



***“A study To Evaluate The Effectiveness of Pranayama to Reduce Stress Among Adolescents in Secondary Schools of RangaReddy District, Telangana.”***

***Mrs.Sunitha chinnam, professor,***

***Deepthi college of nursing, Vanasthalipuram, Hyderabad.***

Yoga and Pranayama has been practiced in the adolescent children to reduce their stress to promote physically, psychologically healthy and emotionally strong. Objectives 1. To assess the baseline stress level among adolescents in secondary schools among experimental and control group. Experimental research design was used for this study and the data was collected by using self administered rating scales. Sample 600 were selected are adolescents studying in 9<sup>th</sup> and 10<sup>th</sup> class from government and private schools. Out of 66 high schools in selected balapur mandal ,Ranga reddy district ,8 schools are selected for data collection by using simple random sampling technique.

Results described as in perceived stress level among 300 adolescent children, in interventional group 210 (70.0%) are having moderate stress levels,57(19.0%) are having low stress levels and only 33 (11.0%) are having high stress levels in pre-test scores where as 180 (60.0%) are having moderate stress levels,120 (40.0%) are with low stress levels and none of them are having high stress levels after 30 days of pranayama practice. where as in 300 adolescent children in control group 211 (70.3%) are having moderate stress levels,47 (15.7%) are having high stress levels and only 42 (14.0%) are having low stress levels in pre-test scores ,where as 238 (79.3%) are having moderate stress levels,59 (19.7%) are with high stress levels and only 3 (1.0%) are with low stress levels in post-test scores. The results also shown that there is no association between stress and selected variables of an adolescent children.

**Key words: Pranayama, Adolescents, Stress And Perceived Stress Scale.**



## **Introduction :**

Modern life is full of stress and strain and this has taken heavy toll on the health of humankind. Adolescents usually undergo with severe stress and anxiety during examinations and when they need to do specific tasks. This stress and anxiety may lead persons unable to perform well and sometimes may lead to severe psychological depression and may commit suicide.

Adolescents mainly who are studying secondary schools are more prone to undergo maximum level of stress due to their academic stress and due to developmental changes during puberty such as secondary sexual characteristics. Certain relaxing and breathing techniques will help in reducing stress among people. Yoga is part of mainstream culture today, with major medical centers, community healthcare centers, and neighborhood yoga studios offering yoga as a mind-body practice to support health and healing<sup>2</sup>.

There is increasing interest in the benefits of pranayama on a more complete span of individuals including school age children, adolescents, expectant mothers, and the elderly. Pranayama research is quickly being extended to other populations as well, including people in the workplace, among athletes, and a strong new interest in yoga research among active military duty and veterans with pain conditions, combat stress and Post Traumatic Stress Disorder with the emergence of higher quality yoga research<sup>7</sup>.

A study on Immediate effects of Bhramari Pranayama on resting Cardiovascular parameters in healthy adolescents. The aim of the study to assess the immediate effect of Bhramari Pranayama on resting Cardiovascular parameters in healthy adolescents. 60 apparently healthy adolescents of both sex participated in the study. They were randomly divided into experimental group (n=30, Bhr.p) and control (n=30) group. Informed consent was obtained after explaining the detailed procedure of the study. Bhr.p group practiced for Bhramari Pranayama for 45 minutes (5 cycles) and control group was allowed to do normal breathing (12-16 breath/min). Heart rate was assessed by Radial artery Palpation method and



Blood Pressure was recorded in supine position after five minutes of rest by Sphygmomanometer.

So the research scholar chosen this pranayama as an alternative therapy which facilitates this research study to learn and practice pranayama regularly or during the stress conditions may help to an adolescent to reduce and cope up with his or her stress levels. And there are less number of studies in Indian setting on pranayama and became as upcoming practice along with modern treatment. Proper training by skilled yoga teacher and 30 minutes of practice every day will maximize the benefits. Hence, research scholar chosen this topic, in order to help adolescent children to overcome with stress during any situation with pranayama.

### **Research approach**

The present study is intending to evaluate the effectiveness of pranayama on reducing stress among adolescents from selected high schools of Ranga Reddy district ,Hyderabad.

Hence the researcher chose the “**Evaluatory approach**” to evaluate the effectiveness of pranayama program on adolescent children to reduce stress. The purpose of evaluatory research is to assess, organize, and plan the intervention to bring the desired outcome. (Polit & Beck 2008)

### **Research design**

Keeping in view the objectives of the study, the research design selected for the present study is ‘**True Experimental Pretest-Posttest with Control group design**’, which enables the investigator to evaluate the effectiveness of pranayama program to adolescent children to reduce stress from government and private high schools of Ranga Reddy district.



In the present study, pre-test was conducted for both interventional and control group followed by pranayama program was administered to interventional group keeping control group in waiting period and then post-test was conducted after thirty days from the last day of the teaching program for both interventional and control group.

### **Variables in the study**

#### **Independent variable**

In the present study independent variable refers to Pranayama program on reducing stress among adolescents.

#### **Dependent variable**

In the present study dependent variable refers the level of stress among adolescents.

#### **Demographic variables**

The demographic variable selected for present study are- Age, Gender, Class, Family type, Family income per month, Type of educational institution studying, Education of father, Education of mother, Occupation of father, Occupation of mother.

#### **Setting of the study**

The present study was conducted at selected government and private schools of Balapur mandal, Ranga Reddy District.

#### **Population for the study**

In the present study, the population refers to an adolescent children studying 9<sup>th</sup> and 10<sup>th</sup> class.



### **Target population:**

All adolescent children studying 9<sup>th</sup> and 10<sup>th</sup> class from selected schools.

### **Accessible population**

Adolescent children studying 9<sup>th</sup> and 10<sup>th</sup> class and who meets inclusion in the study. Sample and sampling technique

### **Sample**

Sample for the present study are Adolescent children studying 9<sup>th</sup> and 10<sup>th</sup> class.

### **Sample size**

In the present research sampling of study subjects are done by simple random sampling technique by making government and private schools in to list and the sample size is determined using previous data . Hence forth **600** Adolescent children will be selected, of which 300 will be in interventional group and 300 will be in control group for conduction of the study.

### **Sampling technique**

In the present research the sampling technique used is probability sampling technique, the method used is simple random sampling.

The simple random sampling was adopted to assign subjects to interventional and control group, to assigning the subjects to interventional and control group .There are 11 government and 55 private high schools in balapur mandal. So the total 66 schools are made list and by using lottery method four government high schools and four private high schools are selected, and then the adolescent children studying 9<sup>th</sup> and 10<sup>th</sup> class are made small sections



which consist 20 to 25 members in each section due to corona virus prevalence. So then the sample are selected equally from 9<sup>th</sup> and 10<sup>th</sup> class with the equal proportion of boys and girls from all eight schools with the total of 600 sample. Out of this 600 sample 300 are interventional group selected from two government and two private schools for 9<sup>th</sup> and 10<sup>th</sup> class, boys and girls adolescents with equal proportions. And in the same way the other 300 adolescent children are taken for control group from two government and two private high schools with same proportion.

### **Sampling criteria**

#### **Inclusion criteria**

- ❖ Adolescent children who are present during the study .
- ❖ Those who are willing to participate in the study.
- ❖ Those who are available during the study.
- ❖ Adolescents who are studying 9<sup>th</sup> and 10<sup>th</sup> class.

#### **Exclusion criteria**

- ❖ Adolescent children who are not willing to participate in the study.
- ❖ Adolescent children who are not available during the study.

### **Selection and development of the tool**

The instrument selected in a research must be the vehicle to obtain the best data for drawing conclusion to the study.

In the present study, based on the objectives of the study, a standard tool was used to assess the stress levels by perceived stress scale (0-4 score Likert scale).

After extensive and systematic review of literature and taking experts opinion on content of



the tool for the validity the researcher had developed the structured rating scales for the study.

## **Review of Literature**

The review of literature included literature from textbooks, journals, periodicals, articles from newspapers, reports and studies from review studies.

## **Description of the tool:**

The tool classified in to two parts.

### **Part I : Demographic data**

### **Part II :Perceived stress scale to assess stress level among adolescents.**

**Part I: Socio demographic data:** Age,Gender, Class, Family type, Family income per month, Type of educational institution studying ,Education of father, Education of mother, Occupation of father, Occupation of mother.

## **Testing the tool**

### **Content validity**

The prepared tool along with Objectives of the study, Blue print for reference, Designed tool, Criteria rating scale, Content validity certificate was validated by experts from different faculties such as Medical surgical nursing, Psychiatric nursing, community health nursing, Psychiatry, Statistician, yoga teachers and the experts were requested to judge items for relevance, accuracy, clarity, appropriateness of the title and content area. Later the expert's comments and suggestions were incorporated in designing the final tool for the study in consultation with guide and statistician. The content validity index was 0.88.



### **Reliability of the tool**

The stability of the tool was done by Spearman's split half method.

The reliability of the tool was **0.90** this is statistically significant and thus reliable.

### **Pretesting of the tool**

Pretesting is the trial administration of newly developed instruments to identify the flaws, to check clarity of items, feasibility and practicability. It helps the investigator to identify whether the subjects understand the items and to know the time required to complete the questionnaire. The pretesting of the tool was done for hundred subjects under experimental group 50 and control group 50. The investigator found that the tool was practicable and the time taken for completing questionnaire was 45 minutes.

### **Ethical consideration**

Ethical clearance was obtained from Apollo medical college ethical committee, and the Prior permission was obtained from District educational officer and Mandal educational officer Ranga Reddy district for conducting study.

Informed consents were obtained from all the subjects who participated in the study. The subjects were assured of anonymity and total confidentiality of information, and that any information obtained from them was solely for the purposes of the study.

### **Pilot study**

A small-scale version, or trail run, done in preparation for a major study.

Pilot study was conducted at government and private schools of Balapur Mandal, Ranga Reddy district, after obtaining permission from concerned authority, from 1<sup>st</sup> February 2020





to 2<sup>nd</sup> march 2020. The tool was administered to 16.6% percent of the total sample that is 100, in that 50 subjects in interventional and 50 subjects in control group.

### **Data collection procedure:**

After obtaining permission from the concerned authority ie District educational officer and mandal educational officer, Ranga reddy district. The study was conducted from 03 February 2021 to 20 March 2021.

### **Processing of the data**

Data analysis is carefully edited, systematically classified, tabulated, analyzed, intellectually interpreted and rationally concluded. (Polit & Beck 2008)

### **Plan for data analysis and presentation**

The data collected from the subjects was analyzed by applying descriptive and inferential statistics as follows:

### **Descriptive statistical analysis**

- ❖ Frequency and Percentage analysis will be used to describe socio demographic characteristics of subjects.
- ❖ Mean, Standard deviation and Mean percent will be used to assess the knowledge scores of pretest and posttest.

### **Inferential statistical analysis**

- ❖ The Paired student 't' test to ascertain the significant difference between the mean pretest and mean posttest knowledge scores.
- ❖ The Chi-Square analysis was used to determine the association between pretest knowledge score and socio demographic variable.



## **Results:**

This chapter deals with the results of data collected from adolescent children studying 9<sup>th</sup> and 10<sup>th</sup> class from selected government and private schools of balapur mandal, Ranga Reddy District regarding evaluating the effectiveness of pranayama to reduce stress.

Results are the answers to research questions, obtained through an analysis of the collected data. (Polit & Beck 2008) The results are based on the data collected using standard rating scales. The data collected were organized, tabulated, analyzed and interpreted using SPSS 16.0 version for descriptive and inferential statistics.

## **OBJECTIVES OF THE STUDY**

1. To assess the baseline stress level among adolescents in secondary schools among experimental and control group.
2. To evaluate the effectiveness of pranayama on reducing stress levels among adolescents in experimental and control group.

## **Organisation and presentation of data**

The data collected is organized, tabulated, analyzed and finding obtained were presented in the form of tables and figures which are represented as follows:

**SECTION-A: Description of demographic characteristics of an adolescent children in interventional and control group.**

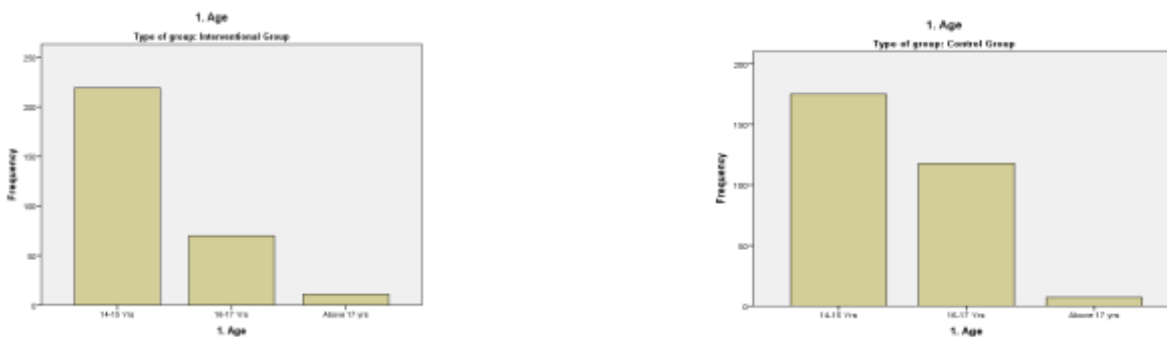
**SECTION-B: Description of perceived Stress levels in adolescent children in pre-post test scores in interventional and control group.**

**SECTION-A: Description of demographic characteristics of an adolescent children.**

**Frequency and distribution according to age of an adolescent children among interventional and control group.**

Type of group			Frequency	Percent
Interventional Group	Valid	14-15 Yrs	219	73.0
		16-17 Yrs	70	23.3
		Above 17 yrs	11	3.7
		Total	300	100.0
Control Group	Valid	14-15 Yrs	175	58.3
		16-17 Yrs	118	39.3
		Above 17 yrs	7	2.3
		Total	300	100.0

Table 1 shows the frequency and distribution according to age of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 219(73%) were in 14-15 years age group, 70(23.3%) were in 16-17 years age group and only 11(3.7%) were in the age group of above 17 years .Out of 300 adolescents in control group 175(58.3%) were in 14-15 years age group, 118 (39.3%) were in 16-17 years age group and only 7(2.3%) were in above 17 years age group.

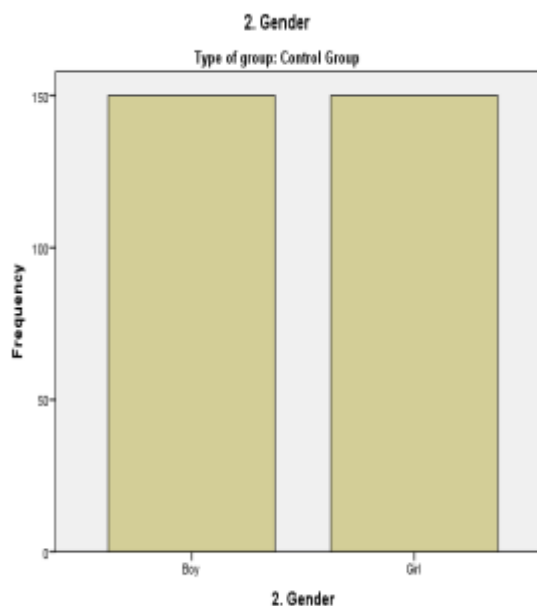
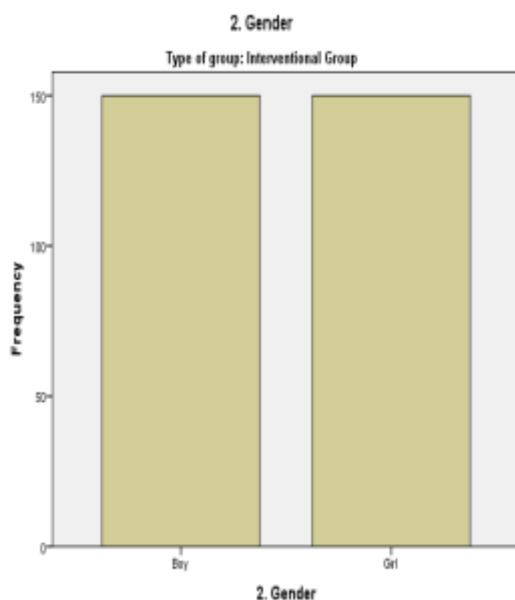


**Figure 3 : Frequency and distribution according to age of an adolescent children among interventional and control group.**

**Frequency and distribution according to gender in adolescent children among interventional and control group.**

Type of group			Frequency	Percent
Interventional Group	Valid	Boy	150	50.0
		Girl	150	50.0
		Total	300	100.0
Control Group	Valid	Boy	150	50.0
		Girl	150	50.0
		Total	300	100.0

Table 2 shows the frequency and distribution according to gender of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 150(50%) were boys, 150(50%) were girls. Out of 300 adolescents in control group 150(50%) were boys and 150(50%) were girls.

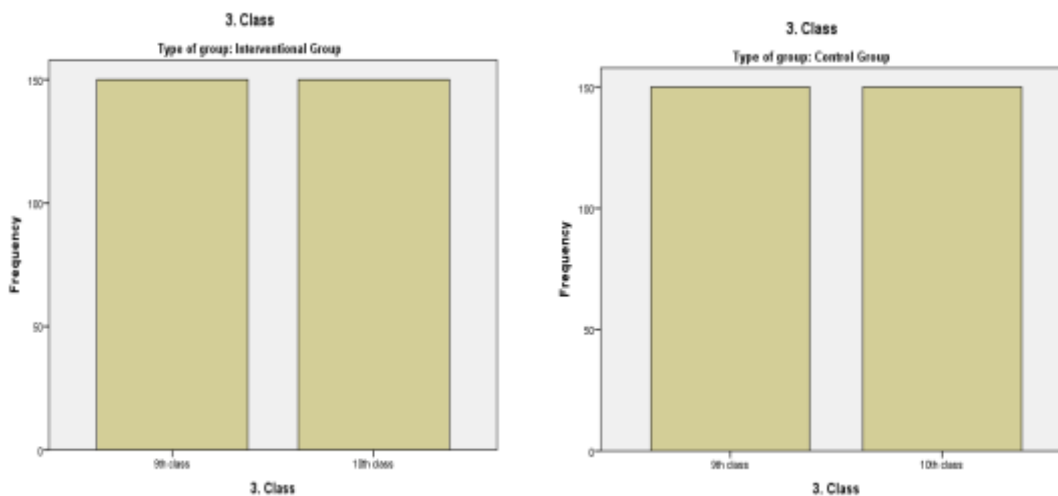


**Figure 2 : Frequency and distribution according to gender of an adolescent children among interventional and control group.**

**Frequency and distribution according to class in adolescent children among interventional and control group**

Type of group			Frequency	Percent
Interventional Group	Valid	9th class	150	50.0
		10th class	150	50.0
		Total	300	100.0
Control Group	Valid	9th class	150	50.0
		10th class	150	50.0
		Total	300	100.0

Table 3 shows the frequency and distribution according to class of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 150(50%) were studying 9<sup>th</sup> class and, 150(50%) were studying 10<sup>th</sup> class. Out of 300 adolescents in control group 150(50%) were studying 9<sup>th</sup> class and 150(50%) were studying 10<sup>th</sup> class.

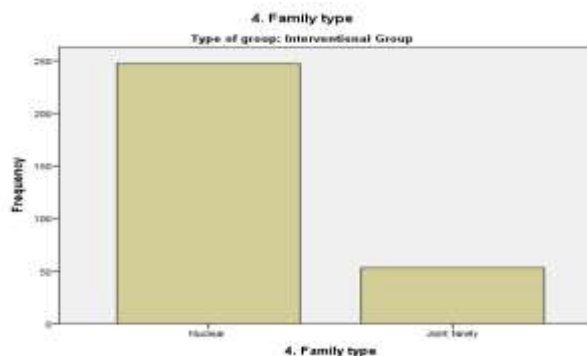
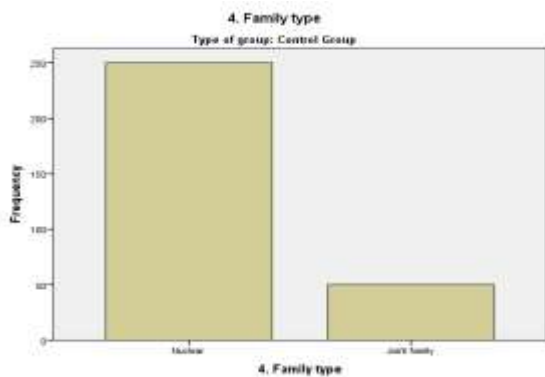


**Figure 3 : Frequency and distribution according to class of an adolescent children among interventional and control group.**

**Frequency and distribution according to family type in adolescent children among interventional and control group.**

Type of group			Frequency	Percent
Interventional Group	Valid	Nuclear	247	82.3
		Joint family	53	17.7
		Total	300	100.0
Control Group	Valid	Nuclear	250	83.3
		Joint family	50	16.7
		Total	300	100.0

Table 4 shows the frequency and distribution according to family type of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 247 (82.3%) were having nuclear families and only 53 (17.7%) were having joint families . Out of 300 adolescent children in control group 250 (83.3%) were having nuclear families and only 50 (16.7%) were having joint families .

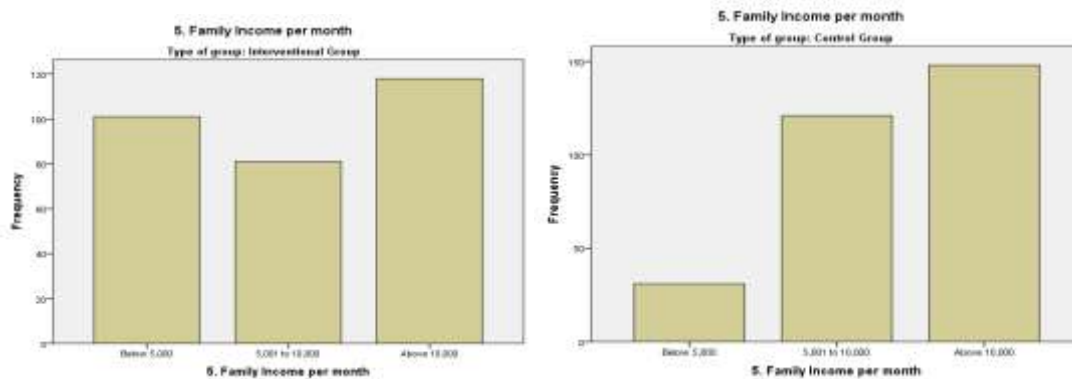


**Figure 4 : Frequency and distribution according to type of family of an adolescent children among interventional and control group.**

**Frequency and distribution according to family income of an adolescent children among interventional and control group.**

Type of group		Frequency	Percent	
Interventional Group	Valid	Below 5,000	101	33.7
		5,001 to 10,000	81	27.0
		Above 10,000	118	39.3
		Total	300	100.0
Control Group	Valid	Below 5,000	31	10.3
		5,001 to 10,000	121	40.3
		Above 10,000	148	49.3
		Total	300	100.0

Table 7 shows the frequency and distribution according to family income of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 118(39.3%) were with the family income above Rs10000 ,101 , (33.7%) were having family income below Rs 5000 and only 81 (27.0%) were with the family income between Rs5001- 10000 and Out of 300 adolescent children in control group 148(49.3%) were with the family income above Rs10000 , 121 (40.3%) were having family income between 5001-10000, and only 31 (10.3%) were with the family income between Rs5001- 10000



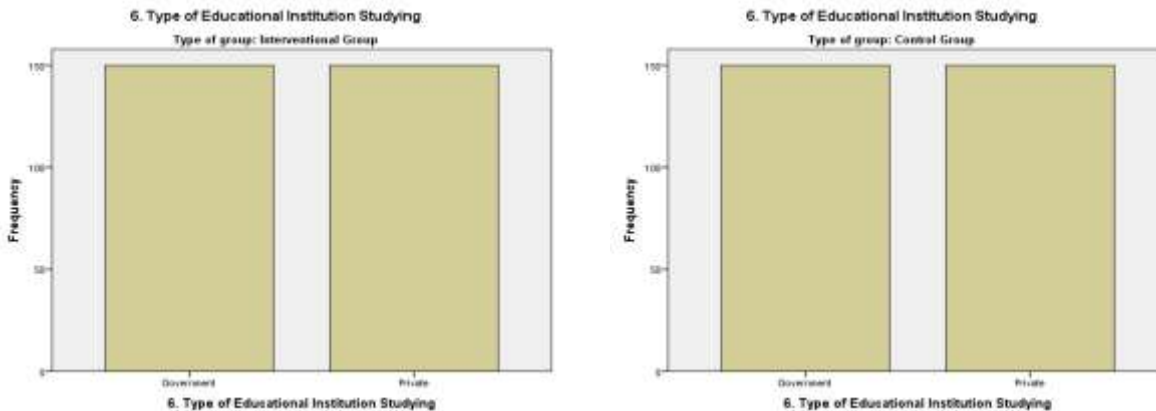
**Figure 7: Frequency and distribution according to family income per month of an adolescent children among interventional and control group.**

**Frequency and distribution according to type of educational institution studying in adolescent children among interventional and control group**

Type of group			Frequency	Percent
Interventional Group	Valid	Government	150	50.0
		Private	150	50.0
		Total	300	100.0
Control Group	Valid	Government	150	50.0
		Private	150	50.0
		Total	300	100.0

Table 8 shows the frequency and distribution according to type of educational institution studying of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 150(50%) were studying in government schools and, 150(50%) were studying in private schools. Out of 300 adolescents in control group 150(50%) were studying in government schools and, 150(50%) were studying in private schools.





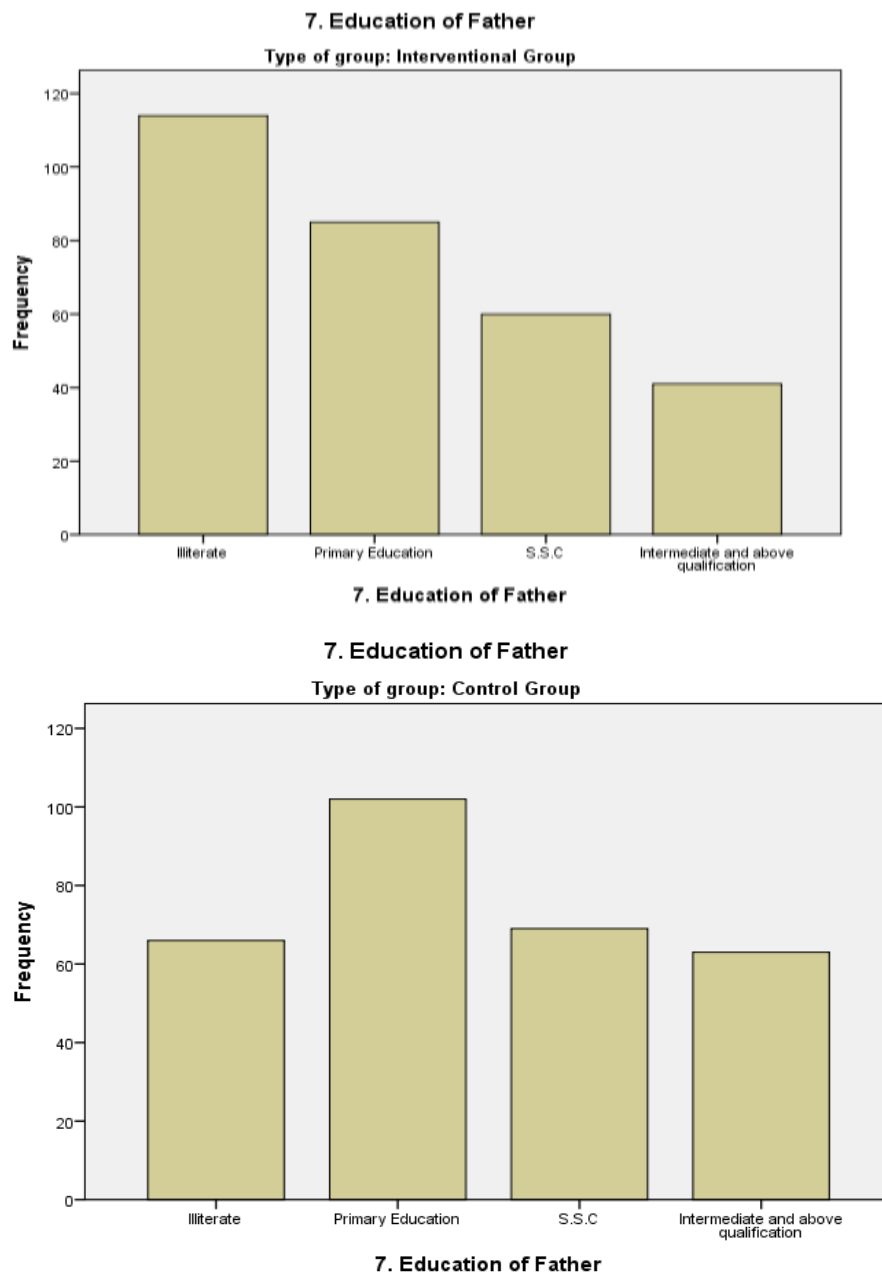
**Figure 8 : Frequency and distribution according to type of educational institution studying of an adolescent children among interventional and control group.**

**Frequency and distribution according to education of father in adolescent children among interventional and control group**

Type of group			Frequency	Percent
Interventional Group	Valid	Illiterate	114	38.0
		Primary Education	85	28.3
		S.S.C	60	20.0
		Intermediate and above qualification	41	13.7
		Total	300	100.0
Control Group	Valid	Illiterate	66	22.0
		Primary Education	102	34.0
		S.S.C	69	23.0
		Intermediate and above qualification	63	21.0
		Total	300	100.0



Table 9 shows the frequency and distribution according to education of father of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 114(38.0%) adolescent children fathers are illiterates, 85(28.3%) fathers are with primary education, 60(20.0%) fathers are with S.S.C and only 41(13.7%) fathers are with intermediate and above educational qualification. Out of 300 adolescent children in control group 102(34.0%) adolescent children fathers are with primary education , 69 23.0%) fathers are with S.S.C, 66(22.0%) fathers are illiterates and only 63(21.0%) fathers are with intermediate and above educational qualification.

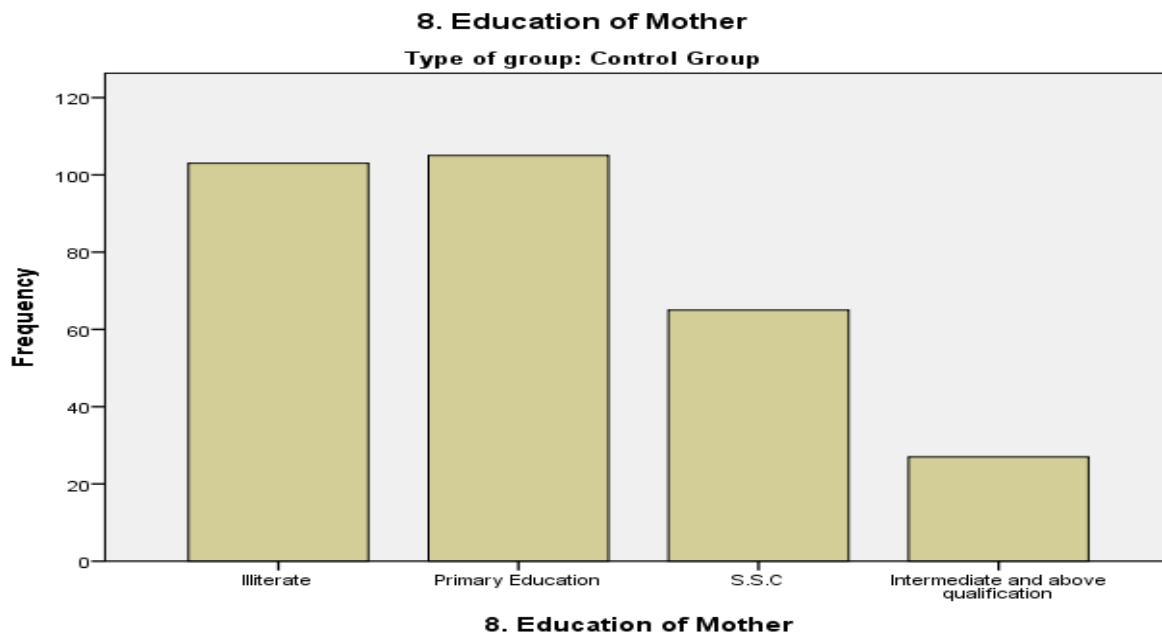
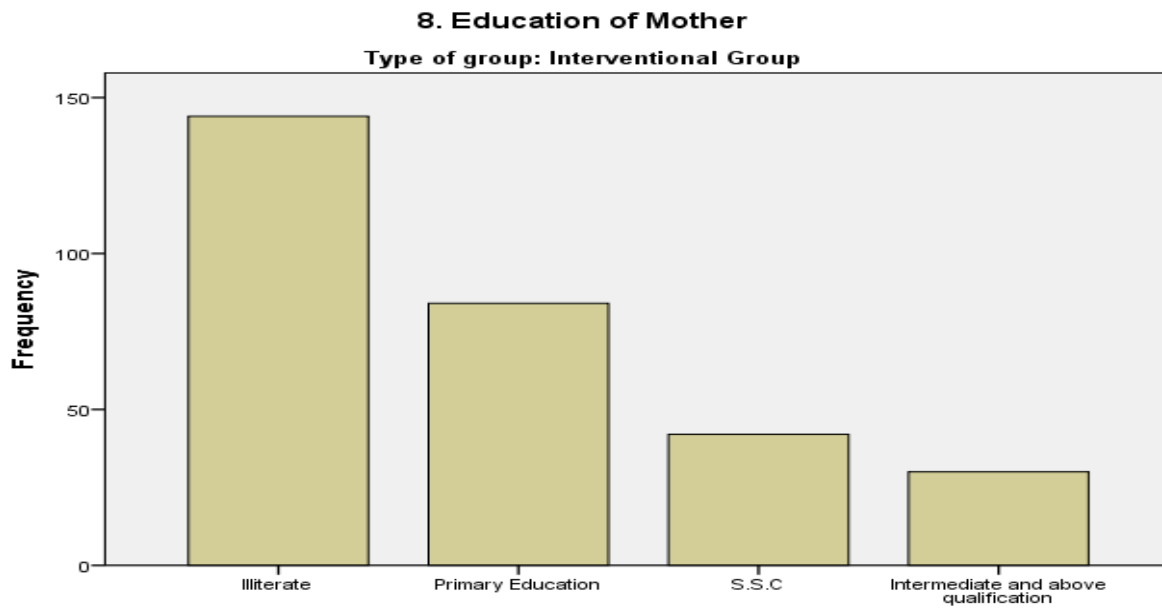


**Figure 9 : Frequency and distribution according to education of father of an adolescent children among interventional and control group.**

**Frequency and distribution according to education of mother in adolescent children among interventional and control group**

Type of group		Frequency	Percent	
Interventional Group	Valid	Illiterate	144	48.0
		Primary Education	84	28.0
		S.S.C	42	14.0
		Intermediate and above qualification	30	10.0
		Total	300	100.0
Control Group	Valid	Illiterate	103	34.3
		Primary Education	105	35.0
		S.S.C	65	21.7
		Intermediate and above qualification	27	9.0
		Total	300	100.0

Table 10 shows the frequency and distribution according to education of mother of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 144(48.0%) adolescent children mothers are illiterates, 84(28.0%) mothers are with primary education, 42(14.0%) mothers are with S.S.C and only 30(10.0%) mothers are with intermediate and above educational qualification. Out of 300 adolescent children in control group 105(35.0%) adolescent children mothers are with primary education ,103( 34.3%) mothers are illiterates, 65(21.7%) mothers are with S.S.C and only 27(9.0%)mothers are with intermediate and above educational qualification.

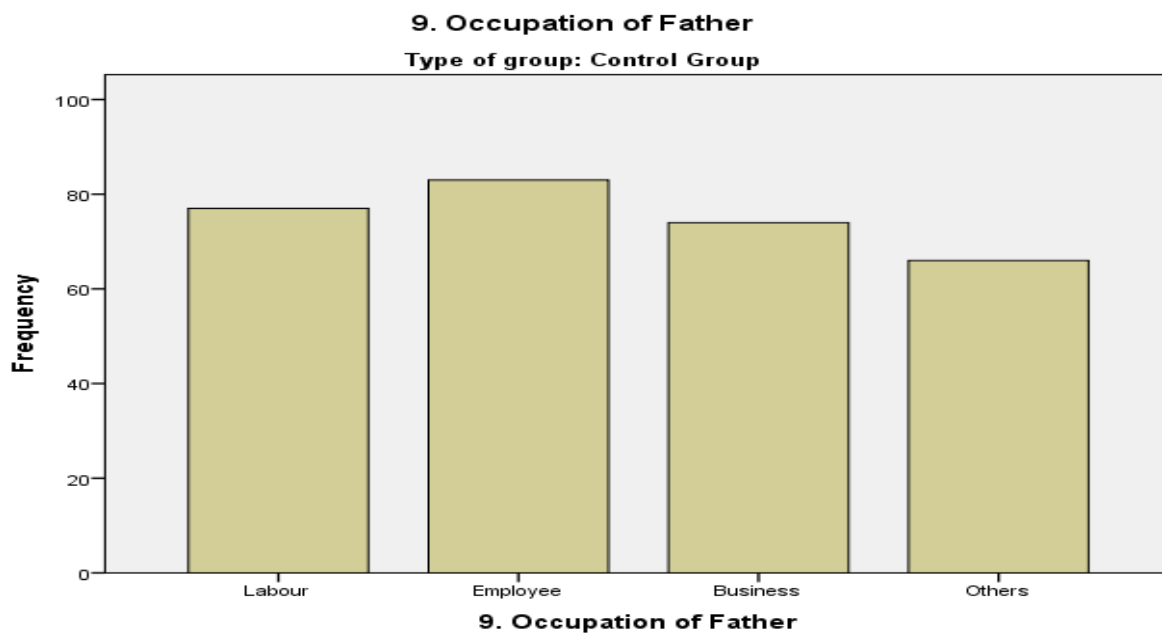
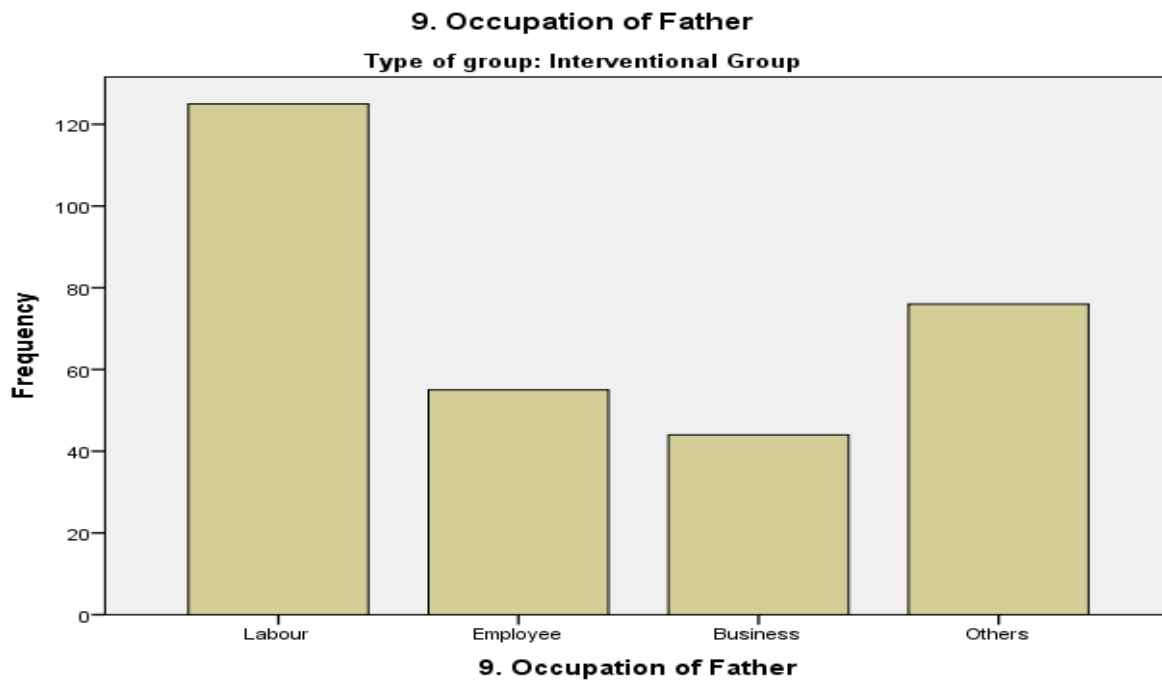


**Figure 10 : Frequency and distribution according to education of mother of an adolescent children among interventional and control group.**

**Frequency and distribution according to occupation of father in adolescent children among interventional and control group**

Type of group			Frequency	Percent
Interventional Group	Valid	Labour	125	41.7
		Employee	55	18.3
		Business	44	14.7
		Others	76	25.3
		Total	300	100.0
Control Group	Valid	Labour	77	25.7
		Employee	83	27.7
		Business	74	24.7
		Others	66	22.0
		Total	300	100.0

Table 11 shows the frequency and distribution according to occupation of father of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 125(41.7%) adolescent children fathers occupation is labour, 55(18.3%) fathers are employees, 44(14.7%) fathers are in business and 76(25.3%) fathers are in other occupations. Out of 300 adolescent children in control group 83(27.7%) adolescent children fathers employees, 77( 25.7%) fathers are labourer,74 (24.7%) fathers are in business, and only 66(22.0%) fathers are in other occupations.



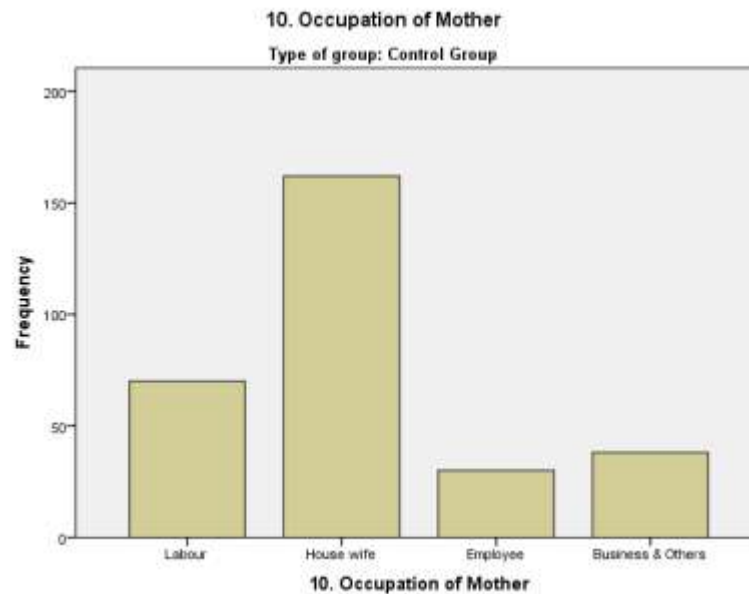
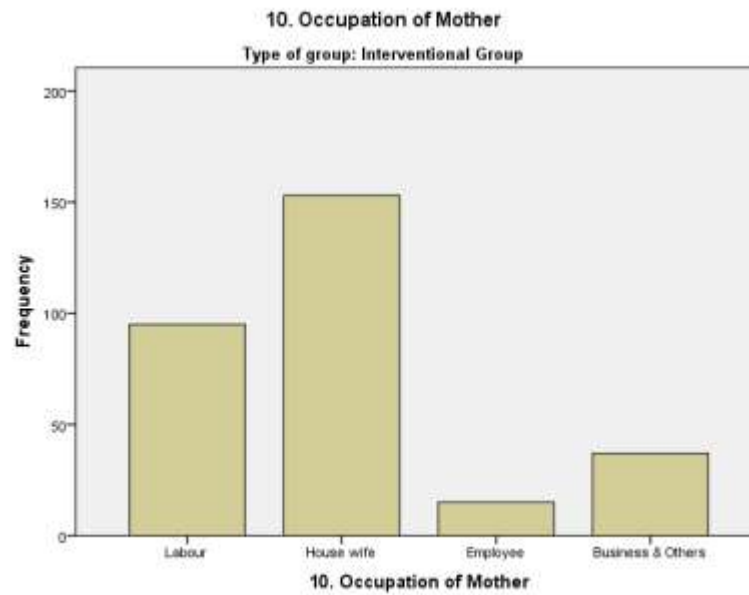
**Figure 11 : Frequency and distribution according to occupation of father of an adolescent children among interventional and control group.**

**Frequency and distribution according to occupation of mother in adolescent children among interventional and control group**

Type of group		Frequency	Percent	
Interventional Group	Valid	Labor	95	31.7
		House wife	153	51.0
		Employee	15	5.0
		Business & Others	37	12.3
		Total	300	100.0
Control Group	Valid	Labor	70	23.3
		House wife	162	54.0
		Employee	30	10.0
		Business & Others	38	12.7
		Total	300	100.0

Table 12 shows the frequency and distribution according to occupation of mother of an adolescent children among interventional and control group. Out of 300 adolescent children in interventional group 153(51.0%) adolescent children mothers are house wives,95(31.7%) mothers occupation is labor, 37(12.3%) mothers are in business and other jobs and only 15(05.0%) mothers are employees. Out of 300 adolescent children in control group 162(54.0%) adolescent children mothers are house wives,70(31.7%) mothers occupation is labor, 37(12.3%) mothers are in business and other jobs and only 15(05.0%) mothers are employees.





**Figure 12 : Frequency and distribution according to occupation of mother of an adolescent children among interventional and control group.**

**SECTION- B: Description of perceived stress levels in adolescent children in pre and post test scores among interventional and control group.**

<b>* PERCEIVED STRESS</b>							
Type of group				PERCEIVED STRESS			Total
				low stress levels	moderate stress levels	high stress levels	
Interventional Group	Status	Pre	Count	57	210	33	300
			% within Status	19.0%	70.0%	11.0%	100.0%
	Post	Count	120	180	0	300	
		% within Status	40.0%	60.0%	0.0%	100.0%	
	Total	Count	177	390	33	600	
		% within Status	29.5%	65.0%	5.5%	100.0%	
Control Group	Status	Pre	Count	42	211	47	300
			% within Status	14.0%	70.3%	15.7%	100.0%
	Post	Count	3	238	59	300	
		% within Status	1.0%	79.3%	19.7%	100.0%	
	Total	Count	45	449	106	600	
		% within Status	7.5%	74.8%	17.7%	100.0%	
<b>Chi-Square Tests</b>							
Type of group				Value	df	Asymp. Sig. (2-sided)	
Interventional Group		Pearson Chi-Square		57.731 <sup>a</sup>	2	.000	
Control Group		Pearson Chi-Square		36.782 <sup>b</sup>	2	.000	

Table 15 shows the perceived stress level among adolescent children, out of 300 children in interventional group 210 (70.0%) are having moderate stress levels, 57 (19.0%) are having low stress levels and only 33 (11.0%) are having high stress levels in pre-test scores where

as 180 (60.0%) are having moderate stress levels, 120 (40.0%) are with low stress levels and none of them are having high stress levels in post-test scores.

Among 300 adolescent children in control group 211 (70.3%) are having moderate stress levels, 47 (15.7%) are having high stress levels and only 42 (14.0%) are having low stress levels in pre-test scores, whereas 238 (79.3%) are having moderate stress levels, 59 (19.7%) are with high stress levels and only 3 (1.0%) are with low stress levels in post-test scores.

chi square is significant (sig. value is  $0.000 < 0.05$ ), accept research hypothesis. It means that there is a significant difference between perceived stress with respect to pre and post scores, which shows effectiveness of pranayama in interventional group and chi square is significant (sig. value is  $0.000 < 0.05$ ), reject null hypothesis. It means that there is no significant difference between perceived stress with respect to pre and post scores due to same stress full environment in control group.

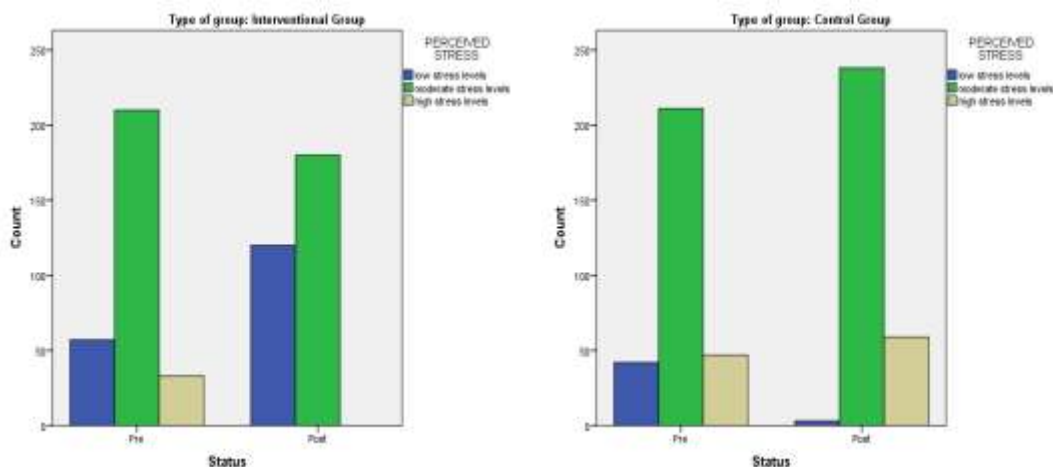


Figure 15: Describes the association between perceived stress with respect to pre and post effectiveness of pranayama in interventional & control groups.



## **Discussion**

The result of the study is discussed in terms of findings and its relevance to the earlier studies conducted in this field. This study is first of its kind, very few attempts were made to study on adolescent children, even after they are school going children they play an important role in community and they too are more prone to undergo stress and anxiety for various stress factors as teenage pressures, academic, family problems and physiological changes during this sensitive age. However, any conclusion drawn from the evaluative study should be judged in the light of its methodological shortcomings.

True experimental pre-test post-test with control group study was designed to assess the effectiveness of pranayama to reduce stress among an adolescent children. The study was conducted at selected government and private schools of balapur mandal, Ranga Reddy District, Hyderabad, Telangana. Included 600 adolescent children studying class 9<sup>th</sup> and 10<sup>th</sup>, sample allotted in each interventional and control group equally, a simple random sampling technique was adopted to select samples. Data was collected from adolescent children using standard perceived stress scale and beck anxiety inventory. The collected data was tabulated, analyzed using SPSS 16.0 version software and interpreted to check the formed objectives and hypothesis. The results of the present study contribute to reduce the stress and anxiety levels among self and family also helps others to follow the same to reduce stress.

The findings of the study are discussed as follows:

### **Demographic characteristics of the adolescent children in interventional and control group.**

❖ Age distribution of an adolescent children showed that most of them are belongs to 14-15 years age group i.e 219(73%) out of 300 in both interventional and control group.



❖ Gender distribution of an adolescent children among interventional and control group are equal in each group.

❖ Class distribution of an adolescent children among interventional and control group are equal from both the classes i.e from class 9<sup>th</sup> 10<sup>th</sup>. Class. \

❖ Family type of an adolescent children among interventional and control group most of them are having nuclear families i.e 247 (82.3%).

❖ Family income wise of an adolescent children among interventional and control group majority of them i.e 118(39.3%) were with the family income above Rs10000

❖ Type of educational institution studying of an adolescent children among interventional and control group are equal from both government and private schools.

❖ Education of father of an adolescent children among interventional and control group most of the fathers are illiterates. i.e 114(38.0%) adolescent children fathers are illiterates,

❖ Education of mother of an adolescent children among interventional and control group majority of the mothers are illiterates. i.e 144(48.0%) adolescent children mothers are illiterates.

❖ Occupation of father of an adolescent children among interventional and control group majority of them are labour and employees .i.e 125(41.7%) adolescent children fathers occupation is labor, and 83(27.7%) adolescent children fathers employees.

❖ Occupation of mother of an adolescent children among interventional and control group most of them are house wives. i.e 153(51.0%) adolescent children mothers are house wives.

### **Description of perceived stress levels in adolescent children in pre and post test scores among interventional and control groups.**

The perceived stress level among adolescent children, among 300 children in interventional group 210 (70.0%) are having moderate stress levels,57(19.0%) are having low stress levels and only 33 (11.0%) are having high stress levels in pre-test scores where as180 (60.0%) are



having moderate stress levels, 120 (40.0%) are with low stress levels and none of them are having high stress levels in post-test scores.

Among 300 adolescent children in control group 211 (70.3%) are having moderate stress levels, 47 (15.7%) are having high stress levels and only 42 (14.0%) are having low stress levels in pre-test scores, whereas 238 (79.3%) are having moderate stress levels, 59 (19.7%) are with high stress levels and only 3 (1.0%) are with low stress levels in post-test scores.

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

An evaluatory approach, experimental pretest-posttest with control group design was used to assess the effectiveness of pranayama in reducing stress among adolescent children from selected schools of balapur mandal, Ranga Reddy District, Hyderabad, Telangana.

Major findings of the present study

A. Findings related to demographic characteristics of an adolescent children in interventional and control group

- ❖ Age distribution of an adolescent children showed that most of them are belong to 14-15 years age group i.e 219(73%) out of 300 in both interventional and control group.
- ❖ Gender distribution of an adolescent children among interventional and control group are equal in each group.
- ❖ Class distribution of an adolescent children among interventional and control group are equal from both the classes i.e from class 9<sup>th</sup> 10<sup>th</sup>. class .
- ❖ Family type of an adolescent children among interventional and control group most of them are having nuclear families i.e 247 (82.3%).
- ❖ Family income wise of an adolescent children among interventional and control group majority of them i.e 118(39.3%) were with the family income

above Rs10000

- ❖ Type of educational institution studying of an adolescent children among interventional and control group are equal from both government and private schools.
- ❖ Education of father of an adolescent children among interventional and control group most of the fathers are illiterates. i.e 114(38.0%) adolescent children fathers are illiterates,
- ❖ Occupation of father of an adolescent children among interventional and control group majority of them are labor and employees .i.e 125(41.7%) adolescent children fathers occupation is labor, and 83(27.7%) adolescent children fathers employees,
- ❖ Occupation of mother of an adolescent children among interventional and control group most of them are house wives. i.e 153(51.0%) adolescent children mothers are house wives.

**b. Description of perceived stress levels in adolescent children in pre and post test scores among interventional and control groups.**

The perceived stress level among adolescent children, among 300 children in interventional group 210 (70.0%) are having moderate stress levels,57(19.0%) are having low stress levels and only 33 (11.0%) are having high stress levels in pre-test scores where as 180 (60.0%) are having moderate stress levels,120 (40.0%) are with low stress levels and none of them are having high stress levels in post-test scores.

Among 300 adolescent children in control group 211 (70.3%) are having moderate stress levels,47 (15.7%) are having high stress levels and only 42 (14.0%) are having low stress levels in pre-test scores ,where as 238 (79.3%) are having moderate stress levels,59 (19.7%) are with high stress levels and only 3 (1.0%) are with low stress levels in post-test scores.



Effectiveness shows significant difference (sig. value is  $0.000 < 0.05$ ), accept research hypothesis. It means that there is a significant difference between perceived stress with respect to pre and post scores, which shows effectiveness of pranayama in interventional group where as in control group chi square is significant (sig. value is  $0.000 < 0.05$ ), reject null hypothesis. It means that there is a significant difference between perceived stress with respect to pre and post scores due to stress full environment in control group.

### **Conclusion**

The aim of the study was to assess the effectiveness of pranayama among adolescent children. True experimental pretest posttest with control group design was adopted, The study had interventional and control group, the interventional group and control group had total 600 adolescent children selected by simple random sampling technique, the data was collected by using perceived stress scale, setting of the study was at selected government and private schools of balapur mandal, Ranga Reddy district. Both the interventional and control groups were given pretest following which the interventional group was given pranayama practice for one month after one month posttest was given to both interventional and control group. Collected data was analyzed for descriptive and inferential statistics using SPSS 16.0 version. The study showed the significant difference in the mean pretest stress scores and mean posttest stress scores in interventional group, which is evident by reduced stress in posttest showed the effectiveness of pranayama program. In contrast control group, showed little significant difference in pretest and posttest stress scores. The study found no significant association between pretest stress scores and demographic variable in interventional and control group.

### **Implications of the study**

The results of the present study have implications on community practice, adolescent children education, health administration and research





### **Community practice**

The present study clearly shown evidence to reduce stress by practicing pranayama which helps to their family members and neighbors to practice pranayama in their day to day life stress situations.

### **Health education**

The present study is the clear evidence showing the efficacy of pranayama in reducing stress and anxiety among adolescent children .so practicing pranayama will help an adolescents to improve their basic health and prevent covid -19 infections, which helps him to focus on studies and maintain sound psychological health.

### **Health administration**

Health administrators are the key person to plan, organize and conduct health education program to an adolescent children during schooling will help to enhance and promote the health of school children. As these adolescent children will become the future citizens of country, hence the youth must protected by using safe methods to control and treat minor health issues, which reduces burden on families, society, the health care system ,and on government.

### **Nursing Research**

The present study is ideal of its kind, similar studies can be performed with large sample. There is a great need for research in various fields that improves the coping in an adolescent children, as they are future citizens of our country .This research will help in early and timely management of stress and anxiety to reduce complications, illness or deformity that may arise due to delay in seeking health care.



### **Recommendations of the study**

Based on the findings of the present study the following recommendations are:

- ❖ Similar study can be studied with different research designs.
- ❖ Large sample can be used to for generalization.
- ❖ To cover large population manuals, information booklets and self instructional modules may be developed and published.

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