Effectiveness of Concentration Enhancement Activity on Attention and Concentration among School Age Children

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Statement of the problem

A study to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children (6 – 12 years) in selected schools of District Hoshiarpur, Punjab.

Objectives

1. To assess the pre-test and post-test level of attention and concentration among school age children in experimental and control group.
2. To compare the pre-test and post-test level of attention and concentration among school age children in experimental and control group
3. To associate the post-test level of attention and concentration among children with their selected demographic variables.

Operational definitions

Effectiveness: In this study it refers to the efficacy of concentration-boosting exercises in raising school-age children's levels of focus and attention.

Attention: In this study it refers to the directed orientation of the mind, particularly to a task or challenge.

Concentration: In this study it refers to strengthening the mind's potential for attentiveness to one task.

Concentration Enhancement Activity: In this study it refers to series of activities for enhancing focus and attention in school-aged children that include letter and colour splitting, dot joining, missing numbers, jigsaw puzzles, and tongue twisters.

School Age Children: In this study, it refers to children in selected areas of Hoshiarpur between the ages of 6 to 12 years.

Hypothesis

➢ **H0:** There will be statistically no significant difference in attention and concentration among school age children in both experimental and control group at $p < 0.05$ level of significance.

➢ **H1:** There will be statistically significant improvement in attention and concentration among school age children after administration of concentration enhancement activity in experimental group as compared to control group at $p < 0.05$ level of significance.

Delimitations

➢ Study is delimited to school age children in selected areas of District Hoshiarpur.

➢ Study is delimited to school age children between the age of 6 - 12 years.

Methodology

Deals with the methodology adopted for the study. The methodology pf research indicates the general pattern for organizing the procedure and for gathering valid and reliable data for investigation.

Research approach –

In this study, a quantitative approach was used.

Research design-

A quasi-experimental research design including a pre-test, a post-test, and a control group was used to examine the impact of a concentration-improving exercise on children of school age in a selected areas of Hoshiarpur, Punjab.

Variables of the study

- **Dependent variables**: Attention and Concentration.
- **Independent variables**: Concentration Enhancement Activity

Demographic variables: "Age (in years), gender, kind of family, religion, monthly family income, family structure, education level of the mother, educational levels of the father, type of food, type of leisure, and prior meditation skill are some of these."

Setting of the study: The study was conducted at Roop Nagar and Gokal Nagar, Hoshiarpur, Punjab.

Sample: The sample of the present study comprised of school age children in selected areas of Hoshiarpur.

In the present study, 60 samples were selected.

Sampling technique:

- **Sample size:** The research sampled 60 school-aged children, 30 in the experimental and control groups. The purposive sampling technique was used.
- **Sampling criteria:** The study samples were selected in view of the following pre-determined criteria.

Inclusion criteria –

- 6-12-year-old boys and girls.
- Children who speak and understand English, Hindi, and Punjabi.
- Children with academic scores of 50 percent or less.

Exclusion criteria-

- Children with chronic illnesses are excluded.
- Children who engaged in concentration-boosting activities like meditation

Data Collection Technique and Instruments
Selection and development of tool for data collection:

SECTION – A: It contained "demographic profile of the respondents that includes age (in years), gender, family type, religion, family's monthly salary, family structure, mother's and father's educational status, dietary pattern, hobby and prior meditation experience."

SECTION – B: Modified James B. Snyder's Attention Profile was used to evaluate the level of attention among school-aged children using a 25-item rating scale.

Criterion measurement

0 – 20	rarely inattentive
21 – 30	sometimes inattentive
31 – 40	often inattentive
Max score	40
Minimum Score	01

SECTION – C: Eric Harsh Barger's game was used to gauge how well-concentrated kids of school age were. It includes activities that improve focus, such as letter and colour erasure, dot joining, filling in blanks, finding missing numbers, solving puzzles, and tongue twisters, for school-age children.

SCORING AND INTERPRETATION

21 – 26	Poor concentration
15 – 20	Fair concentration
9 – 14	Good concentration
Maximum score	26
Minimum score	9

SECTION – D:

1. Cultivated a cordial connection with the mother of the school-age children and obtained their informed permission.

2. Children's levels of concentration and attention were measured using the Eric Harsh Barger card game and the Modified James B. Snyder Attention Profile respectively in the experimental and control groups.

3. The kids participated in a 30-minute activity designed to boost their concentration for one week.

4. On the 8th day, following the concentration-enhancing activity, the post test was administered using the same instrument.

5. The children in the experimental and control groups were given a post-test to measure their ability to focus and concentrate.

Content Validity: The tool's content authenticity was determined based on the opinions of specialists in paediatrics and paediatric nursing, and pertinent suggestions were taken into consideration.

Validity of tool: In conjunction with four paediatric nursing professionals and one medical expert, the validity of the instrument was determined. Karl Pearson's formulas for attention ($r = 0.9$) and concentration ($r = 0.8$) were used to confirm the instrument's accuracy.

Reliability of tool: The tool's dependability was evaluated utilising the inter rater approach. Modified James B. Snyder's Attention Profile's determined correlation coefficient is 0.88, whereas Eric Harsh Barger's game's correlation coefficient is 0.86.

Because of the high correlation coefficient, the instrument was found to be acceptable for evaluating the effectiveness of concentration improvement activities on students' attention and concentration.

ETHICAL CONSIDERATION

➤ Parents of the chosen subjects gave their consent for the study to be carried out.

➤ The subject's guardians were informed of the research's goals and provided with a signed consent before the study could begin.

➤ The replies were kept private, and the subject and interviewer maintained their professional rapport.

➤ Assent was obtained for the study to be carried out.

DATA COLLECTION PROCEDURE:

The data was collected in the month of January to February from the school age children of Gokul Nagar and Roop Nagar, Hoshiarpur. For final study purposive sampling was done to obtain a sample of 60 school age children i.e. 30 in experimental group and 30 in control group respectively.

The study was conducted after the approval from dissertation committee of SHRI GURU RAM DASS COLLEGE OF NURSING, HOSHIARPUR . Writing permission was taken from Municipal Corporations (MCs) of selected areas of Hoshiarpur, Punjab to conduct the research study.

First, researcher visited the Gokul Nagar, Hoshiarpur, gave self-introduction to the tuition teachers and to the school age children aged between 6 – 12 years.

The sample size was 60 school age children, 30 in experimental group were selected from Roop Nagar and 30 school age children were selected from Gokul Nagar, Hoshiarpur by using purposive sampling technique. They were free to decide to step out of the study at any time according to their will and voluntary nature of study was explained to the participants. Confidentiality of the information obtained from school age children was maintained by researcher.

Level of attention and concentration among school age children was pre-assessed by using Modified James B Synder's attention profile and Eric Harsh Barger Card Game. The sample was selected on the basis of scores of attentions i.e. who had sometimes and often inattentive and on the basis of score of concentration i.e. who were led in fair and poor concentration were selected.

Concentration enhancement activities were given to the experimental group for 30 minutes for 5 days. During data collection, they were assured their responses would be kept confidential and used only for research. On the 7th day, post test was conducted by using Modified James B Synder's attention profile and Eric Harsh Barger Card Game, no concentration enhancement activities were given on this day.

Description of selected personal variables:

The study consisted of 60 samples. The selected personal variables of school age children are described under the subheadings shown in the table.

Nursing Administration

➤ Nurse administrators must help and supervise the nurses in order to ensure that they are doing their job properly.

➤ Concentration-boosting routines might be developed by the nurse administrator.

➤ Instruct parents to maintain tabs on their children's attention spans and check their own attention spans.

➤ Parent-child training sessions should be organized and conducted by her.

NURSING RESEARCH

➤ Nursing research has enabled us to have a better understanding of attention and focus.

➤ Nursing educators and practicing nurses should support research on energy and care in the field of nursing.

➤ In order to improve concentration and attention, nurse researchers should be encouraged to carry out more research.

➤ She should focus on figuring out what's causing the loss of focus and attention in kids.

NURSING EDUCATION

➤ It is the responsibility of nurse educators to inform parents and children about various strategies for enhancing focus and attention.

➤ A range of concentration-enhancement exercises should be included in the school's curriculum in order to educate nurses and recognise the needs of children who lack attention and focus.

➤ To assist nurses become more mindful of attention and concentration issues in children, various practical nursing education and in-service education addressing strategies to promote concentration and attention should be addressed to nurses.

NURSING PRACTICE

➤ It is the role of nurse educators to provide parents and children with information on various methods for improving concentration and focus.

- ➢ Nurses should be educated on the needs of children who have difficulty paying attention and concentrating by including in their curriculum a range of exercises that assist them enhance their concentration.

- ➢ Many practical nursing education and in-service education regarding strategies to improve mental alertness are needed to help nurses better grasp attention and focus in children.

SECTION A: Frequency and percentage of distribution of school age children according to their selected personal variables

Sample Characteristics	Experimental Group (n = 30)		Control Group (n = 30)		df	χ^2
	n	%	n	%		
1. Age (in years)						
a) 6-8	10	33	17	57		
b) 8-10	9	30	7	23	2	3.535^{NS}
c) 10-12	11	37	6	20		
2. Sex						
a) Boy	18	60	14	46	1	1.071^{NS}
b) Girl	12	40	16	54		
3. Birth order						
b) 1st child	12	40	10	33		0.941^{NS}
c) 2nd child	13	43	12	60	2	
c) 3rd child	5	17	8	7		
4. No. of siblings						
a) None	12	37	10	33		0.941^{NS}
b) One	13	43	12	60	2	
c) Two or above	5	17	8	7		
5. Type of family						
a) Nuclear Family	23	77	19	64	1	1.269^{NS}
b) Joint Family	7	33	11	36		
6. Educational status of mother						
a) Primary school	2	7	2	6		0.664^{NS}
b) Higher secondary	13	43	10	34	2	
c) Graduate	15	50	18	60		
7. Mother's occupation						
a) Housewife	9	30	11	37		2.006^{NS}
b) Government employee	3	10	6	20	2	
c) Private employee	18	60	13	43		
8. Educational status of father						
a) Primary school	2	7	2	7		0.685^{NS}
b) Higher secondary	9	30	12	40	2	
c) Graduate	19	64	16	53		
9. Father's occupation						
a) Self employee	6	20	12	40		2.865^{NS}
b) Government employee	9	30	7	33	2	
c) Private employee	15	50	11	37		
10. Family income per month						
a) Rs. 5,000 – Rs. 10,000	4	13	5	17		0.292^{NS}
b) Rs. 10,000 – Rs. 15,000	10	34	11	36	2	
c) Rs. 15,000 & above	16	53	14	47		

SECTION B(a) : Frequency and percentage distribution of pre-test levels of concentration among school age children in experimental and control group.

Sample Characteristics	Experimental Group (n = 30)		Control Group (n = 30)		df	χ^2
	n	%	n	%		
1. Age (in years)						
a) 6-8	10	33	17	57		
b) 8-10	9	30	7	23	2	3.535 NS
c) 10-12	11	37	6	20		
2. Sex						
a) Boy	18	60	14	46	1	1.071 NS
b) Girl	12	40	16	54		
3. Birth order						
b) 1st child	12	40	10	33		0.941 NS
c) 2nd child	13	43	12	60	2	
c) 3rd child	5	17	8	7		
4. No. of siblings						
a) None	12	37	10	33		0.941 NS
b) One	13	43	12	60	2	
c) Two or above	5	17	8	7		
5. Type of family						
a) Nuclear Family	23	77	19	64	1	1.269 NS
b) Joint Family	7	33	11	36		
6. Educational status of mother						
a) Primary school	2	7	2	6		0.664 NS
b) Higher secondary	13	43	10	34	2	
c) Graduate	15	50	18	60		
7. Mother's occupation						
a) Housewife	9	30	11	37		2.006 NS
b) Government employee	3	10	6	20	2	
c) Private employee	18	60	13	43		
8. Educational status of father						
a) Primary school	2	7	2	7		0.685 NS
b) Higher secondary	9	30	12	40	2	
c) Graduate	19	64	16	53		
9. Father's occupation						
a) Self employee	6	20	12	40		2.865 NS
b) Government employee	9	30	7	33	2	
c) Private employee	15	50	11	37		
10. Family income per month						
a) Rs. 5,000 – Rs. 10,000	4	13	5	17		0.292 NS
b) Rs. 10,000 – Rs. 15,000	10	34	11	36	2	
c) Rs. 15,000 & above	16	53	14	47		

SECTION B(a) : Frequency and percentage distribution of pre-test levels of concentration among school age children in experimental and control group

Level of attention	Criterion measures	Experimental Group (n = 30)		Control Group (n = 30)	
		n	%	n	%
Rarely inattentive	0 – 20	0	0	1	3
Sometimes inattentive	21 – 40	16	54	11	36
Often inattentive	41- 50	14	46	18	61

SECTION B(b) : Frequency and percentage distribution of pre test levels of concentration among school age children in experimental and control group

Level of Concentration	Criterion measures	Experimental Group (n = 30)		Control Group (n = 30)	
		n	%	n	%
Good concentration	9 - 14	0	0	0	0
Fair concentration	15 – 20	13	44	12	40
Poor concentration	21 - 26	17	56	18	60

SECTION C (a): Frequency and distribution of the post-test level of attention among school age children in experimental and control group."

Level of attention	Criterion measures	Experimental Group (n = 30)		Control Group (n = 30)	
		n	%	n	%
Rarely inattentive	0 – 20	17	57	2	7
Sometimes inattentive	21 – 40	13	43	11	36
Often inattentive	41- 50	0	0	17	57

SECTION C (b): Frequency and distribution of the post-test level of concentration among school age children in experimental and control group."

Level of Concentration	Criterion measures	Experimental Group (n = 30)		Control Group (n = 30)	
		n	%	n	%
Good concentration	9 - 14	15	50	3	11
Fair concentration	15 – 20	13	43	11	36
Poor concentration	21 - 26	2	7	16	53

SECTION D(a): Comparison of the mean pretest and posttest level of attention score among children in experimental and control group

GROUP	n	Pre- test Mean	SD	Post-test Mean	SD	df	T-test value
Control group	30	38.73	7.352	37.93	8.02	29	0.467^{NS}
Experimental Group	30	31.93	9.03	23.87	8.75	29	3.342^{***}
		Df = 58	$t = 0.402^{NS}$	Df = 58	$t = 6.123^{***}$		

SECTION D(b): Comparison of the mean pre-test and post-test level of concentration score among children in experimental and control group

Group	n	Pre-test Mean	SD	Post-test Mean	SD	df	Paired 't' test value
Control group	30	21.27	2.88	20.50	3.04	29	0.406^{NS}
Experimental Group	30	20.57	3.47	16.60	2.82	29	2.724^{**}
		df	't'		df	't'	
		58	1.8732^{NS}		58	4.665^{***}	

SECTION E(a) : "Relationship of post-test level of attention among children with socio demographic variables in experimental group and control group."

Sample characteristics	Experimental group			Control group		
	N	Mean	SD	n	Mean	SD
Age (in years)						
6-8 years	10	35.4	9.34	17	20	4.43
8-10 years	9	37.5	8.14	7	21	4.35
10-12 years	11	40.54	6.40	6	20.33	2.33
	df = 2,27; f = 1.100^{NS}			**df = 2,27; f = 0.147^{NS}**		
Gender						
Boy	18	37.88	8.505	14	20.35	3.920
Girl	12	38	7.615	16	18.43	5.83
	df = 28; t = 0.0409^{NS}			**df = 28 ; t = 1.042^{NS}**		

Birth order

	n	Mean	SD	n	Mean	SD
1st child	12	39.25	7.78	10	19.9	2.23
2nd child	13	38.76	7.38	12	20.08	3.75
3rd child	5	32.6	9.68	8	19.75	5.41
	df = 2, 27; f = 1.370^{NS}			df= 2,27; f = 0.018^{NS}		

No. of siblings

	n	Mean	SD	n	Mean	SD
None	12	39.25	7.78	10	19.9	2.23
One	13	38.76	7.38	12	20.08	3.75
Two or above	5	32.6	9.68	8	19.75	5.41
	df = 2, 27; f = 1.370^{NS}			df= 2,27; f = 0.018^{NS}		

Type of family

	n	Mean	SD	n	Mean	SD
Nuclear family	23	38.95	6.81	19	20.10	4.25
Joint family	7	34.57	11.12	11	19.63	2.802
	df = 28; t = 1.279^{NS}			df= 28; t= 0.326^{NS}		

Educational status of mother

	n	Mean	SD	n	Mean	SD
Primary school	2	40.5	0.707	2	20.5	2.12
Higher Secondary	13	39.15	8.35	10	21.5	4.35
Graduate	15	36.53	8.31	18	19	3.34
	df = 2,27; f = 0.463^{NS}			df= 2, 27; f = 1.512^{NS}		

Mother's occupation

	n	Mean	SD	n	Mean	SD
Housewife	9	37.11	8.08	11	20.45	4.10
Government employee	3	39.66	21.52	6	20.5	4.54
Private employee	18	38.01	8.80	13	19.23	3.19
	df = 2, 27 ; f = 0.11^{NS}			df= 2, 27 ; f = 0.387^{NS}		

Educational status of father

	n	Mean	SD	n	Mean	SD
Primary school	2	40	1.414	2	19	1.414
Higher Secondary	9	37.88	8.69	12	21.66	3.601
Graduate	19	37.73	8.33	16	18.75	3.66
	df = 2, 27 ; f = 0.068^{NS}			df = 2, 27 ; f = 2.341^{NS}		

Father's occupation

	n	Mean	SD	n	Mean	SD
Self-employee	6	31.33	11.16	12	20.33	3.96
Government employee	9	40.88	5.25	7	19.28	4.38
Private employee	15	38.8	6.93	11	19.90	3.36
	df = 2, 27 ; f = 3.42**			df = 2, 27 ; f = 0.165^{NS}		

Family income per month

	n	Mean	SD	n	Mean	SD
Rs. 5,000 – Rs. 10,000	4	33.5	11.38	5	18.6	2.19
Rs. 10,000 – Rs. 15,000	10	37.9	5.74	11	19.45	3.32
Rs. 15,000 & above	16	39.06	8.49	14	20.78	4.42
	df = 2, 27 ; f = 0.756^{NS}			df = 2, 27 ; f = 0.564^{NS}		

SECTION E(b) : "Relationship of post-test level of concentration among children with socio demographic variables in experimental group and control group."

Sample characteristics	Experimental group			Control group		
	n	Mean	SD	n	Mean	SD
Age (in years)						
6-8 years	10	15.1	3.080	17	19.23	3.96
8-10 years	9	16.55	3.562	7	21.71	3.03
10-12 years	11	16.72	2.935	6	21	1.788
	df = 2, 27, f = 0.794^{NS}			df = 2, 27 f =1.500^{NS}		
Gender						
Boy	18	16.77	3.153	14	20.64	2.87
Girl	12	15.33	3.55	16	19.75	4.04
	df = 28, t = 1.166^{NS}			df = 28, t = 0.686^{NS}		

Birth order

1st child	12	15.33	2.67	10	19.9	3.60
2nd child	13	16.15	3.80	12	21.08	3.34
3rd child	5	18	2.91	8	19.12	3.75
	df = 2, 27, f = 1.190^{NS}			df = 2, 27 f =0.779^{NS}		

No. of siblings

None	12	15.33	2.67	10	19.9	3.60
One	13	16.15	3.80	12	21.08	3.34
Two or above	5	18	2.91	8	19.12	3.75
	df = 2, 27, f = 1.190^{NS}			df = 2, 27 f =0.779^{NS}		

Type of family

Nuclear family	23	16.60	3.08	19	18.84	3.35
Joint family	7	14.57	3.64	11	20.72	3.875
	df = 28, t = 1.465^{NS}			df = 28, t = 1.40^{NS}		

Educational status of mother

Primary school	2	15.5	3.53	2	17.5	6.36
Higher Secondary	13	17.53	3.17	10	19	4.02
Graduate	15	15	3.07	18	21.11	2.74
	df = 2 , 27, f = 2.314**			df = 2, 27, f = 1.888^{NS}		

Mother's occupation

Housewife	9	17.55	3.16	11	19.27	3.77
Government employee	3	14	2.64	6	19.83	3.71
Private employee	18	15.77	3.28	13	21.07	3.25
	df = 2, 27, f = 1.603^{NS}			Df = 2, 27, 26 f =0.805^{NS}		

Educational status of father

Primary school	2	20	2.82	2	19.5	3.53
Higher Secondary	9	16.55	3.004	12	19.66	3.27
Graduate	19	15.52	3.27	16	20.62	3.51
	df = 2, 27, f = 1.912^{NS}			df = 2, 27 f =0.280^{NS}		

Father's occupation

Self-employee	6	18	3.63	12	19.41	4.31
Government employee	9	15.66	2.82	7	20.85	2.26
Private employee	15	15.66	3.33	11	20.54	3.32
	df = 2, 27, f = 1.246^{NS}			df = 2, 27 f =0.456^{NS}		

Family income per month

Rs. 5,000 – Rs. 10,000	4	17.75	2.62	5	18.5	4.33
Rs. 10,000 – Rs. 15,000	10	15.6	2.41	11	21	3.37
Rs. 15,000 & above	16	16.06	3.87	14	20.07	3.38
	df = 2, 27, f = 0.607^{NS}			df = 2, 27 f =0.867^{NS}		

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