



An experimental study to assess the effectiveness of yoga therapy on reducing level of stress among 10th standard students in selected schools, Bangalore.

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Abstract

Introduction and objectives

The study was to identify the increasing level of stress among the 10th standard students. Stress caused in students is the important factor resulting in poor results and hamper their health. Increased amount of stress results in the students getting anxious and afraid of not achieving the goal and disappointing the dreams of their parents and teachers. In Indian system of education 10th standard is considered as the building block of future of a child hence the importance and stress faced by students is extreme. The study aims at assessing the level of stress faced by students and checking the effectiveness of yoga therapy in reducing the stress level.

Methods: An experimental design and an evaluative approach were used to assess the effectiveness of yoga therapy on reducing level of stress among 10th standard students in selected schools, Bangalore. In view of the nature of the problem and to accomplish the objectives of the study, a student’s academic stress scale was modified to assess the stress among 10th standard students. Reliability (0.99) of tool was tested and validity was

ensured in consultation with Guides and Experts in the field of medicine and nursing. The study was conducted in Udaya public school, and East west school, Bangalore. 30 experimental and 30 control groups of 10th standard students were selected by simple random sampling and students stress scale was used to collect the data. Collected data was analyzed by using descriptive and inferential statistics.

Results: Among the 60 samples majority of the 10th standard students i.e., in pretest 40% students had severe stress level as followed by 60% of students had moderate stress level. In posttest it is all students 100% had a mild stress level in experimental group. And in control group, 56.7% moderate stress and 43.3% had severe stress in pretest and in posttest also 56.7% had moderate stress as followed by 43.3% severe stress. So, the result of the study revealed that reduction in stress level after yoga therapy among experimental group, and in control group there was no reduction in stress level.

Conclusion: Thus, the above study results reveal that there is reduction in the stress level of 10th standard students after yoga therapy in the experimental group but

no reduction of stress level in the control group

Keywords: Effectiveness, yoga, stress, students

Introduction

“Stress is nothing more than socially acceptable form of mental illness” Richard Carlson Let’s start with a little theory A number of studies suggest a close relationship between stress levels and success all the studies basically arrive at the same conclusion: Stress helps to improve our efficiency, but only up to a certain point. Once this point is reached if stress continues to increase, the quality of our performance begins to decline. Stress comes in all forms and is an unavoidable consequence of life. Transient feeling of anxiety and stress is part of life for every individual, in course of normal development transient feeling anxiety is experienced and usually mastered by every child and adolescent. A mild degree of anxiety and stress may be stimulating and motivating and may help to overcome stress. Stress is natural part of being human; it’s your body responding to changes in the world around you. It changes how your body works and puts your mind into different moods. When you get a bit stressed about an exam it just means that you really care about the results you will get. That can be a good thing if it pushes you into working extra hard as you try to get a good score. But it can be bad if you get too worried and effects of stress stop doing well. Everyone gets stressed out, even children. While we may think of childhood as a care free time with few major responsibilities, the truth is that our preteen and teens have 19 plenty to worry about from everyday challenge like tests and after school activities of life. Stress is the body’s way of preparing to meet tough situation with focus, strength, stamina, and heightened alertness. The word yoga means ‘unity’ or ‘oneness’ and is derived from the Sanskrit word ‘yuj’ which means ‘to join’. Yoga has a diverse range of things that it can offer. It could be said that a primary goal of

yoga is to gain balance and control in one's life. To free one from confusion and distress.

To provide a sense of calm that comes from the practice of yogic exercises and the practice of breath control. The practice of yoga exercises aims at overcoming the limitations of the body. Other forms of exercises are good but good is not enough; they strain the muscles, joints, the entire skeletal system and cause free radical damage at a cellular level. Yoga will teach you that the goal of every individual's life should be to take journey inside one's self. When there is perfect harmony between mind and body, we achieve total balance and control. A study done on prevalence of stress in students at some schools in Kerala, evaluating children of all grades from 1st to 12th, in order to cover all age groups from 4-17 years. Subjects were taken from seven identified schools from Trivandrum, Kerala. A total of 667 school children between age of 4 and 17, were screened from seven schools in Trivandrum district.

A standardized stress assessment scale was used to collect the data from the sample using Spearman-Brown Prophecy formula (garret, 1969). The results indicate that 93 to 100% of the children aged 4 to 17 years showed medium to moderate stress while 1.9% severe stress. This suggests that in every age more than 90% of the school children of the state are facing above normal levels of stress and tension. Also, more than 97% of the children above 10 years showed above average stress.

More number of children with severe stress was observed at the 21 ages of 14 whereas the majority of the children between 13 to 15 showed moderate or severe level of stress than any other age groups. Similar results were obtained in a study done in Brazil by C. R. Sbaraini and B. Schermann (2007). A total of 883 children studied, 27.2% of children over 10 years and 18.2% of 14-year-

old children showed a significantly higher prevalence of stress.

Materials and method

Research methodology is a systemic way to solve the research problem (Kothari 1990). It consists of all general and specific activities from the identification and conclusion. The role of methodology is to carry on the research work in a scientific and valid number. This deals with the methodology adopted for the proposed study. It includes research approach, research design, setting, population, sample size, criteria for sample selection, development and description of tools, plan for data analysis and protection for human subjects.

Materials and method Source of data

Data was collected from the 10th standard students having severe stress to low stress in the schools of East west school, Rajajinagar and Udaya school, Vijanagar, Bangalore

Variables

Independent variable

yoga therapy for reducing the level of stress

Dependent variable

level of stress among 10th standard students.

Demographic variables

Sampling technique

Sampling refers to the process of selecting the portion of population to represent the entire population. In this study simple random sampling was adopted. Section - A: A frequency and percentage distribution of demographic characteristics of respondents in the experimental and control groups.

Table 1 Classification of Respondents by Personal Characteristics age, sex, and ordinal position, leisure time at school & home sufficient, and education, occupation and marital status of parent. n=E- 30, C-30.

Characteristics	Category	Respondents Group					
		Experimental (n=30)		Control (n=30)		Combined (n=60)	
		N	%	N	%	N	%
Age Group	14 years	11	36.7	12	40.0	23	38.3
	15 years	8	26.6	8	26.7	16	26.7

Age, Sex, Education status of parents, Socioeconomic status, Occupation of parents, Religion, Type of family, Birth order, Area of residence, Recreational activities.

Settings

Setting is location for conduction research. The study was conducted in East west public school, Rajajinagar and Udaya public school, Vijayanagar, Bangalore.

Population

Population is the entire aggregation of the cases that meet a designed set of criteria. In the present study, population consisted of all students in 10th standard at East west public school, and Udaya public school Bangalore.

Sample

Sample consists of subject of the population selected to participate in a research study. In the present study the sample consisted of 10th standard students with moderate to severe stress and full filling inclusion criteria in both East west and Udaya public school, Bangalore.

Sample size

In the present research study, the sample size is 60, 10th standard students, 30 in control group and 30 in experimental group.

	16 years	11	36.7	10	33.3	21	35.0
Sex	Male	13	43.3	17	56.7	30	50.0
	Female	17	56.7	13	43.3	30	50.0
Ordinal Position	First	21	70.0	17	56.7	38	63.3
	Second	9	30.0	13	43.3	22	36.7
Leisure time at school & Home Sufficient	Yes	5	16.7	26	86.7	31	51.7
	No	25	83.3	4	13.3	29	48.3
Education of Parents	Secondary	9	30.0	10	33.3	19	31.7
	PUC	14	46.7	9	30.0	23	38.3
	Graduate	7	23.3	11	36.7	18	30.0
Occupation of Parents	Private	23	76.7	12	40.0	35	58.3
	Self employed	0	0.0	7	23.3	7	11.7
	Others	7	23.3	11	36.7	18	30.0
Marital status of Parents	Married	30	100.0	30	100.0	60	100.0
	Divorced	0	0.0	0	0.0	0	0.0

Table 1 Depicts that in experiment group majority of the respondent 11 (36.7%) of the sample were in the age of 14years and 16years. In the control group 12 (40.0%) of sample were in the age 14 years followed by 10 (33.3%) of the sample were in the age 16years.

With regard to the sex of students in experimental group majority of the respondent 17 (56.7%) were girls but in control group, 17 (56.7%) were boys.

In the experimental group students 21 (70.0%) were first born children 9 (30.0%) were second born in their family, even in the control group students 17 (56.7%) were first born and only 13 (43.3%) were second born children. In the experimental group 25 (83.3%) agree that the leisure time provided is not sufficient at both home and school but in the control group 26 (86.7%) agree that

they are provided with sufficient time for leisure at school and home.

With regard to the education of parent, in the experiment group 9 (30.0%) of parent has secondary education, 14 (46.7%) are PUC and remaining 7 (23.3%) are graduate. In the control group, 10 (33.3%) have secondary education, 9 (30.0%) are PUC and 11 (36.7%) were graduates. Occupation of the parent in the experimental group, around 23(76.7%) were privately employed in the control group, 12(40.0%) were privately employed and 7(23.3%) were self-employed and 11 (36.7%) come in other category. The marital status also effects the stress in both the experimental and control group 30(100%) are married.

Assessment of level of stress in the experimental and control group before Yoga therapy.

Table 2: Assessment of pre- test level of stress among 10th standard students in Experimental and Control Group

Stress Level	Category	Respondents Group				χ ² Value
		Experimental		Control		
		N	%	N	%	

Mild	26-50 Score	0	0.0	0	0.0	0.07
Moderate	51-75 Score	18	60.0	17	56.7	
Severe	76-100 Score	12	40.0	13	43.3	
Total		30	100.0	30	100.0	NS

NS : Non-Significant,

$$\chi^2 (0.05, 1df) = 3.841$$

The above table 3 depicts that there were 18(60%) samples with moderate stress level and 12(40%) with severe level of stress in the experimental group. In the control group, 17(56.7%) had moderate stress and 13(43.3%) of the samples had severe stress level. The

statistical test (χ^2) also indicated a non-significant difference in the stress levels of the two groups. The chi-square value was 0.07 which was non-significant at 5% level of degree of freedom.

Section C- Assessment of level of stress of in the experimental and control group after Yoga therapy

Table 3: Assessment of on Post-test Stress Level among 10th standard students in Experimental and Control Group.

Stress Level	Category	Respondents Group				χ^2 Value
		Experimental		Control		
		N	%	N	%	
Mild	26-50 Score	30	100.0	0	0.0	60.00*
Moderate	51-75 Score	0	0.0	17	56.7	
Severe	76-100 Score	0	0.0	13	43.3	
Total		30	100.0	30	100.0	

*Significant at 5% Level, $\chi^2 (0.05, 2df) = 5.991$

Post-test finding in table 5 revealed that all the students 30 (100%) were having mild stress level in the experimental group, and in control group 17 (56.7%) were having moderate stress followed by 13 (43.3%) were having severe stress level. It is evident from the result that the pain was found to considerably decreased among samples in the experiment group than in the control group. The statistical test (χ^2) also indicated a significant difference in the stress level of the two groups. The chi-square value was 60.00 which is significant at 5% level for 2-degree freedom.

Findings of the study

Section 1: Demographic Characteristics. Section 2: Objectives of the study.

Findings Related to the Demographic Characteristics

Pre-test was administered to elicit information on demographic data and investigator administered academic stress assessment scale to both experimental and control groups. Further 7 days intervention was given to each of the participants in experimental group lone and then data for post-test was collected for experimental and control group respectively.

Majority of samples i.e. 11(36.7%) from the experimental group were in the age group 14years, similarly in the control group 12(40.0%) were in the age group of 14years.

Regarding sex of students, majority of samples i.e. were females in the experimental group, but in the control group also majority of samples were males.

Regarding ordinal position in family in experimental group majority of the respondents i.e. 70% were first born children as well as in control group majority of respondents 56.7% were first born followed by 43.3% 2nd born child.

Regarding the leisure time provided in the school and home in the experimental group around 83.3% agreed that they did not have sufficient leisure time in school and home but in control group there were about 86.7% students agreed that they did not have sufficient leisure time.

In the experimental group majority of samples parents' i.e. about 46.7% education was PUC but in control group the parents were graduates i.e. about 36.7% of the parents.

Regarding the marital status of parents in both experimental and control group 100% of parents of samples were married.

Findings

The results depicts that out of 30 10th standard students in the in experimental group, 18(60%) of students had moderate level of stress of score between 51-75, and 12(40%) had severe stress of score 76-100. Whereas, in the control group 17(56.7%) had moderate stress 51-75 and 13(43.3%) had severe stress with score 76-100.

Finding also reveal that the pre-test mean level of stress score of the experimental group was that mean was 73.47 and SD was 6.4. The mean of level of stress of control group was 73.53 and SD was 4.7.

According to the study conducted in Israeli schools on 122 school children aged 14- 16years in two elementary schools. The study was done by assessing the level of stress faced by students using questionnaires previously validated in international studies. Based on the questionnaires completed by the children, we found that there was many statistically significant changes in

the children's concentration, mood and ability to function under pressure, due to the excessive stress face by student

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