



“A STUDY TO ASSESS THE IMPACT OF PRANAYAMA ON STRESS AND PHYSIOLOGICAL PARAMETERS AMONG SENIOR CITIZENS AT OLD AGE HOMES OF MORADABAD”

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Abstract

Introduction: Old age and stress go hand in hand in today’s world. Stress refers to being under an excellent deal of emotional mental and social pressure for a prolonged amount of time

Aim: To Assess the impact of pranayama on stress and physiological parameters among senior citizens.

The objectives of the study were:

1. To assess the level of stress among senior citizens before and after pranayama.
2. To assess the level of selected physiological parameters among senior citizens before and after pranayama.
3. To evaluate the effectiveness of pranayama on stress and physiological parameters among senior citizens.
4. To associate the level of stress and physiological parameters with their selected demographic variables.

Material and Method: A quasi-experimental times’ series design was used to conduct the study at old age homes of Moradabad. 100 senior citizen were selected by the Purposive sampling technique. Structured questionnaire was used to assess the level of stress and rating scale was used to assess the level of physiological parameters before and after giving pranayama The Pranayama was given for six Months in morning and in evening. The duration of pranayama was 30 minutes the data was analyzed by using SPSS18 and Excel 2010.

Results: The results shows that after doing pranayama the senior citizens stress level reduced from moderate stress to mild stress level. In physiological parameters the parameters showed improvement after doing pranayama

Conclusion: This clearly indicated that pranayama was useful for reducing stress and improving physiological parameters in older adults.

Keywords:- Assess, Impact, Stress, Physiological Parameters, pranayama, Senior Citizens.

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INTRODUCTION

Aging is a natural process. In old age, people need the greatest love and care. Caring for the elderly isn't only a responsibility but also an ethical duty. Seniors are the backbone of a family. They have a good experience with the difficulties of life. They say that life gives us lessons. Older people teach us how to grow up, how to survive in this world, and also how to shape our careers. They establish us in this world with their immense effort. It is our responsibility to reimburse them in their old age.

According to the 2001 statistics (7.4%) of total population was above the age of sixty years and in 2011 the population of elderly citizens was 8.4%. The senior population in Karnataka in 2001 was 7.7%.⁽¹⁾ Between 2000 and 2050, the world double from the current 8.4% to 16.4%, According to the United Nation Population Division report there will be two senior persons for every child in the world by 2050.⁽²⁾ There are 81 million aged people in India, 11 lakh in Delhi itself.⁽³⁾

Stress may be a complex factor that generates social and psychological problems for the individual and thus for society. Adaptation to aging is critical to one's happiness; failure to adapt may result in stress. Adaptive coping will alter could also be seriously thanks to major stressors like financial problems, physical illness, changes in body functioning, increased awareness of approaching death, and various losses of individual experiences during the amount of life. The old-age population suffers each physical in addition to mental changes in life like biological or bodily changes, loss of a partner, amendment in family structure and role, and economic dependency, all of that contribute to the mental state issues. Several studies are done on the various form of issues sweet-faced by maturity folks like physical, psychological, and social associated with money however still there's an increasing range of maturity homes day by day.

According to the website dadadadi.org, there are presently **728 Old Age Homes** in India today. There is Information on 547 homes of which 325 homes are free, 95 old age homes are grounded on paid accommodation, 116 are both free and paid accommodation and 11 homes have no information.⁽¹⁰⁾

STATEMENT OF THE PROBLEM

“A study to assess the impact of Pranayama on stress and physiological parameters among senior citizens at old age homes of Moradabad.”

AIM OF THE STUDY

To assess the impact of pranayama on stress and physiological parameters among senior citizens.

1.1 OBJECTIVES OF THE STUDY

1. To assess the level of stress among senior citizens before and after pranayama.
2. To assess the level of selected physiological parameters among senior citizens before and after pranayama.
3. To evaluate the effectiveness of pranayama on stress and physiological parameters among senior citizens.
4. To associate the level of stress and physiological parameters with their selected demographic variables.

1.2 ASSUMPTIONS

1. There is a large disparity in seniors' pre-test levels of stress.
2. Within elderly, there is a statistically significant change in the values of a few physiological markers between before and after the test.
3. Pranayama has been linked to a reduction in stress among the elderly.
4. Pranayama has a strong correlation with a number of older persons' physiological markers.

HYPOTHESES

H1 There is a significant difference in the level of stress between the experimental and control group.

H2 There is a significant difference in the level of physiological parameters between the experimental and control group.

H3 There is a correlation between the Level of stress and physiological parameters

MATERIAL AND METHODS

For this study Quantitative research approach with quasi- experimental time's series design was used to conduct the study in old age homes of Moradabad, U.P. purposive sampling technique was used to select 100 senior citizens. Structured questionnaire was used to assess the level of stress and rating scale was used to assess the level of physiological parameters before and after giving pranayama The Pranayama was given for six Months in morning and in evening. The duration of pranayama was 30 minutes. The results shows that after doing pranayama the senior citizens stress level reduced from moderate stress to mild stress level. In physiological parameters the parameters showed improvement after doing pranayama.

PROCEDURE FOR DATA COLLECTION

After taking permission the final study was conducted in August 2021. The Researcher introduced herself to the participants. The objectives of the study was explained to the elderly people and their informed consent was taken. There were two groups (experimental group & control group) in each 50 samples.

A Structured Questionnaire was given to both groups to assess the level of stress and rating scale was used to assess the physiological parameters. Then intervention was given to experimental group only. Again the data was collected from both the groups. The research tool consist of three sections.

SECTION A DEMOGRAPHICs VARIABLES

Age, gender, marital status, level of education, source of income, employment status, and stay

SECTION C PHYSIOLOGICAL PARAMETERS

Table 4: Blood Pressure According to Indian Guideline of Hypertension –IV 2019⁽⁶⁴⁾

S. No.	BLOOD PRESSURE CATEGORY	SYSTOLIC B.P MMHG	DIASTOLIC B.P MMHG	SCORE
1	OPTIMAL	<120	<80	0
2	NORMAL	<130	<85	1
3	HIGH NORMAL	130 - 139	85- 89	2
4	STAGE 1 HYPERTENSION	140 - 160	90 – 99	3

Table 5: PULSE According to Textbook of Nursing Foundation, First edition 2021

S. No.	CATEGORY	SCORE
1	60-70 bpm	0
2	71-80 bpm	1
3	81-90 bpm	2
4	91- 100 bpm	3

Table 6: Respiration According to Principles and Practice of Nursing-1 by Sr. Nancy, sixth edition 2011

S. No.	CATEGORY	SCORE
1	22-24 Breath per min	1
2	18- 20 Breath per min	2
3	14-16 Breath per min	3

Post-test level of stress & physiological parameters in 3rd month & 6th month

OBSERVATION AND RESULTS

SECTION A: DESCRIPTION OF DEMOGRAPHIC VARIABLES

Table 7: Description of sample characteristics in terms of frequency and percentage N=100

Demographic Variable		Experimental group N=50		Control group N =50	
		(%)	Freq.	(%)	Freq.
Age in year	60-65 Years	28.0%	14	30.0%	15
	66-70 Years	56.0%	28	54.0%	27
	Above 70 Years	16.0%	8	16.0%	8
Sex	Male	56.0%	28	56.0%	28
	Female	44.0%	22	44.0%	22
Religion	Hindu	68.0%	34	58.0%	34

time in old age home, Reason of staying in old age home, Religion, Food habit, practicing pranayama previously, Staying as couple & Number of Children.

SECTION B RATING SCALE

The related literature was reviewed for the 40 items in stress scale, the amount of stress is measured. The stress scale is divided into 4 sections i.e. Physical, Mental, and Social & Financial. Each section consists of 10 items.

Table 3: Total score obtained for all items

LEVEL OF STRESS	RANGE
MILD	BELOW 50%
MODERATE	50 – 75%
SEVERE	ABOVE 75%

Demographic Variable		Experimental group N=50		Control group N =50	
		(%)	Freq.	(%)	Freq.
	Muslim	18.0%	9	22.0%	9
	Christian	14.0%	7	20.0%	7
	Others	0.0%	0	0.0%	0
Marital status	Married	46.0%	23	42.0%	23
	Unmarried	14.0%	7	18.0%	7
	Divorced	16.0%	8	22.0%	8
	Widow	24.0%	12	18.0%	12
Education	Formal Education	16.0%	8	14.0%	8
	Primary Education	18.0%	9	16.0%	9
	Secondary Education	28.0%	14	28.0%	14
	High secondary Education	24.0%	12	24.0%	12
	Graduation and above	14.0%	7	18.0%	7
Pre-employment Status	Housewives	22.0%	11	24.0%	11
	Daily wages	16.0%	8	14.0%	8
	Private employee	28.0%	14	22.0%	14
	Government employee	18.0%	9	28.0%	9
	Business	16.0%	8	12.0%	8
Source of income	Pension	24.0%	12	26.0%	12
	Rental	10.0%	5	10.0%	5
	Government scheme	26.0%	13	24.0%	13
	No income	40.0%	20	40.0%	20
Duration of staying in old age home	0-2 Years	28.0%	14	32.0%	14
	2-4 Years	40.0%	20	34.0%	20
	4-6 Years	18.0%	9	20.0%	9
	Above 6 Years	14.0%	7	14.0%	7
Reason for staying in old age home	No one to take care	34.0%	17	20.0%	17
	Poor support from family members	22.0%	11	24.0%	11
	Loneliness at home	8.0%	4	14.0%	4
	Family negligence	22.0%	11	24.0%	11
	Other reason	14.0%	7	18.0%	7
Are you practicing Pranayama previously	Yes	10.0%	5	16.0%	5
	No	90.0%	45	84.0%	45
Are you staying as couple	Yes	22.0%	11	20.0%	11
	No	78.0%	39	80.0%	39
Food Habit	Vegetarian	48.0%	24	52.0%	24
	Non –Vegetarian	52.0%	26	48.0%	26
No. of Children	One	36.0%	18	28.0%	18
	Two	30.0%	15	34.0%	15
	Three or More	34.0%	17	38.0%	17

Table 8: Description of Association of Demographic variables between Experimental & Control Group N=100

DEMOGRAPHIC VARIABLES		GROUP		ASSOCIATION				
Variables	Opts	Experime ntal N=50	Control N=50	Chi Test	P Value	Df	Table Value	Result
Age in year	60-65 Years	14	15	0.053	0.974	2	5.9915	Not Significant
	66-70 Years	28	27					
	Above 70 Years	8	8					
Sex	Male	28	28	0.000	1	1	3.8415	Not Significant
	Female	22	22					
Religion	Hindu	34	29	1.126	0.5694	2	5.9915	Not Significant
	Muslim	9	11					
	Christian	7	10					

DEMOGRAPHIC VARIABLES		GROUP		ASSOCIATION				
Variables	Opts	Experimental N=50	Control N=50	Chi Test	P Value	Df	Table Value	Result
	Others	0	0					
Marital status	Married	23	21	1.243	0.7427	3	7.8147	Not Significant
	Unmarried	7	9					
	Divorced	8	11					
	Widow	12	9					
Education	Formal Education	8	7	0.375	0.9844	4	9.4877	Not Significant
	Primary Education	9	8					
	Secondary Education	14	14					
	High secondary Education	12	12					
	Graduation and above	7	9					
Pre-employment Status	Housewives	11	12	1.843	0.7646	4	9.4877	Not Significant
	Daily wages	8	7					
	Private employee	14	11					
	Government employee	9	14					
	Business	8	6					
Source of income	Pension	12	13	0.080	0.9941	3	7.8147	Not Significant
	Rental	5	5					
	Government scheme	13	12					
	No income	20	20					
Duration of staying in old age home	0-2 Years	14	16	0.429	0.9341	3	7.8147	Not Significant
	2-4 Years	20	17					
	4-6 Years	9	10					
	Above 6 Years	7	7					
Reason for staying in old age home	No one to take care	17	10	2.970	0.5629	4	9.4877	Not Significant
	Poor support from family members	11	12					
	Loneliness at home	4	7					
	Family negligence	11	12					
	Other reason	7	9					
Are you practicing Pranayama previously	Yes	5	8	0.796	0.3724	1	3.8415	Not Significant
	No	45	42					
Are you staying as couple	Yes	11	10	0.060	0.8061	1	3.8415	Not Significant
	No	39	40					
Food Habit	Vegetarian	25	26	0.040	0.8414	1	3.8415	Not Significant
	Non-Vegetarian	25	24					
No. of Children	One	18	14	0.736	0.6921	2	5.9915	Not Significant
	Two	15	17					
	Three or more	17	19					

As per the above chi-square table 8 that we studied on Experimental & Control group in Age in the year has different age group people such as 60-65 Years in Experimental group 14 & Control is 15 & 66-70 Years in Experimental group 28 & Control is 27 and also Above 70 Years in Experimental & Control group is 8, chi-test value is 0.053, P Value is 0.974, the degree of freedom is 2, T Value is 5.9915 as per this result are not significant with the same p value that was given for the Chi-square test. as well as Sex in that has male & female in Experimental & Control group is male is 28, female

is 22 & chi-test value is 0.000, p value is 1, df value is 1, t value is 3.8415 so, result are not significant because significant (p) value is greater than 0.05. In Religion Hindu is in Experimental group 34 & Control is 29, Muslim has experimental value is 9, in control group 11, Christian experimental group is 7 also in control group is 10 also others is 0 for both group chi-test value is 1.126, p value is 0.5694, the degree of freedom is 2, t value is 5.9915 however, as per the observation all variables of both group are insignificant because significant (p) value is greater than 0.05.

SECTION B: ASSESS THE LEVEL OF STRESS AMONG SENIOR CITIZENS BEFORE & AFTER PRANAYAMA AND COMPARISON OF STRESS BETWEEN EXPERIMENTAL & CONTROL GROUP

(PART –A) STRESS PRETEST SCORE

Table 9: Table Showing Level of Stress between pre control and pre experimental group

CRITERIA MEASURE OF STRESS SCORE		
SCORE LEVEL	PRE-CONTROL	PRE-EXPERIMENTAL
SEVERE (121-160)	0(0%)	0(0%)
MODERATE (80-120)	48(96%)	49(98%)
MILD (0-79)	2(4%)	1(2%)
Maximum=160 Minimum =0		

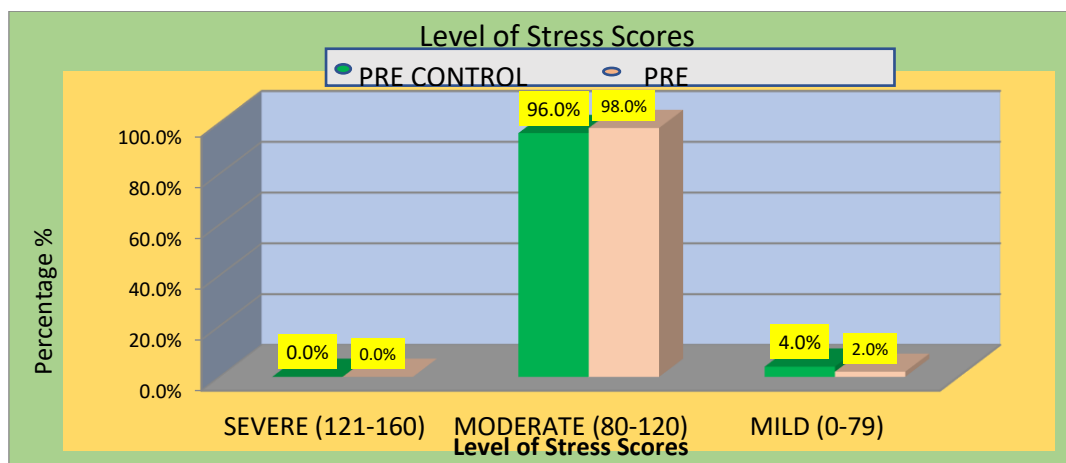


Fig. 16: Column Diagram showing Level of Stress Scores

The study of the control group’s pre-stress level of coping indicated that it had 0(0%) severe level, 48(96%) moderate level, and 2(4%) mild level.

The experimental group's pre-stress level of coping indicated that it had 0(0%) severe level, 49(98%) moderate level, and 1(2%) mild level.

STRESS POSTTEST SCORE

Table 11: Showing Level of Stress between post experimental and post control group

CRITERIA MEASURE OF STRESS SCORE		
Score Level	Post Experimental	Post Control
SEVERE (121-160)	0(0%)	0(0%)
MODERATE (80-120)	35(70%)	49(98%)
MILD (0-79)	15(30%)	1(2%)
Maximum=160 Minimum =0		

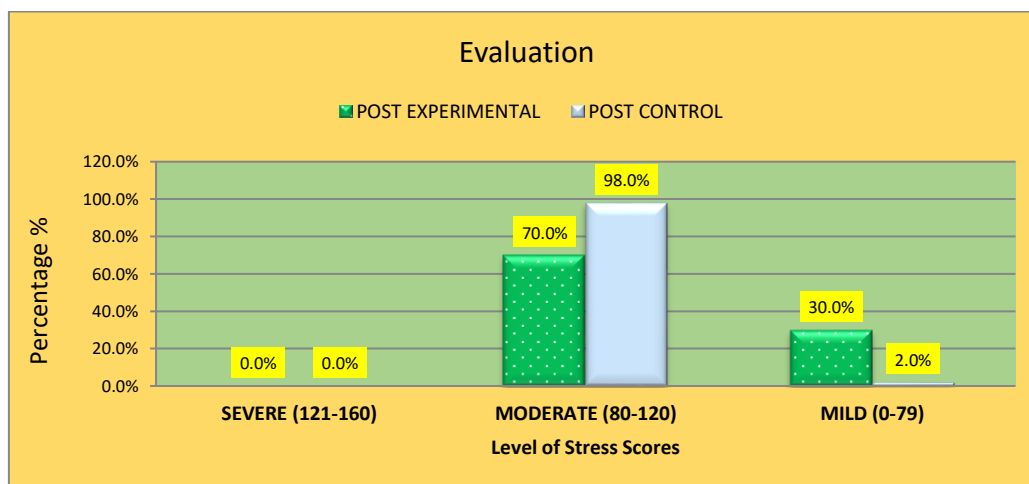


Fig. 18: Bar Diagram showing Level of Stress Scores after pranayama

The study of the post Experimental group shows that the majority of 35 (70%) older individuals experienced moderate stress, 15 (30%) had mild stress, and at least 0 (0%) had severe stress. In Post

Control Group The majority of seniors 49(98%) reported moderate stress, 1(2% had light stress, and at least 0% had severe stress.

PART B- PRE/POST-TEST OF BOTH GROUPS

Table 13: Showing Stress Score between Pre -Experimental /Control & Post- Experimental /control Group N=50+50

CRITERIA MEASURE OF STRESS SCORE				
SCORE LEVEL	Pre Experimental N=50	Pre Control N=50	Post Experimental N=50	Post Control N=50
SEVERE (121-160)	0(0%)	0(0%)	0(0%)	0(0%)
MODERATE (80-120)	49(98%)	48(96%)	35(70%)	49(98%)
MILD(0-79)	1(2%)	2(4%)	15(30%)	1(2%)
Maximum=160 Minimum =0				

The analysis of pre-test level in the experimental group, as shown in the table above, indicated that the majority, 49 (98%), had a moderate level, while just 1 (2%) had a mild level. In contrast, the post-test level in the experimental group indicated that 35 (70%) participants had a moderate level, while 15 (30%) had a mild level.

In addition, the pre-test level in the control group indicated that the majority, 48 (96%), had a moderate level, while just 2 (4%), mild level. In contrast, the post-test level in the control group indicated 49 (98%) moderate levels and 1 (2% mild levels).

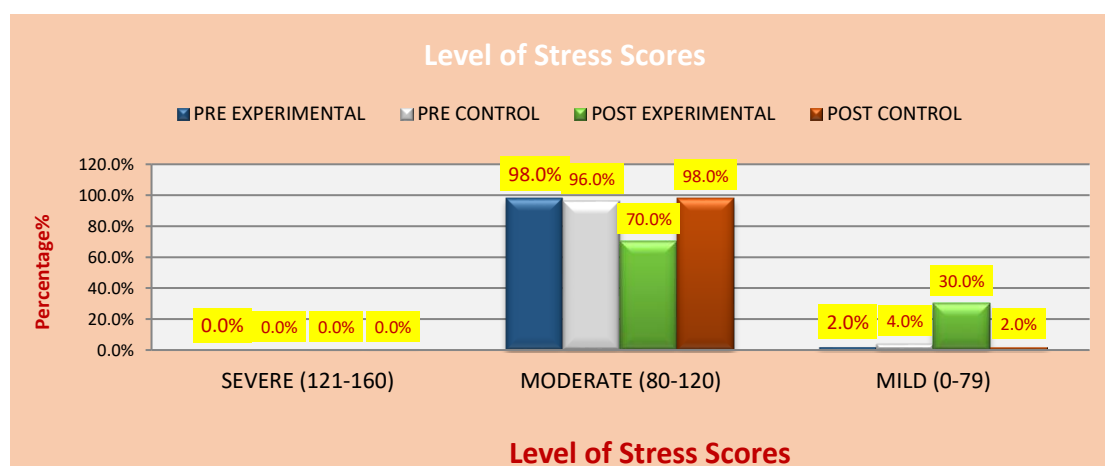


Fig. 20: Diagram showing Level of Stress Scores in both group

COMPARISON OF STRESS BETWEEN EXPERIMENTAL & CONTROL GROUP

Table 14: Comparison within the Group with Paired T Test

	STRESS SCORE						Paired T Test		
	N	Mean	SD	Mean	SD	df	T	p value	Result
Pre-test									
Post-test									
Experimental Group	50	98.5	9.054	85.06	10.46	49	9.497	<0.001	Significant
Control Group	50	94.78	11.886	95.86	10.01	49	1.126	0.2658	Not. Significant

The table above compares the degree of coping in the experimental group before and after the test. Pre-test scores for coping averaged 98.5 with a standard deviation of 9.054, while post-test scores were 85.06 with a standard deviation of 10.46. The estimated paired value of "t" = 9.497 was deemed statistically significant at the p value 0.001 level.

This clearly demonstrates that after pranayama was administered to the experimental group, the post-test stress levels of the experimental group's elderly citizens were much lower than those of the control group.

SECTION C: ASSESSTHE LEVEL OF PHYSIOLOGICAL PARAMETERS AMONG SENIOR CITIZENS BEFORE AND AFTER PRANAYAMA & COMPARISION OF PHYSIOLOGICAL PARAMETERS BETWEEN EXPERIMENTAL & CONTROL GROUP

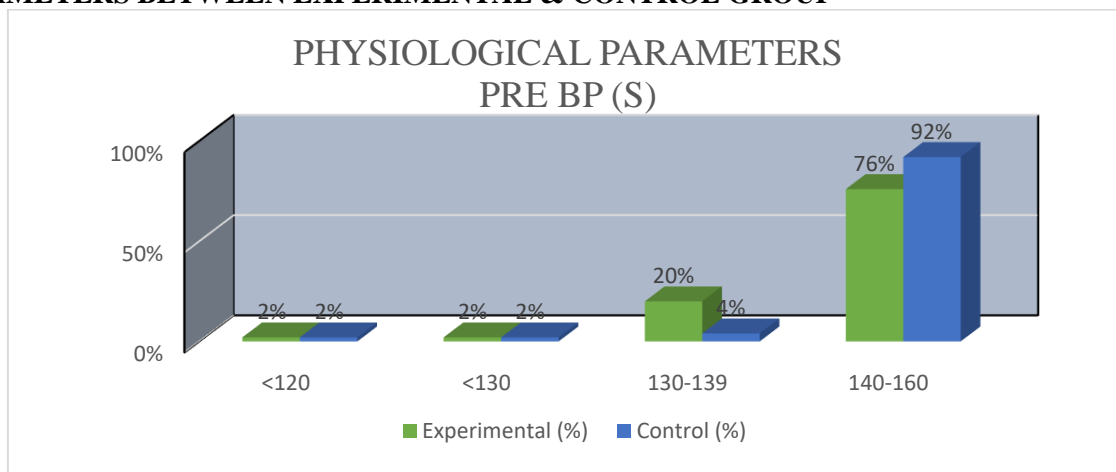


Fig. 23: Cylindrical Diagram showing percentage of Pre BP (S)

In the above table pretest BP Systolic both groups had 2. 0%, optimal blood pressure in normal category both had 2.0%, in high normal category

Experimental group had 20.0% & Control had 4.0%, in stage I hypertension Experimental group had 76.0% whereas Control group had 92.0%.

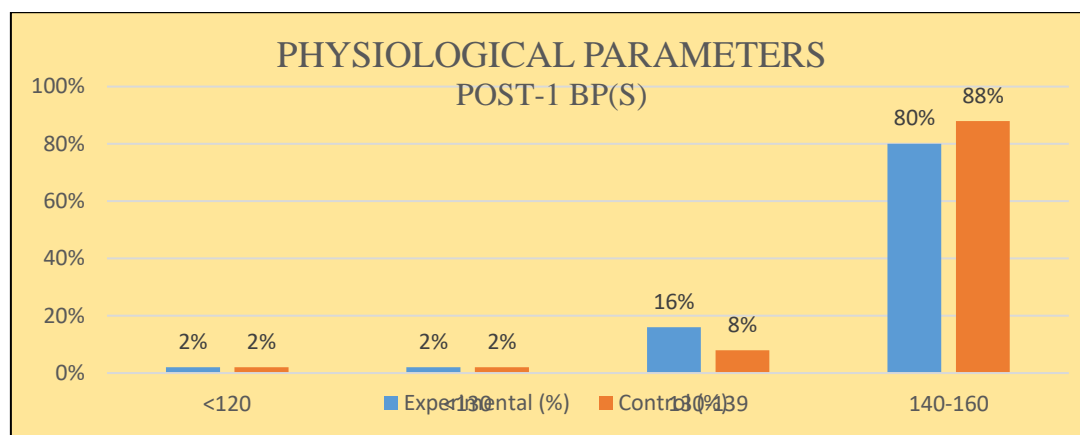


Fig. 24: Cylindrical Diagram showing percentage of Post I BP (S)

In the above table posttest 1 BP Systolic both groups had 1. (2 %,) optimal blood pressure, in normal both groups had 1(2.0%), in high normal category Experimental group had 8 (16.0%) &

Control group had 4(8.0%) in stage I hypertension Experimental had 40 (80.0%) & Control group had 44 (88.0%).

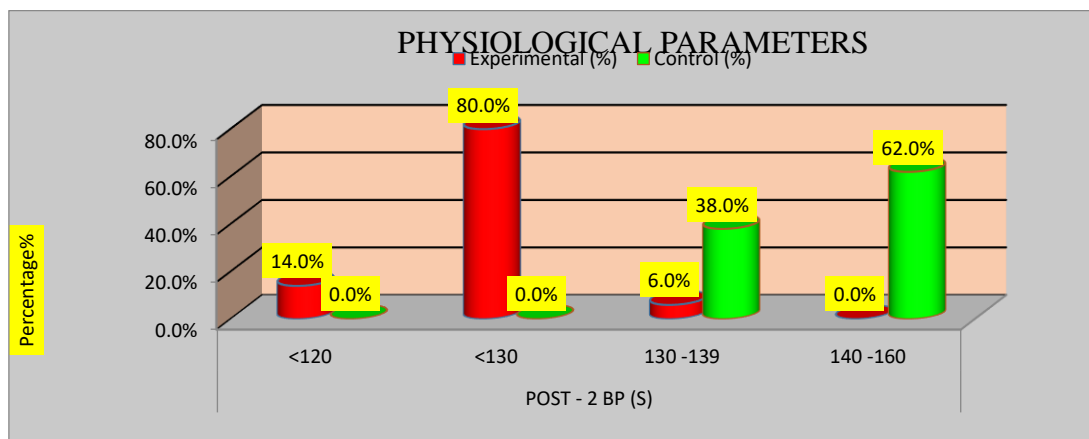


Fig. 25: Cylindrical Diagram showing percentage of Post II BP (S)

In the above table posttest II in optimal BP Systolic experimental group had 7(14.0%) Control group had 0(0.0%) in normal experimental had 40(80%) & control group had 0(0.0%), high normal category

Experimental group had 3 (6.0%) Control had 19(38.0%) in stage I hypertension Experimental had 0 (0.0%) & Control group had 31 (62.0%).

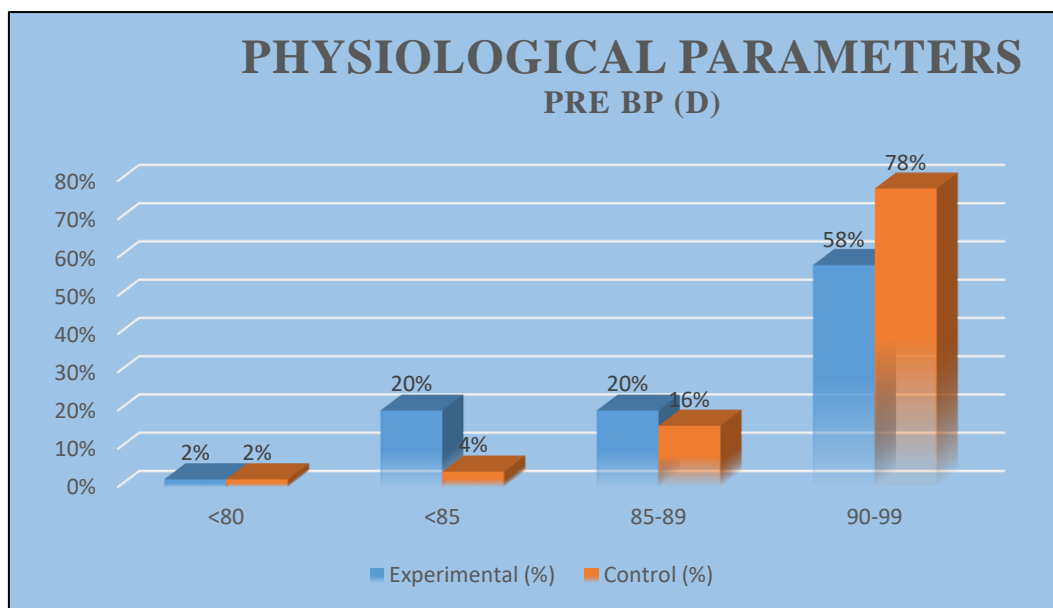


Fig. 26: Column Diagram showing percentage of Pre BP (D)

In the above table pretest optimal BP Diastolic experimental group had 1(2.0%) & Control group had 1(2.0%) in normal BP D experimental group had 10(20%) & control group 2(4.0%). In high normal category Experimental group had 10

(20.0%) & Control 8(16.0%). In stage I hypertension in Experimental 29 (58.0%) & Control group is had 39(78.0%), stage I hypertension.

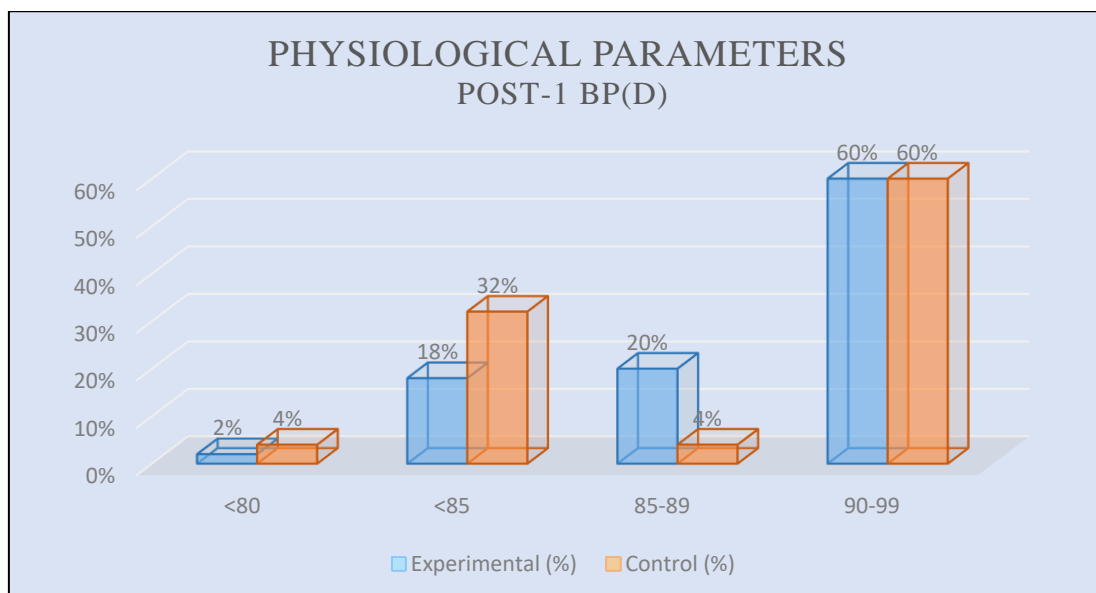


Fig. 27: Column Diagram showing percentage of Post I BP (D)

In the above table in posttest, I BP Diastolic in experimental group 1(2.0%) had optimal BP & Control group had 9(18.0%) normal BP experimental group had 10(20%) & control group had 2(4.0%), high normal category in

Experimental group had 10 (20.0%) & Control had 8(16.0%) in stage I hypertension in Experimental group had 29 (58.0%) & Control group had 39(78.0%), stage I hypertension.

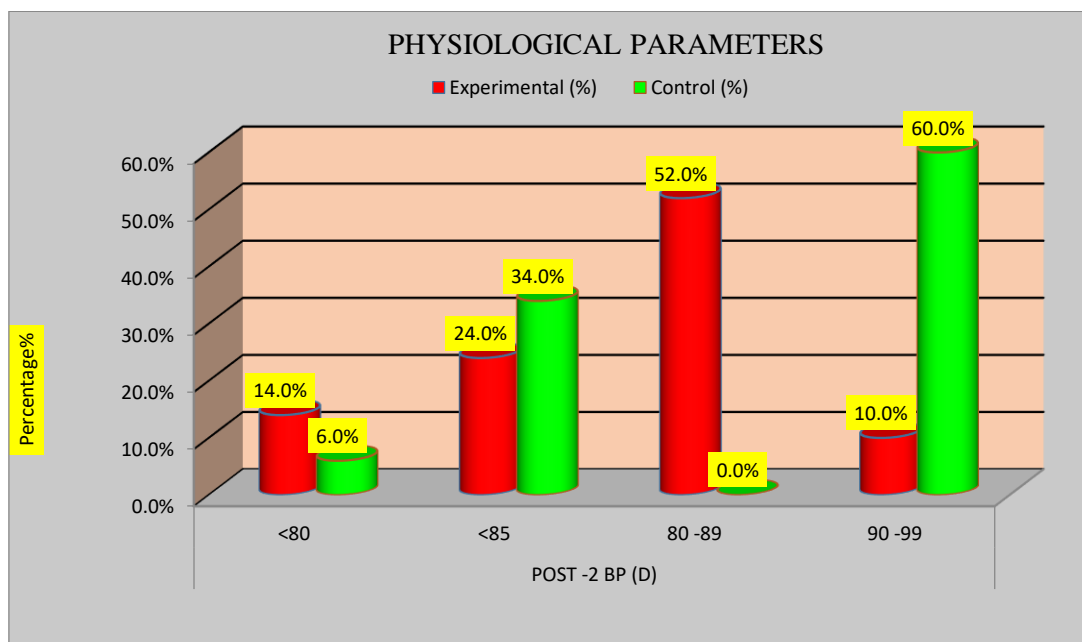


Fig. 28: Column Diagram showing percentage of Post I BP (D)

In experimental group's posttest II BP Diastolic indicated that experimental group had 7(14.0%) and Control group had 12(34%) optimal BP, 12(24%) had normal Diastolic BP in experimental group and control had 12(34%). The experimental

group 26(52.0%) had high normal D BP, and control had 0(0.0%), and in stage I hypertension 5(10.0%) in experimental group and 30 (60.0%) in control group.

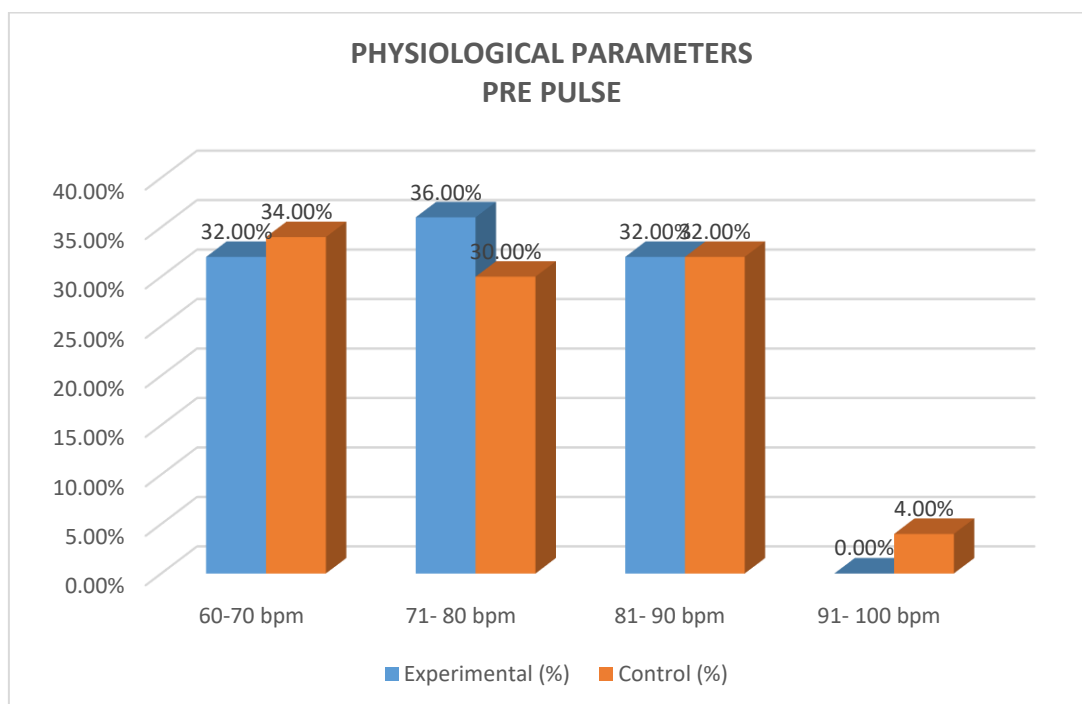


Fig. 29: Cylindrical Diagram showing percentage of Pre Pulse

In the above table pretest Pulse experimental group had 16(32.0%) & Control group had 17(34.0%) 60-70 bpm. In experimental group 18(36.0%) & control group 15(30.0%) 71-80 bpm. In

Experimental group 16(32.0%) & Control 16(0.0%) had 81-90 bpm, experimental group had 0 (0%) & control group had 2(4%) 91-100bpm.

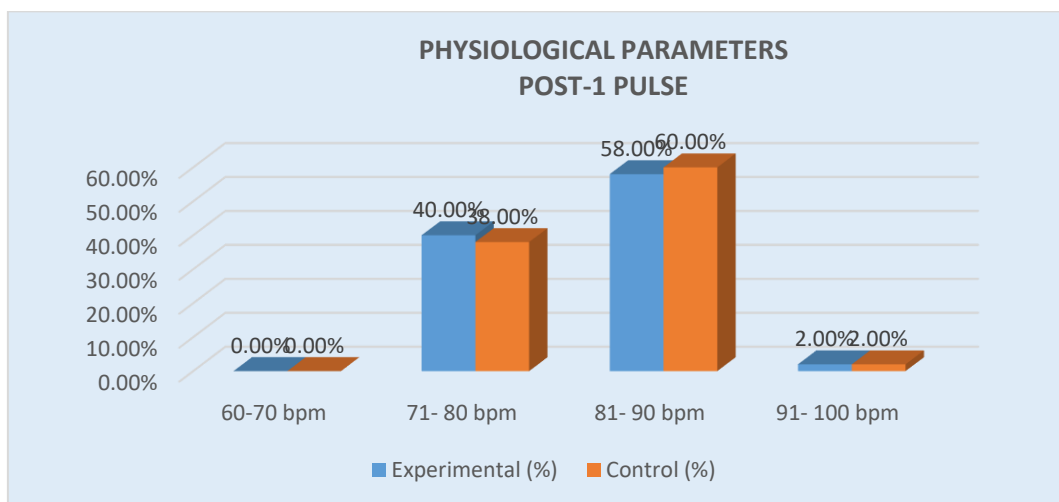


Fig. 30: Cylindrical Diagram showing percentage of Post I Pulse

In the above table in Pulse posttest I, no group had 60-70bpm, experimental group had 20(40.0%) & Control group had 19(38.0%) 71-80bpm, in 81-

90bpm category Experimental group had 29 (58.0%) & Control had 30(60.0%) in 90-100bpm category both groups had 1(2.0%).

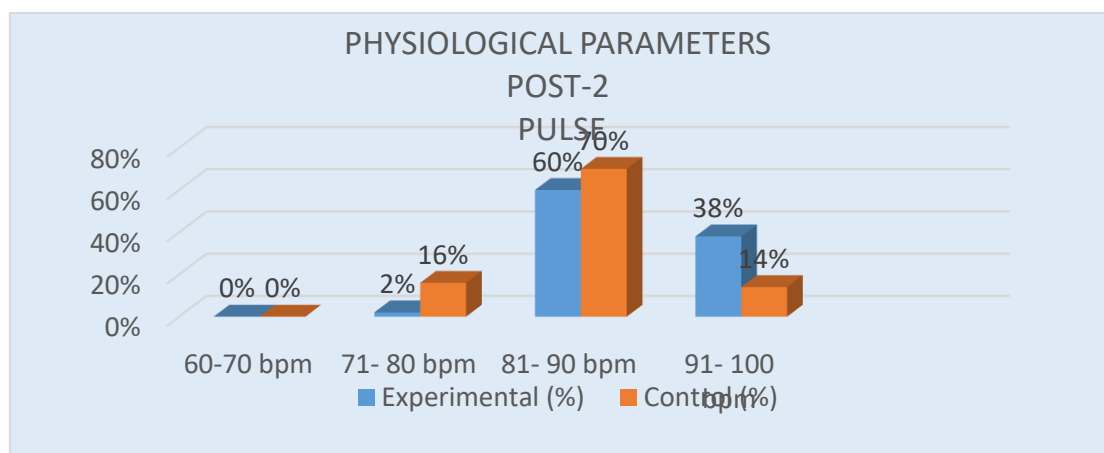


Fig. 31: Cylindrical Diagram showing percentage of Post II Pulse

In the above table in Pulse posttest II no groups had 60-70 bpm, whereas in 71-80 bpm experimental group had 1(2.0%) & Control group had 8(16.0%), in 81-90bpm category Experimental group had

30(60.0%) & Control had 35(70.0%) 91-100bpm category experimental group had 19(38.0%) & control group had 7(14%).

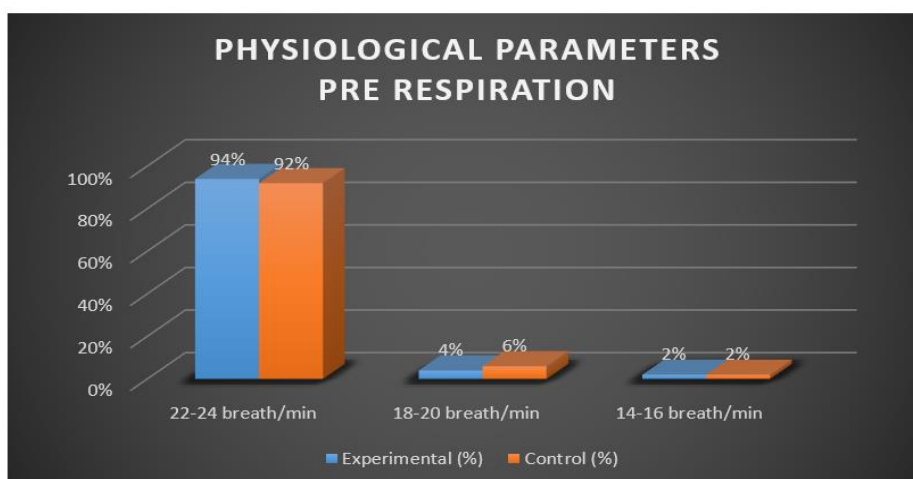


Fig. 32: Column Diagram showing percentage of Pre Respiration

In the above table in Respiration pretest experimental group had 47(94.0%) & Control group 46(92.0%) had 22-24 breath pm, in 12-18

breath pm category Experimental group had 2(4.0%) & Control had 3(6.0%), and both groups had 1(2.0%) 14-16 breath pm..

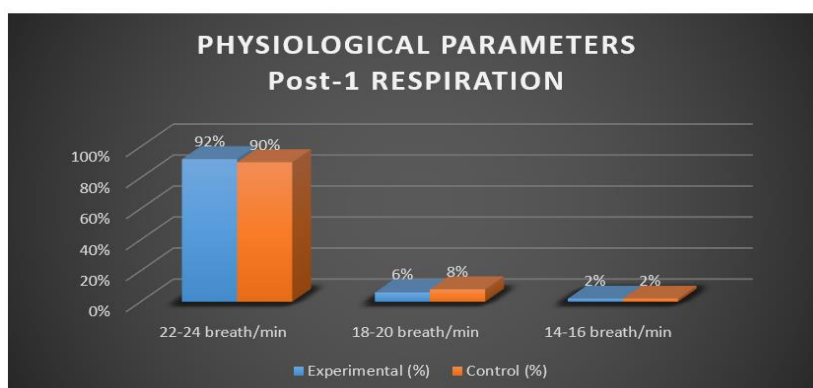


Fig. 33: Column Diagram showing percentage of Post I Respiration

In the above table in Respiration posttest, I experimental group had 46(92.0%) & Control group 45(90.0%) had 22-24 breath pm, in 12-18

breath pm category Experimental group had 3(6.0%) & Control had 4(8.0%), and both groups had 1(2.0%) 14-16 breath pm.

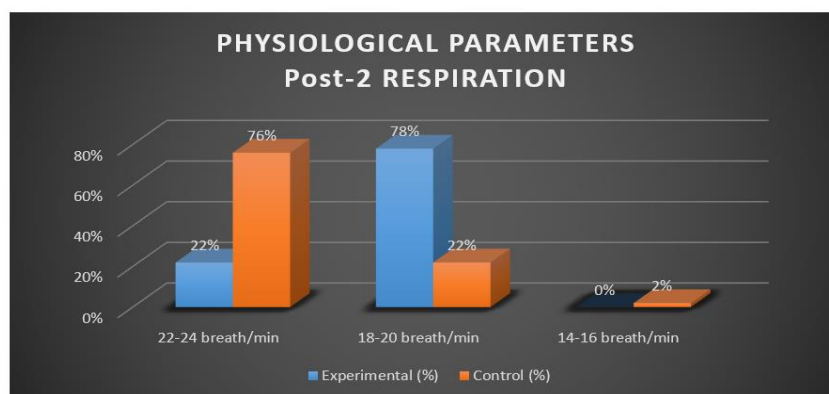


Fig. 34: Cylindrical Diagram showing percentage of Post II Respiration

In the above table in Respiration posttest, II experimental group had 11 (22.0%) & Control group 38 (76.0%) had 22-24 breath/m, Experimental group had 39(78.0%) & Control had

11(22.0%) 18-20 breath, and in experimental group had 0(0.0%) & Control had 1(2.0%) 14-16 breath.

SECTION D: EVALUATE THE EFFECTIVENESS OF PRANAYAMA ON STRESS AND PHYSIOLOGICAL PARAMETERS: STRESS

Table 15: Showing Comparison Experimental Group

ANOVA EXPERIMENTAL GROUP	STRESS		
	PRE	POST I	POST II
Mean	98.50	91.56	85.06
S.D.	9.054	10.872	10.460
Median	100.5	92	85
Number	50	50	50
Maximum	115	114	106
Minimum	75	68	62
F test	5.083		
Table Value at 0.05	3.885		
P value	0.025		
Result	Significant		
Tukey's method for Pairwise comparison	PRE		
Mean Difference & Result>	POST I	6.94NSig	POST I
	POST II	13.44Sig	6.5Sig

INTERPRETATION

In above table shows ANOVA EXPERIMENTAL GROUP, there is value taken of the Mean of pre stress post 1 stress and the post 2 so we have observed that the highest to compare other two mean of the stress in the pre stress that is 98.50 and the lowest stress mean is post 2 that is 85.06.

In above table shows ANOVA EXPERIMENTAL GROUP, there is value taken of the S.D Of pre stress post 1 stress and the post 2 so we have observed that the highest to compare other two S.D. Of the stress in the POST I stress that is

10.872 and the lowest stress mean is PRE STRESS that is 9.054.

In above table we have observed that the Maximum STRESS score in Pre-test, as well as minimum stress score in post –I.

In above table F test is 5.083, Table Value at 0.05 is 3.885, P value is 0. 025. So we analyse that significant value is required less than 0.05 in that above table of stress the value is 0.025. So the variable is acceptable.

PART B:

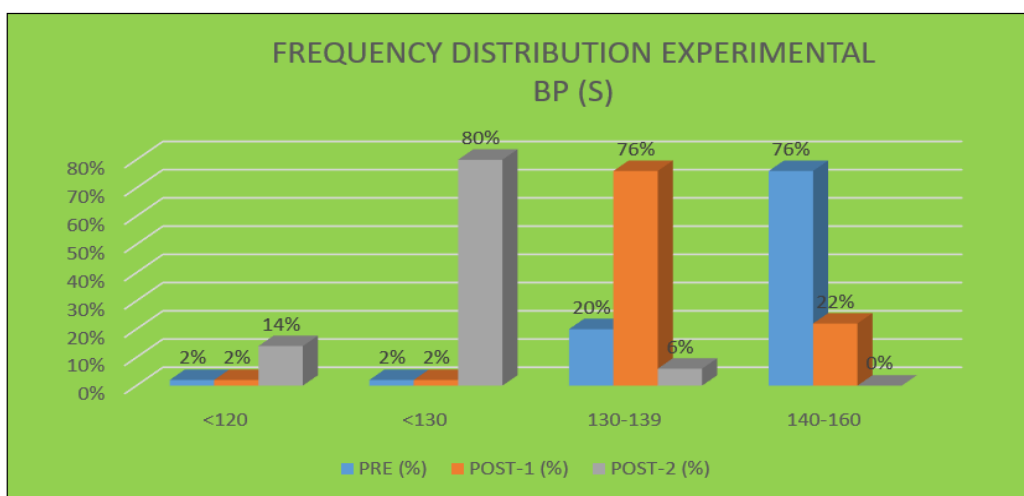


Fig. 37: Column diagram Showing frequency of BP(S) Pre, Post I & Post II in Experimental Group

Table possess that physiological parameters of Experimental group Blood Pressure systolic in pretest 2.0% had optimal Blood pressure and in posttest II 14.0% had optimal blood pressure. in pretest 2.0% had normal blood pressure and in posttest II 78.0% had normal blood pressure in pretest 20.0% had high normal blood pressure and

in posttest II 6.0% had high normal blood pressure in pretest 76.0% had stage 1 hypertension and in posttest II 2.0% had stage 1 hypertension chi square is 164.3838 and p value is <0.001 df is 6 and table value is 12.592 the results shows that variable is significant.

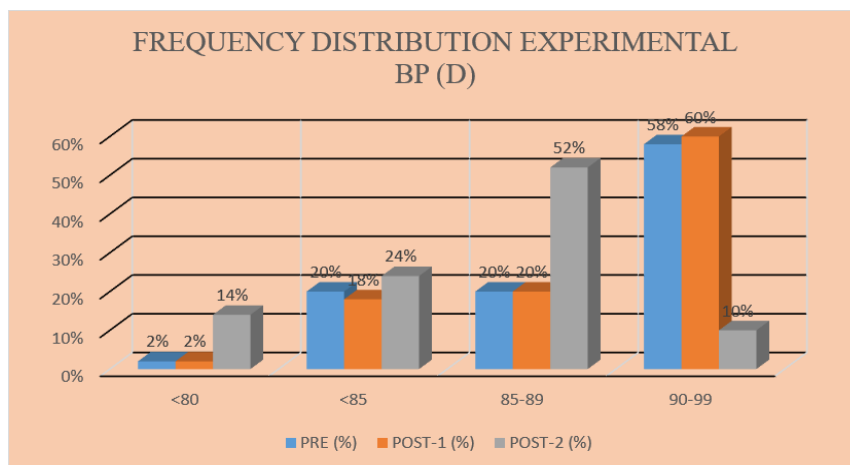


Fig. 38: Clustered Column diagram Showing frequency of BP(D) Pre, Post I & Post II in Experimental Group

Table possess that Blood Pressure diastolic of Experimental group in pretest 2.0% had optimal BP and in posttest II 14.0% had optimal blood pressure in pretest 20.0% had normal blood pressure and in posttest II 24.0% had normal blood pressure in pretest 20.0% had high normal blood

pressure and in posttest II 52.0% had high normal blood pressure in pretest 58.0% had stage 1 hypertension and in posttest II 10.0% had stage 1 Blood pressure range chi square is 38.3633 the and p value is <0.001 df is 6 and table value is 12.592 the results shows that variable is significant.

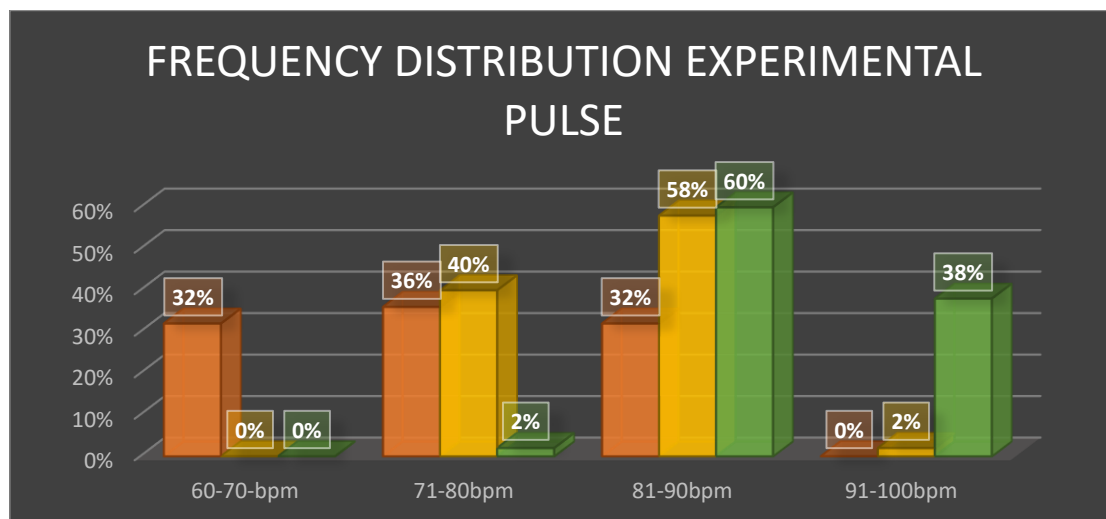


Fig. 39: Clustered Cylindrical diagram Showing frequency of Pulse Pre, Post I & Post II in Experimental Group

In the Pulse section in pretest 32.0% and in posttest II 0.0% had 60-70 bpm in pretest 36.0% and in posttest II 2.0% had 71-80 bpm in pretest 32.0% and in posttest II 58.0% had 81-90 bpm range in

pretest 0.0% and in posttest II 38.0% 91-100 bpm range chi square is 87.949 and p value is <0.001 df is 6 and table value is 12.592 the results shows that variable is significant.

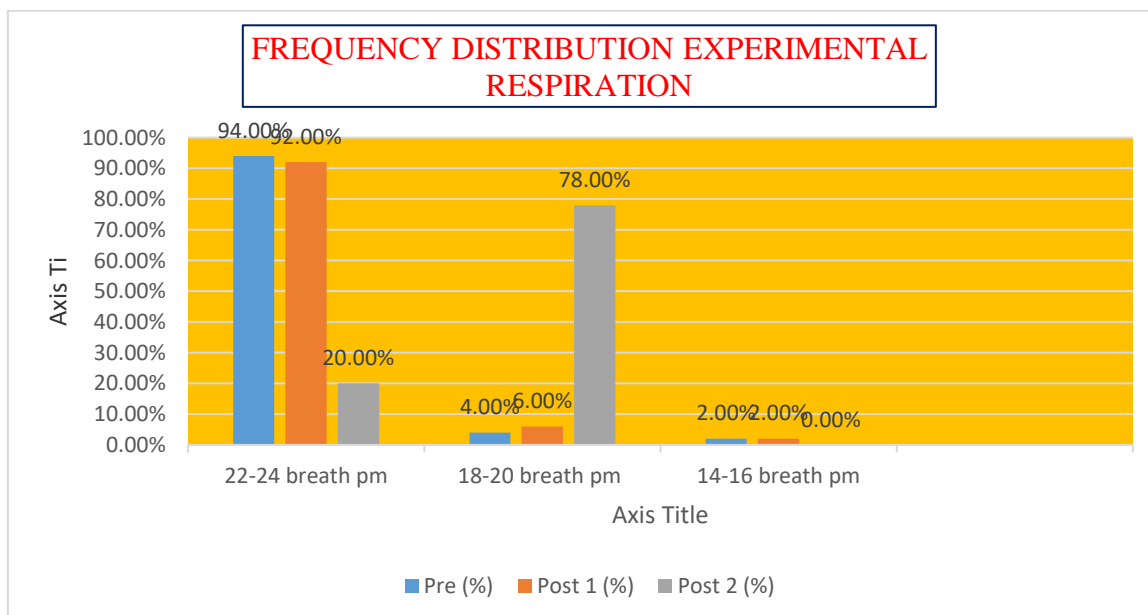


Fig. 40: Clustered Column Diagram showing frequency of Respiration Pre, Post I, Post II in Experimental group

In the Respiration section in pretest 94.0% and in posttest II 20.0% had 22-24 breath pm in pretest 4.0% and in posttest II 78.0% had 18-20 breath pm in pretest 2.0% and in posttest II 0 had 14-16 breath

pm chi square is 86.4744 and p value is <0.001 df is 4 and table value is 9.488 the results shows that variable is significant.

SECTION E: TO ASSOCIATE THE LEVEL OF STRESS & PHYSIOLOGICAL PARAMETERS WITH THEIR DEMOGRAPHIC VARIABLES.

PART A: STRESS

Post Score

Table 21: Showing Association of Posttest II Stress Scores with Demographic Variables in Experimental Group

DEMOGRAPHIC VARIABLES		LEVEL STRESS OF SCORES			ASSOCIATION OF STRESS SCORE WITH DEMOGRAPHIC VARIABLES (POST II STRESS) EXPERIMENTAL GROUP				
Variables	Opts	MILD	MODERATE	SEVERE	Chi Test	P Value	df	Table Value	Result
	66-70 Years	22%	34%	0%					
	Above 70 Years	2%	14%	0%					
Sex	Male	22%	34%	0%	2.613	0.106	1	3.841	Not Significant
	Female	8%	36%	0%					
Religion	Hindu	22%	46%	0%	0.356	0.83707	2	5.991	Not Significant
	Muslim	4%	14%	0%					
	Christian	4%	10%	0%					
	Others	0%	0%	0%					
Marital status	Married	18%	28%	0%	1.974	0.57776	3	7.815	Not Significant
	Unmarried	2%	12%	0%					
	Divorced	4%	12%	0%					
	Widow	6%	18%	0%					
Education	Formal Education	2%	14%	0%	1.502	0.82624	4	9.488	Not Significant
	Primary Education	6%	12%	0%					
	Secondary Education	10%	18%	0%					
	High secondary Education	8%	16%	0%					
	Graduation and above	4%	10%	0%					
Pre-employment Status	Housewives	6%	16%	0%	2.781	0.59508	4	9.488	Not Significant
	Daily wages	2%	14%	0%					
	Private employee	12%	16%	0%					
	Government employee	4%	14%	0%					
	Business	6%	10%	0%					
Source of income	Pension	10%	14%	0%	2.576	0.46166	3	7.815	Not Significant
	Rental	2%	8%	0%					
	Government scheme	4%	22%	0%					
	No income	14%	26%	0%					
Duration of staying in old age home	0-2 Years	8%	20%	0%	12.823	0.00504	3	7.815	Significant
	2-4 Years	22%	36%	0%					
	4-6 Years	0%	18%	0%					
	Above 6 Years	0%	14%	0%					
Reason for staying in old age home	No one to take care	6%	28%	0%	3.990	0.40739	4	9.488	Not Significant
	Poor support from family members	6%	16%	0%					
	Loneliness at home	2%	6%	0%					
	Family negligence	8%	14%	0%					
	Other reason	8%	6%	0%					
Are you practicing Pranayama previously	Yes	4%	6%	0%	0.265	0.60701	1	3.841	Not Significant
	No	26%	64%	0%					
Are you staying as couple	Yes	8%	14%	0%	0.272	0.60203	1	3.841	Not Significant
	No	22%	56%	0%					
Food Habit	Vegetarian	16%	34%	0%	0.095	0.75762	1	3.841	Not Significant
	Non-Vegetarian	14%	36%	0%					
No. of Children	One	14%	44%	0%	1.394	0.49799	2	5.991	Not Significant

Table possess that association of socio demographic variables of Experimental group post – test II the results shows that there was statistically significant association with the duration of staying in old age home and no association settled with rest of the selected demographic variables.

In Physiological Parameters the Demographic variables were not significant in experimental group.

CONCLUSION

The purpose of the research was to investigate the impact of pranayama on stress and physiological parameters among senior citizens. Through pranayama, the majority of senior citizens saw a decrease in stress and an enhancement in coping abilities, according to the findings of the research.

Myths and superstitions have impeded the engagement of elderly individuals. Seniors have been the target of discrimination and unfairness for many years due to our traditional society and cultural attitudes. On the other side, the progress of technology and science discourages everyday physical exercise among humans. As a consequence, numerous physical and mental disorders are spreading at an alarming rate around the globe. Pranayama may be an essential method for older individuals to preserve their health and quality of life.

Yoga is very ancient Hindu discipline, which is a kind of exercise. Yoga is a spiritual practice which includes Pranayama training, poses, meditation. Today Yoga has become very popular all over the world, because of its benefits. Pranayama is one of the important aspects of Yoga.

The present study reveals that a planned Pranayama training program will help in improving health condition (both physiological and psychological).

The goal of the research was:

- To observe the effect of Pranayama training on selected physical and psychological parameters of old age senior citizens.
- To observe the effect of Pranayama training comparing with the pre-test & post-test levels.

This research evaluated the efficacy of Pranayama in lowering stress levels. The findings revealed that older individuals who had a higher level of stress in the pre-test now had a high degree of stress in

the post-test. Therefore, Pranayama may also be used to lower the amount of stress and enhance the psychological health of senior individuals living in old age. The research found suggested pranayama is an excellent stress management technique. Pranayama is an efficient stress management technique.

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