Scholars Journal of Applied Medical Sciences

OPEN ACCESS

Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

Community Health Nursing

A Pilot Study on Effectiveness of Selected 'Yogasanas with Meditation' on Concentration and Self Esteem among Adolescents with Poor Scholestic Performance

Mr. Renukaraj Y. Nagammanavar[1*], Dr. Deelip S. Natekar[2], Mr. Santosh S. Sajjan[3]

[1]PhD Scholar, Associate Professor, Department of Community Health Nursing, B.V.V.S., Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot
[2]Principal, B.V.V.S., Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot
[3]PhD Scholar, Associate Professor, Department of Child Health Nursing, B.V.V.S., Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot

DOI: https://doi.org/10.36347/sjams.2025.v13i03.022 | **Received:** 12.02.2025 | **Accepted:** 16.03.2025 | **Published:** 19.03.2025

***Corresponding author:** Mr. Renukaraj Y. Nagammanavar
PhD Scholar, Associate Professor, Department of Community Health Nursing, B.V.V.S., Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot

Abstract **Original Research Article**

Background: Today, every fifth person in India is an adolescent (10-19 years). While there are many factors that significantly affect adolescence, once which has been often overlooked is mental health and well-being. Mental health issues constitute a major burden of disease for adolescents globally. It is estimated that one in five adolescents will experience a mental health disorder each year, despite this, adolescent mental health and well-being have often been overlooked in global health programming. Regular yoga practice among adolescents improves the mood and changes how stress, anxiety, and fatigue are perceived. Yoga also helps improve cognitive functioning, especially the individual's memory, and performance. A 20-minute yoga session every day can improve an adolescent's performance in tests, in terms of accuracy and speed. ***Methods:*** Data is collected from adolescents studying in selected high schools of Bagalkot. Quantitative approach is used. Quasi experimental time series design is used. In the present study population is adolescents, studying in various high schools of Bagalkot district. The investigator has planned a sample size of 200 adolescents, 100 for experimental group and 100 for control group by using academic performance rating scale (APRS). The sample size will be finalized by using power analysis, assuming 5% drop out with 80 % power to detect a difference of 50 % of effect size and, at 5% level of significance. Proportional Stratified Random Sampling Technique **is** used to select the sample for the present study. ***Results:*** Data analysis of pilot study data shows that there was no significant difference between experimental group children and control group children in forms of socio demographic variables and outcome variables at baseline. Hence both the groups were homogeneous at pre interventional level. Pretest mean and SD was 10.3 and 2.58 in experimental group, post mean and SD was 6.8 and 1.93. In control group pretest mean and SD was 8.9 and 2.23. Post test mean 8.7 and SD 2.26. Self-esteem pretest mean and SD was 19.8 and 5.37 in experimental group, post mean and SD was 24.4 and3.56. In control group pretest mean and SD was 20.2 and 4.98. Post test mean 20.5 and SD 4.83 among control group. mean concentration post-test score (6.8 ± 1.93) of adolescents in experimental group is significantly lower than post-test (8.7 ± 2.26) scores of control group ($U=25.5$, $P<0.05$) which shows the Yogasanas with Meditation was effective in improving the concentration among o Adolescents with Poor Scholastic Performance in experimental group as compared to control group. data regarding self-esteem was tested the histogram was found normally distributed with Shapiro Wilk P Value = 0.55. Hence independent t test was used to assess the effectiveness of Yog asanas with Meditation on self-esteem among Adolescents with Poor Scholastic Performance. The mean pre-test score of children in experimental group was 19.8±5.37 which increased to 24.4 ± 3.56 in post-test whereas the mean pre-test score of control group was 20.2±4.98 which increased to 20.5±4.83 in post-test. The calculated value was 2.05 with P value <0.05, suggesting the Yogasanas with Meditation was effective in improving the self-esteem scores among adolescents of experimental group as compared to adolescents of control group. ***Conclusion:*** After practicing 'Yogasanas with meditation', adolescents' scholastic performance will be improved, in turn that will be a good contribution to produce young population to build the nation in positive direction.

Keywords: Adolescent mental health, Yoga, Meditation, Scholastic performance, Self-esteem.

INTRODUCTION

"Yoga is like music. The rhythm of the body, the melody of the mind and the harmony of the soul creates the symphony of life." ---- BKS Iyengar

Health is the most important asset of human being. Today health has a holistic backdrop and is based on physical, social, spiritual and psychological well-being. The emphasis of today's health care is on preventive and primitive aspects rather than on curative and treatment aspects [1].

Regular yoga practice among adolescents improves the mood and changes how stress, anxiety, and fatigue are perceived. Yoga also helps improve cognitive functioning, especially the individual's memory, and performance. A 20-minute yoga session every day can improve an adolescent's performance in tests, in terms of accuracy and speed. The breathing exercises in yoga improve concentration. Yoga teaches adolescents how to use their breath to stay focused on the task at hand. Yoga is an excellent way to help to deal with the overwhelming emotional and physical changes during adolescence. Adolescents who practice yoga are less stressed and perform better than their counterparts in academics [2].

NEED FOR THE STUDY

''Snow and adolescence are the only problems that disappear if you ignore them long enough''.
------- Earl Wilson

Adolescence (10-19 years) is a phase of life which has recently gained recognition as a distinct phase of life with its own special needs. This phase is characterized by acceleration of physical growth and, psychological and behavioral changes thus bringing about transformation from childhood to adulthood [3].

Many adolescents suffer from problems such as anxiety and depression, which cause them pain and suffering. Some adolescents harm themselves as a result of these problems. Sadly, suicide is a leading cause of death among adolescents. However adolescents could take steps to protect their emotional well-being, and as with other illnesses, there is much that caring people around them could do to help [4].

Today, every fifth person in India is an adolescent (10-19 years). While there are many factors that significantly affect adolescence, once which has been often overlooked is mental health and well-being. Mental health issues constitute a major burden of disease for adolescents globally. It is estimated that one in five adolescents will experience a mental health disorder each year, despite this, adolescent mental health and well-being have often been overlooked in global health programming. Yet, in the Sustainable Development agenda, mental health is being more critically recognized as an important component of the global health agenda. The inclusion of mental health in the Sustainable Development agenda is a crucial step toward reducing preventable deaths among adolescents [5].

REVIEW OF LITERATURE

According to Miss. Prerna Jain of S.D.H. Jain Vidyalaya, Madurai, the State second rank holder, "I have been practicing yoga since childhood and it improved my concentration and helped me score good marks." In the last two years, her school has produced two State ranks and also witnessed five per cent jump in number of students securing an aggregate of 90 per cent and above. No one in the school denies the contribution of yoga in bringing about this change. Every day the school conducts yoga classes for all its students and exclusive sessions for X and XII standard students to improve their concentration. "I still remember our yoga classes. Our yoga teacher grouped us in different teams and asked us to do asanas that would best reflect the given topic. It invigorated us," says A. Sanjana, State topper of board exams from the same school [6].

A study was conducted by Dr. Amit Kouts and Neelam Sharma on effect of yoga on concentration and memory in relation to stress with 800 adolescent students. Experimental group and control group were given pre-test to assess their concentration as well as short term memory. A yoga module consisting of yoga asanas, pranayama, meditation, prayer and a value orientation programme was administered on experimental group for 7 weeks. The experimental and control groups were post-tested for their performance in concentration and memory tests. The results showed that the students, who practiced yoga module yielded higher concentration levels and exhibited better short term memory [7].

STATEMENT OF THE PROBLEM

Effectiveness of 'Yogasanas with Meditation' on Concentration and Self Esteem among Adolescents with Poor Scholastic Performance.

OBJECTIVES

1. To assess the pretest level of Concentration and Self-esteem among adolescents of intervention and control group.
2. To determine the effectiveness of selected Yogasanas with meditation on concentration and self-esteem among adolescents of intervention group.
3. To compare the posttest concentration and self-esteem scores between intervention and control group.
4. To find the association between pretest levels of concentration and self-esteem with selected baseline variables.

HYPOTHESES

H_1: The difference between level of concentration before and after intervention will be significantly higher in experimental than the control group.

H_2: The difference between level of self-esteem before and after intervention will be significantly higher in experimental than the control group.

H_3: The difference between level of scholastic performance before and after intervention will be significantly higher in experimental than the control group.

H_4 There will be significant association between level of concentration and selected socio demographic characteristics among adolescents of experimental and control group

H_5: There will be significant association between self-esteem and selected socio demographic characteristics among adolescents of experimental and control group.

H_6: There will be significant association between scholastic performance and selected socio demographic characteristics among adolescents of experimental and control group.

DELIMITATIONS

The study is delimited to,

1. Adolescents studying in selected High Schools.
2. Assessment is only of concentration, self-esteem and scholastic performance of adolescents.

MATERIAL AND METHODS

Source of Data Collection

Data is collected from adolescents studying in selected high schools of Bagalkot.

Research Approach

Quantitative approach.

Research Design

Quasi experimental time series design is used.

Population

Population: In the present study population is adolescents, studying in various High Schools of Bagalkot district.

Sample and Sample Size

The sample of study is 200 adolescents studying in selected High Schools of Bagalkot.

The investigator has planned a sample size of 200 adolescents, 100 for experimental group and 100 for control group by using academic performance rating scale (APRS). The sample size will be finalized by using power analysis, assuming 5% drop out with 80 % power to detect a difference of 50 % of effect size and, at 5% level of significance.

Sampling Technique

Proportional Stratified Random Sampling Technique was used to select the sample for the present study.

Criteria for Selection of Sample

Inclusion criteria for sampling

The study includes adolescents, who were,

- having poor scholastic performance.
- studying in selected high schools of Bagalkot.
- able to understand Kannada or English.
- available at the time of data collection.
- willing to participate in the study.

Exclusion criteria for sampling

The study excludes adolescents, who were,

- sick at the time of data collection
- unable to cooperate through the period of study.
- who are already on any intervention for improving their scholastic performance.
- who are not willing to give written consent.

VARIABLES UNDER STUDY

► Independent Variable

Selected 'Yogasanas with meditation'.

► Dependent Variable

Concentration and self-esteem of adolescents with poor scholastic performance.

► Selected Socio demographic Variables:

- Age
- Sex
- Religion
- Year of studying
- Father's education
- Mother's education
- father's occupation
- Mother's occupation
- Monthly family income
- Type of family
- Number of siblings
- Birth Order
- Have you ever practiced yoga or meditation?
- Are you undergoing any programme to improve scholastic performance?

Data Collection Instruments

- The Data was collected from fallowing instruments divided under 5 sections.
- **Section I:** includes items related to selected socio demographic characteristics of adolescents.
- **Section II:** The Academic Performance Rating Scale (APRS) is a 19-item scale developed by George J. DuPaul and Mark D. Rapport, to reflect teachers' perceptions of children's

academic performance and abilities in classroom settings. It is a brief teacher questionnaire that provides reliable and valid information about the quality of a student's academic performance and behavioral conduct in educational situations. It is a 5-point scale. Higher the score better the scholastic performance and vice versa. An adolescent with score 38 or less is considered to have poor scholastic performance.

- **Section III:** The structured concentration questionnaire scale was used to assess the concentration level among adolescents. The instrument includes total 20 items with dichotomous YES or NO options. The interpretations of the scale are as follows. A low score (approximately 0-6) means adolescents have good attention skills and are probably already using many good concentration strategies. A middle-range score (approximately 7-13) means adolescents already be using some good concentration strategies but they will likely benefit from learning more about how to improve their concentration abilities. A high score (approximately 14-20) means it is very likely an adolescent need help to your concentration skills.
- **Section IV:** The Rosenberg Self Esteem Scale was used to collect the data regarding self-esteem of adolescents. The scale is developed by Sociologist Dr. Morris Rosenberg. This is a type of Likert scale. This is the scale of 10 items with 5 points ranging from strongly agree to strongly disagree. The score of the scale ranges between 0-30. The score below 15 may indicate a problematic low self-esteem. The RSES is a valid & reliable quantitative tool for self-esteem assessment.

Plan for Data Analysis

Analysis of the data was done in accordance with the objectives with the help of descriptive and inferential statistics.

1. **Descriptive Statistics**.

Frequency, percentage distribution, mean, standard deviation was used to summarize the data.

2. **Inferential Statistics.**
   a. **Paired 't' test:** to analyze the difference between pretest and post test scores of concentrations and self-esteem in experimental group and control group.
   b. **Independent 't' test:** to analyze the effectiveness of intervention on level of concentration, self-esteem and scholastic performance by comparing the outcome of experimental and control group.
   c. **Chi – square test:**
      - For matching of the groups before implementation of "selected Yogasanas with Meditation".
      - To ascertain association between scholastic performance, level of concentration and self-esteem with selected socio demographic variables of adolescents of both experimental and control group.

Projected Outcome:

After practicing 'Yogasanas with meditation', adolescents' scholastic performance will be improved, in turn that will be a good contribution to produce young population to build the nation in positive direction.

RESULTS

Section–I

Description of Demographic characteristics of High School Students

Table No. 1: To test the feasibility of intervention, homogeneity of group was assessed and effectiveness of intervention was assessed. N1=10, N2=10

Sl No	Demographic Variables	Categories	Experimental group		Control Group	
			F	%	F	%
1	Age	a.14	2	20%	3	**30%**
		b.15	2	20%	2	**20%**
		c.16	3	30%	4	**40%**
		d.17	3	30%	1	**10%**
2	Gender	a. Male	6	60%	7	**70%**
		b. Female	4	40%	3	**30%**
3	Religion	a. Hindu	9	90%	8	**80%**
		b. Muslim	1	10%	1	**10%**
		c. Christian	0	0%	1	**10%**
		d. Others	0	0%	0	**0%**
4	Year Of Studying	a.8thstandard	5	50%	3	**30%**
		b.9thstandard	3	30%	3	**30%**
		c.10th standard	2	20%	4	**40%**

5	Father's Education	a. Illiterate	1	10%	0	**0%**
		b. Primary education	3	30%	3	**30%**
		c. Secondary education	3	30%	4	**40%**
		d. P.U.C.	1	10%	2	**20%**
		e. Graduation and above	2	20%	1	**10%**
6	Mother's Education	a. Illiterate	2	20%	5	**50%**
		b. Primary education	3	30%	3	**30%**
		c. Secondary education	4	40%	2	**20%**
		d. P.U.C.	0	0%	0	**0%**
		e. Graduation and above	1	10%	0	**0%**
7	Father's Occupation	a. Coolie/labor	0	0%	0	**0%**
		b. Farmer	4	40%	2	**20%**
		c. Business	2	20%	2	**20%**
		d. Government employee	1	10%	2	**20%**
		e. Private company employee	1	10%	1	**10%**
		f. Unemployed	2	20%	3	**30%**
8	Mother's Occupation	a. Housewife	3	30%	1	**10%**
		b. Coolie/labor	3	30%	2	**20%**
		c. Farmer	2	20%	2	**20%**
		d. Business	0	0%	2	**20%**
		e. Government employee	0	0%	1	**10%**
		f. Private company employee	2	20%	1	**10%**
9	Monthly Income	a.<10000/-	1	10%	1	**10%**
		b.10001-20000/-	3	30%	2	**20%**
		c20001-30000/-	4	40%	5	**50%**
		d. >30001/-	2	20%	2	**20%**
10	Type of family	a. Nuclear family	5	50%	5	**50%**
		b. Joint family	3	30%	4	**40%**
		c. Extended family	2	20%	1	**10%**
11	Number of Siblings	1	6	60%	5	**50%**
		2	3	30%	4	**40%**
		>2	1	10%	1	**10%**
12	Birth Order	a. First	8	80%	7	**70%**
		b. Second	2	20%	3	**30%**
		c. Third and above	0	0%	0	**0%**
13	Have You Ever Practiced Yoga or Meditation	a. Yes	1	10%	2	**20%**
		b. No	9	90%	8	**80%**
14	Have You Ever Under gone Any Programme to Improve Scholastic Performance	a. Yes	3	30%	2	**20%**
		b. No	**7**	**70%**	**8**	**80%**

Section II

Table2: frequency and percentage distribution of pre-test and post-test level of concentration in both experimental and control group. N1=10, N2=10

Levels of Concentration	**Scores**	**Pretest**				**Post test**			
		N1=10				**N2=10**			
		Experimental group		**Control group**		**Experimental group**		**Control group**	
		F	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Good	0-6	1	10%	2	20%	2	20%	2	**20%**
Moderate	7--11	6	60%	7	70%	8	80%	7	**70%**
Low	**12--16**	**3**	**30%**	**1**	**10%**	**0**	**0%**	**1**	**10%**

Table no.2 shown that in the pre-test the experimental group had 1(10%) of good level of concentration, 6(60%) of moderate level of concentration and 3(30%) of low level of concentration. where as in the post test, 2(20%) of good level of concentration, 8(80%) of moderate level of concentration. And in the control group 2(20%) of good level of concentration, 7(70%) of moderate level of

concentration and 1(10%) of low level of concentration in the pre-test where as in the post test, 2(20%) of good level of concentration, 7(70%) of moderate level of concentration and1(10%) of low level of concentration.

Table 3: Frequency and percentage distribution of pre-test and post-test level of self- esteem in both Experimental and Control group. N1=10, N2=10

Levels of Self Esteem	Scores	Pretest				Posttest			
		N1=10				N2=10			
		Experimental Group		Control Group		Experimental Group		Control Group	
		F	%	F	%	F	%	F	%
Very Low	10--16	2	20%	2	20%	0	0%	1	**10%**
Low	17--22	4	40%	5	50%	2	20%	5	**50%**
Moderate	23-29	3	30%	2	20%	6	60%	3	**30%**
High	30--35	1	10%	1	10%	2	20%	1	**10%**
Very High	**36--40**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**

Table no.3 revealesthatinthepre-testtheexperimentalgrouphad2(20%) of very low level of self-esteem,4(40%) of low level of self-esteem, 3(30%) of moderate level of self-esteem, and 1(10%) of high level of self-esteem. where as in the post test, 2(20%) of low level of self- esteem,6 (60%) of moderate level of self-esteem, and 2 (20%) of high level of self-esteem. And in the control group 2(20%) of very low level of self-esteem, 5(50%) of low level of self- esteem, 2(20%) of moderate level of self-esteem, and 1(10%) of high level of self-esteem in pretest. Where as in the posttest, 5 (50%) of low level of self-esteem, 3 (30%) of moderate level of self-esteem, and 1(10%) of high level of self-esteem.

Section III

Table 4: Pretest and Post test comparison of mean and SD between Experimental and Control groups. N1=10, N2=10

SL No	Variables	Experimental group				Control group			
		Pre test mean	Pre test SD	Post test Mean	Post test SD	Pre test mean	Pre test SD	Post test mean	Post test SD
1	Concentration	10.3	2.58	6.8	1.93	8.9	2.23	8.7	**2.26**
2	**Self-esteem**	**19.8**	**5.37**	**24.4**	**3.56**	**20.2**	**4.98**	**20.5**	**4.83**

Table 4: Depicts pretest mean and SD was 10.3 and 2.58 in experimental group, post mean and SD was 6.8 and 1.93. In control group pretest mean and SD was 8.9 and 2.23. Post test mean 8.7 and SD 2.26. Self-esteem pretest mean and SD was 19.8 and 5.37 in experimental group, post mean and SD was 24.4 and3.56. In control group pretest mean and SD was 20.2 and 4.98. Post test mean 20.5 and SD 4.83 among control group.

Section IV: Effectiveness of 'Yogasanas with Meditation' on level of Concentration among Adolescents with Poor Scholastic Performance

Table 5: Effectiveness of 'Yogasanas with Meditation' on level of Concentration among Adolescents with Poor Scholastic Performance. N1=10, N2=10

Group	Posttest Mean±SD	Mean rank	Sum of ranks	Mann Whitney U	P value
Experimental Group	6.8 ± 1.93	8.05	80.5	25.5	**0.03***
Control Group	**8.7 ± 2.26**	**12.95**	**129.5**		

***: P<0.05**

Table 5: Shown that the mean concentration post-test score (6.8 ± 1.93) of adolescents in experimental group is significantly lower than post-test (8.7 ± 2.26) scores of control group (U=25.5, P<0.05) which shows the Yogasanas with Meditation was effective in improving the concentration among o Adolescents with Poor Scholastic Performance in experimental group as compared to control group.

Section V: Effectiveness of 'Yogasanas with Meditation' on level of self-esteem among Adolescents with Poor Scholastic Performance

Table 6: Effectiveness of 'Yogasanas with Meditation' on level of self-esteem among Adolescents with Poor Scholastic Performance. N1=10, N2=10

Group	Pre-test Mean±SD	Post-test Mean±SD	Mean difference	Standard error	T-value	P-value
Experimental Group	19.8± 5.37	24.4± 3.56	3.9	0.4	2.05	**0.02***
Control Group	**20.2 ± 4.98**	**20.5± 4.83**				

***: P<0.05**

Table 6 depicts the data regarding self-esteem was tested the histogram was found normally distributed with Shapiro Wilk P Value = 0.55. Hence independent t test was used to assess the effectiveness of Yog asanas with Meditation on self-esteem among Adolescents with Poor Scholastic Performance. The mean pre-test score of children in experimental group was 19.8±5.37 which increased to 24.4 ± 3.56 in post-test whereas the mean pre-test score of control group was 20.2±4.98 which increased to 20.5±4.83 in post-test. The calculated value was 2.05 with P value <0.05, suggesting the Yogasanas with Meditation was effective in improving the self-esteem scores among adolescents of experimental group as compared to adolescents of control group.

CONCLUSION

Today, every fifth person in India is an adolescent (10-19 years). While there are many factors that significantly affect adolescence, once which has been often overlooked is mental health and well-being. Mental health issues constitute a major burden of disease for adolescents globally. It is estimated that one in five adolescents will experience a mental health disorder each year, despite this, adolescent mental health and well-being have often been overlooked in global health programming. Yet, in the Sustainable Development agenda, mental health is being more critically recognized as an important component of the global health agenda. The inclusion of mental health in the Sustainable Development agenda is a crucial step toward reducing preventable deaths among adolescents.

REFERENCES

1. Park K. Text book of preventive and social medicine 24th edition. 2016 M/S Banaridas Bhanot Publishers. 1167, Prem Nagar, Jabalpur./ page no 273-277.
2. Akruti. 8 benefits of Yoga for Teenagers and 13 simple poses. Mom Junction. Jan 2017. http://www.momjunction.com
3. Adolescent growth and development. Rastriya Kishor Swasthya Karyakram. Resource book by Ministry of Health and Family Welfare. Vikaspedia. Sep 2018.
4. Adolescent Friendly Health Services. Rastriya Kishor Swasthya Karyakram. Resource book by Ministry of Health and Family Welfare. http://www.mohfw.nic.in.
5. Kapungu. Gendered influences on adolescent mental health in low-income and middle-income countries: recommendations from an expert convening. The Lancet Child & Adolescent Health. 2017. Volume 2. Issue 2. 85 – 8
6. Saravaran T. Yoga is changing scores. The Hindu. Sep 2015. available from http://www.thehindu.com.
7. Kouts Amit. Sharma Neelam. Effect of yoga on concentration and memory in relation to stress. ResearchGate. 2018. www.researchgate.com.