent. The study seeks to bridge traditional practices with contemporary scientific inquiry, examining the potential cognitive advantages of Om chanting in the context of young adolescents' cognitive well-being (Jois, D'Souza, and Moulya 2017).

Keywords: Om Chanting; Visual Short Term Memory; Attention and Concentration Young Adults

Introduction

The ancient practice of Om chanting, deeply entrenched in the spiritual traditions of yoga and meditation, has recently piqued the interest of researchers for its potential cognitive benefits, specifically its influence on Visual Short Term Memory among young adults [2]. Rooted in the belief that the sacred sound "Om" holds profound significance for the mind and consciousness, this practice serves as a unique confluence of ancient wisdom and contemporary scientific exploration. As interest grows in harnessing traditional practices for cognitive well-being, Om chanting emerges as a captivating subject, inviting a nuanced examination of its potential effects on the cognitive landscape of young adults [3].

Methods

Interventional studies, random Sampling will be done to choose the individual for experimental and control group. Individuals will be given 4-week session of OM Chanting and pre post data will be collected using an appropriate tool, which will be further analysed.

Procedure

Our study aimed to examine the effects of Om chanting on short-term memory, concentration, and attention among young adults. Seventy participants have taken part in this study. Participants were randomly allocated in two group. One is control group and the other is interventional group. We gave om chanting for 30 minutes for the 1 month and we have taken the pre and post data and then we have analysed the data.

Assessment tools

Variable -Visual short term memory.

Corsi block-tapping task

For assessment we are using corsi block tapping software. The CBTT (Corsi block-tapping task) is an individual test which measures visuo-spatial short-term and working memory. Nine blue squares appear on the screen. For each trial, the squares "light up" as yellow one by one in a varying sequence. After the presentation,

the participants had to click each of the boxes in the similar order in which they had "lit up" the first part of the task, i.e. forward tapping. The task begins with a two-box sequence to a maximum of nine. The test gets terminated when the participant is not able to remember the sequence for two consecutive trials at any one level. Hence, the test assesses the following eight variables: (1) elapsed time (2) ncorrectal (3) blockspan (4) z_blockspan (5) p_blockspan (6) total score (7) z_totalscore (8) p_totalscore [4,5].

Variable – Concentration and attention

The Digit letter substitution test

The Digit Letter Substitution Test (DLST) is a cognitive assessment tool used to measure various cognitive functions, including processing speed, working memory, and executive function. In the DLST, participants are presented with a key that pairs numbers with corresponding letters of the alphabet. They are then given a series of numbers and asked to substitute each number with the corresponding letter according to the key.

For example, if the key indicates that the number 1 corresponds to the letter A, 2 corresponds to B, and so on, then if the participant sees the number sequence "1 2 3," they would respond with "A B C".

The test is typically timed, and participants are asked to complete as many substitutions as possible within a set time limit. Performance on the DLST can provide insights into cognitive processing speed, attention, and working memory capacity. It's often used in clinical settings, research studies, and neuropsychological assessments to evaluate cognitive functioning and identify potential cognitive impairments.

Data analysis

Comparison of variables

For within group and between group, normality was checked using Shapiro Wilk's test, where the data was not normally distributed so Wilcoxon signed-rank and Mann-whitney test was done for the group. P values are shown in the table below. We got significant changes in all the variables in experimental group. In between group we got significant changes in attention and concentration variable with $p < 0.005$.

Results

Our study aimed to examine the effects of Om chanting on short-term memory, concentration, and attention among young adults. The results were compelling, indicating that participants who engaged in Om chanting for 30 minutes daily over a period of one month showed significant improvements in all three cognitive domains compared to the control group. Specifically, participants in the chanting group demonstrated a significant increase in short-term memory capacity, improvement in concentration scores on attention tasks, and a notable enhancement in overall attentional control. These findings $p < 0.005$ suggest that Om chanting can serve as an effective cognitive enhancement tool, potentially attributable to its calming effects on the nervous system and its ability to induce a state of focused relaxation.

Discussion

In conclusion, our study demonstrates that Om chanting can significantly enhance short-term memory, concentration, and attention among young adults. The findings $p < 0.005$ suggest that regular practice of Om chanting induces a state of focused relaxation, contributing to improved cognitive performance. This aligns with previous research and extends the understanding of Om chanting's sustained benefits. The study also highlights the broader implications of integrating such traditional practices into modern cognitive and wellness programs. By providing a simple, accessible, and cost-effective method for cognitive enhancement, Om chanting can be a valuable tool in educational settings and workplaces to foster mental well-being and productivity. Future research should continue to explore the long-term effects and potential mechanisms underlying these cognitive benefits.

In visual short term memory changes were highly significant as the p value is <0.001 in intervention group, where mean value changed from 49.943 to 64.171 with 15% change.

In attention and concentration also changes were highly significant in intervention group as p value is <0.001 and between group it is 0.040, and mean value changed from 35.086 to 48.514 with 28% change.

Comparing the present study with the pervious study.

Ram Kumar Gupta, Savita Agnihotri, Shirley Telles, and Acharya Balkrishna 2019.

Performance in a Corsi Block-tapping Task following High-frequency Yoga Breathing or Breath Awareness. Each participant was assessed in three sessions conducted on 3 separate days at the same time of the day. The three sessions were (I) HFYB, (ii) BAW, and (iii) quiet sitting (QS). The duration of the intervention was 18 min. The participants were assessed before and after all the three sessions. BAW resulted in an improvement in backward total scores ($P < 0.05$) and the backward Corsi span ($P < 0.05$; one tailed). Limitation of study can be done on various demographic population, Samples size less, Attention and concentration test.

Conclusion

Our study demonstrates that Om chanting can enhance visual short-term memory, attention and concentration, among young adults, a state of focused relaxation, contributing to improved cognitive performance.

Bibliography

1. Joshi Kanchan. "Effect of Nadishodhan Prayayama and Om Chanting on Memory Enhancement of College Students". *International Journal of Yoga and Allied Sciences* 1.1 (2013): 52-57.

2. Alasyam Naveen., *et al*. "Effectiveness of Structured "Om" Chanting and Listening Program on Psychological Parameters in Pre-Hypertensive Women". *National Journal of Physiology, Pharmacy and Pharmacology* 11.10 (2021): 1.

3. Zhang Ziyu., *et al*. "Om Chanting Modulates the Processing of Negative Stimuli: Behavioral and Electrophysiological Evidence". *Frontiers in Psychology* 13 (2022).

4. Swathi PS., *et al*. "Effect of Trataka (Yogic Visual Concentration) on the Performance in the Corsi-Block Tapping Task: A Repeated Measures Study". *Frontiers in Psychology* 12 (2021): 1-7.

5. Brunner Devon., *et al*. "A Yoga Program for Cognitive Enhancement". *PLoS ONE* 12.8 (2017): 4-15.