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Effect of Om Chanting on Concentration Levels among School Going Children

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Abstract: ***Background: In recent years, mantra chanting, has gained attention for its therapeutic effects. While previous research has primarily focused on its physiological and psychological impacts, its potential influence on cognitive functions, such as concentration levels among adolescents, remains an important area for exploration. This study seeks to examine the effects of OM chanting on concentration levels among school - going students aged 14 - 18 through a four - week intervention involving daily OM mantra chanting sessions, and aims to assess its potential as a concentration enhancement tool." Materials and Methods: A total of 34 school students aged between 14 to 18 years participated in this study.10 students were assigned to the control group, 24 students were allocated to the experimental group. Concentration (Dharansheelta) Scale C (D) S - MKMKY, developed by Dr. Mahesh Kumar Muchhal and Yogesh Kumar, consisting of 40 items and designed for individuals aged 13 - 24, to assess concentration levels was used. Students participated in a four - week intervention involving daily 15 - minute sessions of OM mantra chanting. Pre and post concentration levels were measured using the aforementioned scale both before. Results: In our study involving school students aged 14 - 18, we administered a four - week yoga intervention to an experimental group while maintaining a control group. The experimental group showed a significant increase in concentration levels post - intervention, highlighting the efficacy of yoga practices in enhancing concentration levels among school going students. Conclusion: This study highlights the significance of OM chanting as a potential tool for improving concentration levels among school - going students.***

Keywords: Mantra chanting, Cognitive enhancement, Concentration levels, Adolescent students, Yoga Practice

1. Introduction

The practice of Om chanting, deeply rooted in Sanatan tradition, stands as a profound form of meditation aimed at enhancing concentration levels and fostering mental clarity. By repetitively vocalizing the sacred mantra Om, practitioners engage in a rhythmic process that harnesses the vibrational resonance of sound to calm the mind and heighten focus (Lynch et al., 2018). This ancient technique has cultivated increasing attention in modern research, offering promising insights into its profound effects on the brain, cognition, and emotional well - being.

Contemporary studies have revealed the transformative power of Om chanting on various aspects of mental health and cognitive functioning. Notably, investigations have demonstrated its ability to induce a state of deep relaxation, characterized by decreased physiological arousal and enhanced parasympathetic activity (Telles et al., 1998). This profound relaxation response has been linked to reductions in heart rate and respiratory rate, underscoring the therapeutic potential of Om chanting in alleviating stress and promoting emotional balance (Rankhambe and Pande, 2020).

Furthermore, neuroimaging studies have illuminated the neural mechanisms underlying the effects of Om chanting on the brain. Functional MRI (fMRI) investigations have revealed significant alterations in brain activity during chanting sessions, with pronounced deactivation observed in regions associated with emotional processing, such as the amygdala (Kalyani et al., 2011). This deactivation is thought to reflect a shift towards greater emotional stability and regulation, facilitating enhanced cognitive functioning and attentional focus (Deepeshwar et al., 2015).

Importantly, the benefits of Om chanting extend beyond mere relaxation to encompass profound improvements in concentration and mental clarity. Recent research has highlighted its role in enhancing cognitive performance and attentional focus, making it a valuable tool for students, professionals, and individuals seeking to optimize their cognitive abilities (New reference: Gupta et al., 2023).

In light of these findings, our study aims to delve deeper into the cognitive effects of Om chanting, particularly its impact on concentration levels among adolescents. Through meticulous assessment of concentration levels before and after chanting interventions, we seek to find out the mechanisms underlying its cognitive - enhancing properties and its potential as a tool to enhance concentration among children.

2. Materials and Methods

Participants: A total of 34 school students aged between 14 to 18 years participated in this study. Among them, 10 students were assigned to the control group, while 24 students were allocated to the experimental group.

Instrumentation: We employed the Concentration (Dharansheelta) Scale C (D) S - MKMKY, developed by Dr. Mahesh Kumar Muchhal and Yogesh Kumar, to evaluate

concentration levels among the participants. This scale comprises 40 items and is specifically designed for individuals aged 13 to 24 years.

Intervention: The intervention involved a four - week program where participants in the experimental group engaged in daily 15 - minute sessions of mantra chanting. The selected mantra for chanting was the Om mantra.

Procedure: Prior to the intervention, baseline measurements of concentration levels were obtained from all participants using the Concentration Scale. Following this, participants in the experimental group underwent the four - week intervention period, during which they practiced mantra chanting daily. Meanwhile, participants in the control group did not receive any specific intervention and continued with their regular activities.

Outcome Measures: At the conclusion of the intervention period, post - intervention measurements of concentration levels were taken from both the experimental and control groups using the same Concentration Scale. The pre and post - intervention scores were then compared to evaluate the impact of the intervention on concentration levels among the participants.

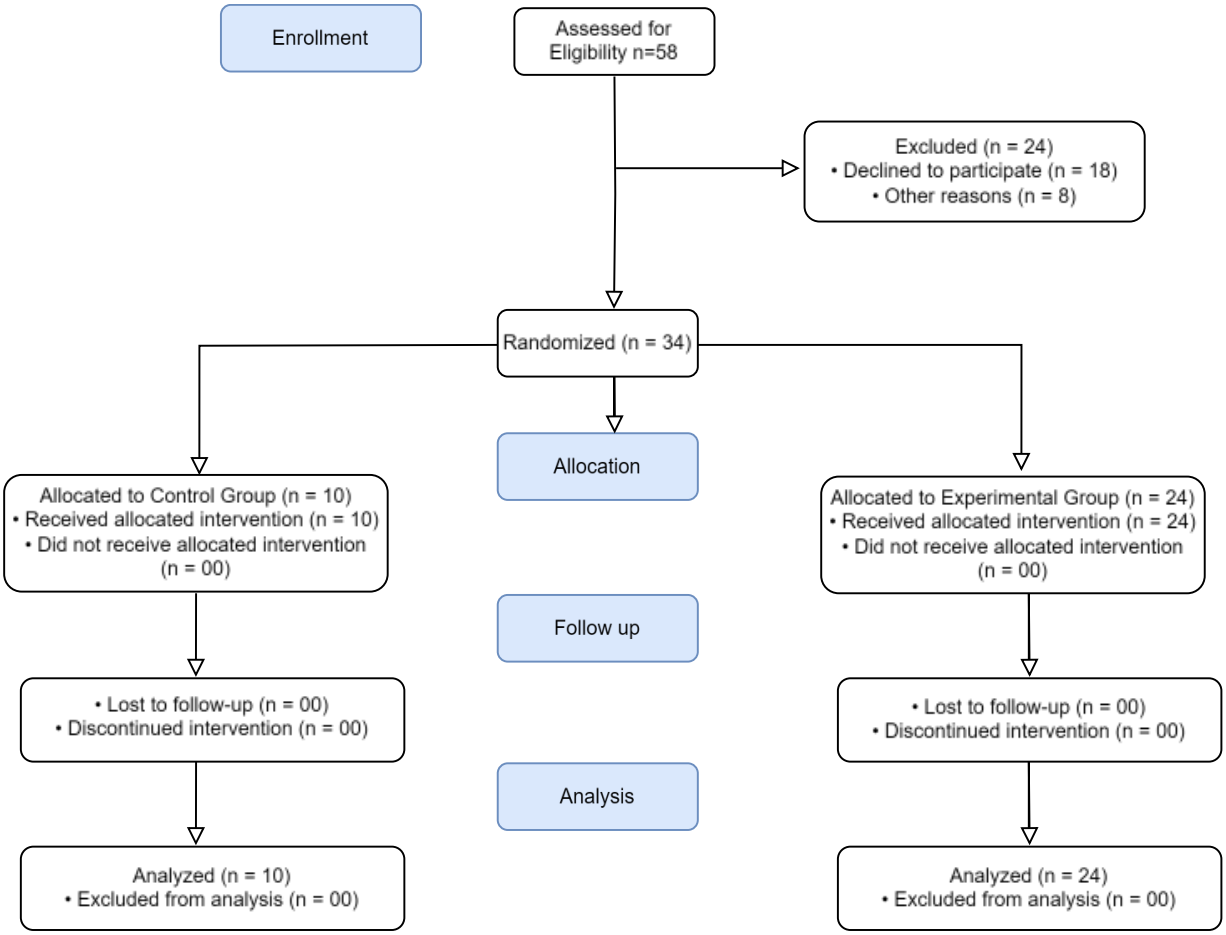

Figure 1: Consort Flow Diagram

Statistical Analysis: Data analysis was performed using SPSS version 20.0. To assess the impact of the intervention on concentration levels across multiple groups, analysis of variance (ANOVA) was employed. A significance level of $p < 0.05$ was considered statistically significant, indicating differences in concentration levels between the experimental and control groups before and after the intervention.

3. Results

The descriptive statistics of two groups experimental and control are mentioned in table - 1. The mean concentration level post - intervention for the experimental group (n=24) was 120.83 (SD = 6.76). In comparison, the control group (n=10) exhibited a slightly lower mean concentration level post - intervention, with a value of 116.00 (SD = 3.68). As shown in Table - 2, the effect of group assignment (experimental vs. control) was significant ($F = 5.899$, $p = 0.021$), suggesting that there was a significant difference in post - intervention concentration levels between the experimental and control groups, after controlling for pre - intervention scores.

Table 1: Descriptive Statistics

Descriptive Statistics			
Dependent Variable: Post			
Group	Mean	Std. Deviation	N
Experimental	120.8333	6.76093	24
Control	116.0000	3.68179	10
Total	119.4118	6.36809	34

Table 2: ANCOVA Results

Tests of Between - Subjects Effects						
Dependent Variable: Post						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	269.386[a]	2	134.693	3.907	.031	.201
Intercept	298.075	1	298.075	8.645	.006	.218
Pre	104.484	1	104.484	3.030	.092	.089
Group	203.407	1	203.407	5.899	.021	.160
Error	1068.849	31	34.479			
Total	486150.000	34				
Corrected Total	1338.235	33				
a. R Squared =.201 (Adjusted R Squared =.150)						

4. Discussion

The primary aim of our study was to investigate the impact of Om chanting intervention on concentration levels among school - going children, comparing an experimental group with a control group. Our results indicate a significant difference in concentration levels between the experimental and control groups following the 4 - week Om chanting intervention. Specifically, participants in the experimental group, who engaged in regular Om chanting sessions, demonstrated improved concentration levels compared to those in the control group. This suggests that Om chanting may serve as an effective intervention for enhancing cognitive focus and attentional abilities among school - going children. Although the difference in concentration levels between the experimental and control groups was statistically significant ($p < 0.05$), it is important to note that the p - value obtained (0.021) indicates a moderate level of significance. While this suggests a meaningful difference between the groups, further research with larger sample sizes may be warranted to confirm and strengthen these findings. The observed difference in concentration levels between the experimental and control groups highlights the potential benefits of incorporating Om chanting practices into educational settings. By enhancing concentration levels, Om chanting may contribute to improved academic performance and overall well - being among school children.

5. Limitations and Future Scope

1) Small sample size: Limited number of participants may affect the generalizability of results.
2) Homogeneous population: Participants from a single location may limit diversity in experiences and perspectives.
3) Specific age group: Study focused on a narrow age range, potentially limiting broader applicability.
4) Short intervention duration: Four - week intervention period may not fully capture long - term effects.
5) Short chanting sessions: Brief chanting durations might limit the magnitude of observed effects on concentration levels.

These limitations should be noted when interpreting the findings and considered for future research designs to ensure robust and comprehensive results.

6. Conclusion

In conclusion, this study demonstrates a significant enhancement in concentration levels among school students aged 14 to 18 following a four - week intervention involving Om mantra chanting, as evidenced by a p - value of 0.021. These findings reciprocate the potential of mindfulness - based practices to improve concentration or cognitive focus in adolescent populations. While our study contributes valuable insights, limitations such as a small sample size and unaccounted extraneous variables warrant further investigation. Further research with larger sample sizes and longer intervention durations is needed to validate and optimize the effectiveness of Om chanting and similar mindfulness techniques in promoting enhancement of concentration levels among adolescent school going children.

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Author Profile

Krishna Suryawanshi: Alongside being a research scholar from LNIPE, Gwalior, Krishna is sincerely oriented towards learning in depth about the cultural aspects and ancient knowledge associated with yoga and its traditional aspects.

Alok Jhinkwan: A research scholar in the field of yoga from Lakshmibai National Institute of Physical Education, Gwalior. Alok is keenly interested in absorbing the real essence of yoga and their practical applications in day - to - day life, that's what motivates him to dig deeper into the research aspects of yoga.

Nikhil Sharma: Nikhil is a research scholar from LNIPE, Gwalior. In his free time Nikhil intensely travels to various regions of India to connect deeper with the cultural and knowledge aspects of yoga to know and learn about them from his self - developed experiential way of learning.