



A Study to Assess the Effectiveness of Concentration Enhancement Activity on Attention & Concentration Among School Age Children 6-12 year at Govt. Primary School Ameri, Bilaspur (C.G.)

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Abstract

Attention and concentration are essential cognitive functions that allow a child to focus on specific tasks, process information, and learn effectively. Attention refers to the ability to select and focus on relevant stimuli while ignoring distractions, where as concentration is the ability to maintain that focus for a sustained period of time. These skills begin developing in early childhood and continue to mature with age. "A study to assess the effectiveness of concentration enhancement activity on attention & concentration among school age children 6-12 year at Govt. Primary School Ameri, Bilaspur (C. G.)" Study was undertaken as a partial fulfillment of requirement for the degree of master of science in Child Health Nursing. It was done by Miss Pooja Khunte from Pt. Deendayal Upadhyay Memorial Health Science and Ayush University of Chhattisgarh, Raipur Chhattisgarh.

Attention and concentration are essential cognitive functions that influence learning ability, academic performance, and behavioural development among school-age children. Due to increasing academic demands, digital media exposure, and environmental distractions, many children experience difficulty maintaining attention and concentration. Poor concentration may affect classroom performance, memory, reasoning ability, and overall scholastic achievement. Therefore, improving attention and concentration during school age is important for cognitive and educational development. Concentration Enhancement Activities (CEAs) such as Stroop Colour-Word activity and Memory Tray Game help improve focus, working memory, and information processing skills among children. These activities are simple, engaging, cost-effective, and suitable for school settings.

"A Study to Assess the Effectiveness of Concentration Enhancement Activity on Attention and Concentration among School-Age Children (6–12 Years) at Govt. Primary School Ameri, Bilaspur (C.G.)"

Methodology: The research design use A quantitative approach with quasi-experimental pre-test post-test control group design was used for the study. Purposive sampling technique was adopted to select 60 school-age children (30 experimental and 30 control group). Attention and concentration were assessed using Lack of Attention and Lack of Concentration Assessment Rating Scales. Concentration enhancement therapy, including Stroop Colour Word Test and Memory Tray Game, was administered for 20 minutes for 12 consecutive days. Post-test was conducted using the same assessment scales after the intervention.

Conclusion: The data was analyzed by using paired "t" test. The results showed that the mean pre test scores In attention, the mean pre-test score was 11.08 and the mean post-test score was 36.94. In concentration, the mean pre-test score was 22.83 and the mean post-test score was 34.83. The paired t-test value for attention was 18.58 and for concentration was 45.0, It shows that there was a significant improvement in concentration level after concentration enhancement therapy. The findings showed that concentration enhancement therapy is effective in improving the level of concentration.

Keywords: Attention, concentration, concentration enhancement activity, Stroop Colour Word Test, Memory Tray Game, school age children

Introduction

Attention and concentration are essential cognitive functions that help children in learning, memory, problem-solving,

and academic achievement. School-age children require adequate attention and concentration for effective classroom participation and successful completion of academic

activities. Poor concentration can negatively affect educational performance and behavioral development among children.

In recent years, children are increasingly exposed to distractions such as television, mobile phones, video games, social media, and environmental disturbances. These factors reduce children's ability to maintain focus during classroom activities and learning sessions. Lack of attention and concentration may result in poor memory retention, incomplete task performance, and reduced academic achievement.

Concentration enhancement activities are structured cognitive exercises developed to improve attention span, memory, and mental focus among children. Activities such as Stroop Colour Word Test and Memory Tray Game stimulate brain functioning and improve sustained attention. These activities are simple, engaging, cost-effective, and can be easily implemented in school settings.

Several studies have shown that concentration enhancement activities significantly improve attention and concentration among school-age children. Previous research findings reported that children who participated in concentration enhancement programs demonstrated better cognitive performance, improved classroom behavior, and enhanced academic outcomes.

During clinical and community exposure, the investigator observed that many school-age children experienced difficulty in maintaining concentration during classroom activities. Since early intervention can improve cognitive functioning and academic performance, the investigator felt the need to assess the effectiveness of concentration enhancement activities on attention and concentration among school-age children aged 6-12 years at Govt. Primary School Ameri, Bilaspur (C.G.).

Ethical Considerations

Ethical clearance was obtained from the Institutional Ethical Committee of Government College of Nursing, Bilaspur (C.G.). Permission to conduct the study was obtained from the Principal of Govt. Primary School Ameri, Bilaspur (C.G.). Informed consent was obtained from the parents/guardians of the participants before data collection. Participation in the study was voluntary, and confidentiality of the participants was maintained throughout the study. The concentration enhancement activities used in the study were safe, non-invasive, and appropriate for school-age children. All collected data were used only for research purposes.

Specific Objective

- To assess the pre- test & post test level of attention & concentration among school age children in experimental & control group.
- To assess the effectiveness of concentration enhancement activity on attention & concentration among experimental group to compare pre-test experimental and control group.
- To find association between the pre- test level of attention & concentration among children with their selected socio demographic variables.

Hypotheses

- **H₁:** There will be a significant difference between the

pre-test & post-test level of attention & concentration among selected school age children in experimental & control group.

- **H₂:** There will be a significant association between the pre-test level of attention & concentration among selected school age children with their selected demographic variables.

Methodology

Research Approach

A Quantitative research approach was adopted for the present study.

Research Design

A quantitative quasi-experimental pre-test and post-test control group design was adopted to evaluate the effectiveness of concentration enhancement activity on attention and concentration among school-age children.

Setting of the study: A study was conducted in the Govt. Primary School Ameri, Bilaspur, (C.G.)

Population: The target population consisted of school-age children aged 6-12 years studying at Govt. Primary School Ameri, Bilaspur.

Sample and Sampling Technique

A total of 60 school-age children were selected using Non-probability purposive sampling technique. The samples were divided into experimental group (30) and control group (30).

Inclusion Criteria

- Children aged between 6–12 years
- Boys and girls able to understand Hindi
- Children having academic scores $\leq 50\%$

Exclusion Criteria

- Children with chronic illness
- Children already engaged in concentration-enhancing activities
- Children with academic scores $> 50\%$

Variables of the Study

Independent Variable

Concentration enhancement activity.

Dependent Variable

Attention and concentration among school-age children.

Extraneous Variables

Age, gender, birth order, type of family, number of siblings, parental education, parental occupation, family income, hobbies, and previous exposure to meditation.

Tools for Data Collection Tools

Section A: Demographic Variables

It included age, gender, birth order, type of family, number of siblings, parental education, parental occupation, family income, hobbies, and previous exposure to meditation.

Section B: (a) Attention Assessment Rating Scale

Response	Score
Never	0
Sometimes	1
Always	2

A 15-item rating scale was used to assess attention among school-age children. Each item was scored as:

Higher scores indicated greater lack of attention. Scores were categorized into mild, moderate, and severe levels of attention deficit.

(b) Concentration Assessment Rating Scale

A 20-item rating scale was used to assess concentration among school-age children. Each item was scored as:

Response	Score
Never	0
Sometimes	1
Often	2
Always	3

Higher scores indicated greater lack of concentration. Scores were categorized into mild, moderate, and severe levels of concentration deficit.

Data Collection Procedure

Formal administrative permission was obtained from the school authority prior to data collection. Pre-test assessment of attention and concentration was conducted for both groups using structured rating scales. The experimental group received concentration enhancement activity, whereas the control group continued routine activities. Post-test assessment was conducted after completion of the intervention.

Plan for Data Analysis

Data were analyzed using descriptive and inferential statistics. Frequency and percentage distribution were used to analyze demographic variables. Mean and standard deviation were used to assess pre-test and post-test levels of attention and concentration among the experimental and control groups. Paired t-test and unpaired t-test were used to compare the effectiveness of the intervention. Chi-square test was used to determine the association between post-test scores and selected demographic variables.

Report writing

The finding of the study were organized, analyzed, interpreted, and presented in the form of table, figures, and graphs, followed by discussion, conclusion, and recommendations.

Ms. Shiney Varghese October (2014) [7] "A study to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children in madha matriculation school at Chennai", Purposive sampling technique was used to select the sample. A modified attention profile and card game was used to assess the pre test and post test level of attention and concentration. Concentration enhancement activity was conducted for the duration of 30 minutes for six days. The post test was assessed on seventh day by using same tool. The analysis revealed that the pre test level of attention mean score was

29.83 with the standard deviation of 6.73 and the post test level of attention mean score was 18.53 with standard deviation of 5.14. The pre test level of concentration mean score was 21.57 with standard deviation of 4.78 and post test level of concentration mean score was 13.83 with standard deviation of 3.60. The paired 't' test value of attention was 9.72 and concentration was 6.71 which showed very high significant at the level of $p < 0.001$. The Karl Pearson correlation coefficient value of $r = 0.56$ at the level of $p < 0.01$ which showed moderate correlation between post test level of attention and concentration among school age children. Hence it indicates the effectiveness of concentration enhancement activity on attention and concentration among school age children. So the research hypothesis was accepted for the study.

Discussion

Comparison of pre-test and post-test score through mean, mean % and SD

The study showed that the attention and concentration scores were improved after implementation of concentration enhancement activities among school age children.

In the experimental group, the pre-test mean score was higher than the post-test mean score, indicating reduction in lack of attention and improvement in concentration after intervention. Mean %, and standard deviation were also reduced in the post-test, showing the effectiveness of concentration enhancement activities.

The concentration enhancement activities such as Stroop Colour Word Test and Memory Tray Game helped the children to improve their focus, memory, and sustained attention during classroom activities.

Overall findings revealed that concentration enhancement activities were effective in improving attention and concentration among school age children aged 6– 12 years.

Results

Depicts that concentration enhancement activities had significant effectiveness in improving attention and concentration among school age children. The intervention was found to be simple, cost-effective, and beneficial for improving cognitive performance among children in selected school, Bilaspur, Chhattisgarh.

Conclusion

Paired 't' test was used for assessing the significant difference between pre-test and post-test scores of attentions and concentration among school age children. Chi-square test was used to find the association between pre-test level of attention and concentration with selected socio demographic variables.

The findings of the paired t-test revealed that the experimental group showed highly significant improvement in attention and concentration after the intervention. The calculated t-value was higher than the table value at 0.05 level of significance, indicating a significant difference between pre-test and post-test scores. Therefore, the null hypothesis (H_0) was rejected, and it was concluded that concentration enhancement activities were effective in improving attention and concentration among school age children.

References

1. Polit DF, Hungler BP. Nursing research: principles and methods. 7th ed. Philadelphia: Lippincott Williams & Wilkins; c2004.
2. Kothari CR. Research methodology: methods and techniques. 2nd ed. New Delhi: New Age International Publishers; c2019.
3. Burns N, Grove SK. The practice of nursing research: appraisal, synthesis and generation of evidence. 8th ed. St. Louis: Elsevier; c2017.
4. Imogene King. A theory for nursing: systems, concepts, process. New York: Wiley; c1981.
5. Basavanthappa BT. Nursing research. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; c2007.
6. Sharma SK. Nursing research and statistics. 3rd ed. Gurugram: Elsevier India; c2018.
7. Shiney V. A study to assess the effectiveness of concentration enhancement activity on attention and concentration among school-age children in Madha Matriculation School, Chennai [thesis]. Chennai; c2014.
8. Mary Nima B, Lizy Merlin Lisha D. A pre-experimental study on effectiveness of concentration enhancement therapy among school children. 2024.
9. Metha J, Dhinakaran D, Aathithiya M, *et al.* An assessment of level of attention and concentration among high school students in Chengalpattu District, Tamil Nadu. 2023.
10. Kavitha K. A study to assess the effectiveness of concentration enhancement therapy among school-age children aged 6–12 years in Kanyakumari District [thesis]. Kanyakumari; c2016.
11. Peng X, *et al.* Effectiveness of mindfulness-based interventions on sustained attention and cognitive flexibility in school-aged children. 2025.
12. Dang T, *et al.* Effectiveness of digital cognitive training combined with medication on concentration levels in school-aged children. 2025.
13. Rahmani A, *et al.* Effectiveness of neurofeedback therapy on enhancing sustained attention in children. 2022.
14. Dunning D, *et al.* A meta-analysis of mindfulness-based interventions on sustained attention and working memory among children. 2019.
15. Bonzia L. Effectiveness of concentration enhancement therapy on elementary school students with attention difficulties. 2010.

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