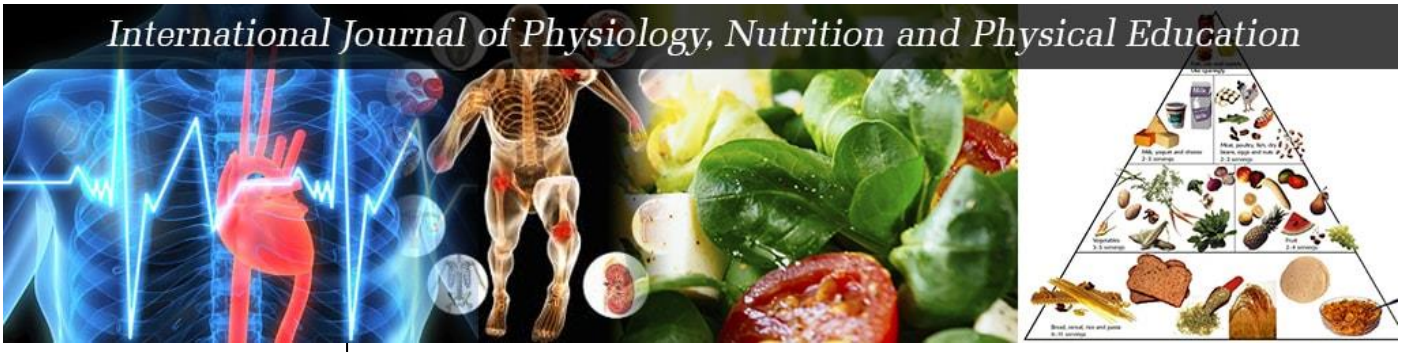

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Effect of callisthenic, aerobics exercises and yogasanas on blood pressure of primary school children

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Abstract
The purpose of the present study was to find out the "Effect of Callisthenic, Aerobics Exercises and Yogasanas on Blood Pressure of Primary School Children". The selected subjects 100 Girls and the Age Levels was 09 to 12 Years. Were divided into three Experimental Groups and a Control Group with Twenty-Five subjects in each (n=25) Experimental Group-I underwent Callisthenic Exercises, (n=25) Experimental Group-II underwent Aerobics Exercises, (n=25) Experimental Group-III underwent Yogasanas and (n=25) Control Group-IV served as Control Group for the training period of Twenty-One (21) Weeks.

Keywords: Callisthenic, aerobics exercises, yogasanas and blood pressure

Introduction
Callisthenic exercises are easy on your joints. Exercises such as leg extensions and machine chest presses are safe enough but for some exercises, these movements can be hard on your joints. If you have a long history of hard training are over forty and beginning to experience the onset of joint pain, callisthenic exercises are one of the best ways to keep your joints moving while minimizing any discomfort. As many martial artists and ex-military personnel have proven, callisthenic exercises are suitable for older exercisers looking to maintain a high level of fitness despite worn joints.

Aerobics exercise is the most important form of exercise for health since it increases the efficiency of heart rate, blood circulation and muscle strength. By doing exercise, the whole system of the body carries oxygen rich air which enters through the organs and tissues of the muscles which is called "the aerobic system" and for this reason, training the system for stamina is called aerobic training. A typical aerobic exercise work out consists of 8 to 10 minutes of stretching, calisthenics and low intensity exercise. This is followed by 15 to 45 minutes of their high or low impact aerobic dancing according to the target training intensity. The 10 minutes cool down period usually includes more stretching and callisthenic type exercise.

Yoga is a systematic and methodological process to control and develop the mind and body to attain good health, balance of mind and self-realization. Thought yoga has the potential power to make us healthy added to our vigor, still most of the people lack the knowledge of systematic practice of yoga. They perform yogic exercises for a short period and when their health improves, they discontinue the practice. For this reason, the effective results of yogic practice cannot be determined perfectly. Many scientists, doctors, psychologists etc. all over the world are extensively studying the beneficial aspects of yoga which encourages us to attain positive health through yoga.

When your heart beats, it pumps blood round your body to give it the energy and oxygen it needs. As the blood moves, it pushes against the sides of the blood vessels. The strength of this pushing is your blood pressure. If your blood pressure is too high, it puts extra strain on your arteries (and your heart) and this may lead to heart attacks and strokes.

Methodology
The purpose of investigator is to compare Resting Pulse Rate Performance of "Effect of Callisthenic Exercises, Aerobics and Yogasanas on Blood Pressure of Primary School

Children". The selected subjects were divided into three Experimental Groups and a Control Group with Twenty-Five subjects in each (n=25) Experimental Group-I underwent Callisthenic Exercises, (n=25) Experimental Group-II underwent Aerobics Exercises, (n=25) Experimental Group-III underwent Yogasanas and (n=25) Control Group-IV served as Control Group for the training period of Twenty-One (21) Weeks. Sample The Total Sample Consists 100 Girls and the Age Levels was 09 to 12 Years.

Analysis and interpretation of data

Hypothesis: There is no significant difference between four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) with respect to pre-test and post-test Systolic Blood Pressure scores of Primary School Children.

To achieve this hypothesis, the Analysis of covariance (ANCOVA) (pre-test scores as covariate) technique has been applied and the results are presented in the following table.

Table 1: Mean of pre-test and adjusted mean of post-test systolic blood pressure scores with comparison between four groups (Control, callisthenic exercise, aerobics exercise and yogasana) with respect to pre-test and post-test systolic blood pressure scores of primary school children by analysis of covariance (ANCOVA).

Groups	Pre-test		Post-test		
	Mean	SD	Mean	SD	Adjusted mean
Control Group	108.20	6.90	106.40	7.00	106.69
Callisthenic Exercise Group	109.40	7.12	112.60	5.97	112.19
Aerobics Exercise Group	110.00	7.36	114.20	5.89	113.44
Yogasana Group	107.20	7.65	112.40	6.31	113.27
F-test	0.7393@		11.4293#		
P-value	0. 5311		0.0001*		
Pair wise comparison of four groups by Tukeys multiple post hoc procedures					
Control v/s Callisthenic Exercise		p=0.9367		p=0.0002*	
Control v/s Aerobics Exercise		p=0.8172		p=0.0001*	
Control v/s Yogasana		p=0.9619		p=0.0002*	
Callisthenic Exercise v/s Aerobics Exercise		p=0.9914		p=0.6281	
Callisthenic Exercise v/s Yogasana		p=0.7081		p=0.9989	
Aerobics Exercise v/s Yogasana		p=0.5256		p=0.5334	

*p<0.05, @one way ANOVA applied, # ANCOVA applied

The results of the above table clearly show the following:

The results of the above table represents the mean of pre-test and adjusted mean of post-test Systolic Blood Pressure scores of Primary School Children in four Groups. The pre-test Mean Systolic Blood Pressure scores in Control Group is 108.20±6.90 as compared to 109.40±7.12 in Callisthenic Exercise Group; 110.00±7.36 in Aerobics Exercise Group and 107.20±7.65 in Yogasana Group. But mean post-test Systolic Blood Pressure scores are higher in Aerobics Group (114.20±5.89) as compared to Callisthenic Exercise Group (112.60±5.97) followed by Yogasana Group (112.40±6.31) and Control Group (106.40±7.00). The adjusted mean of post-test Systolic Blood Pressure scores of Primary School Children are presented in the above table.

- The four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) do not differencesignificantly with respect to pre-test Systolic Blood Pressure scores of Primary School Children (F=0.7393, p>0.05) at 5% level of significance. It means that, the pre-test Systolic Blood Pressure scores of Primary School Children are similar in Control Group, Callisthenic Exercise Group, Aerobics Exercise Group and Yogasana Group.
- A four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (F=11.4293, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post post-test Systolic Blood Pressure scores are different in four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana). It means that, the post-test Systolic Blood Pressure scores of Primary School Children are significantly higher in Aerobics Exercise Group as compared to Callisthenic Exercise Group and Yogasana Group followed by Control Group.

Further, if F is significant, to know the pair wise comparisons of four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) of Primary School Children by applying the Tukeys multiple post hoc procedures and the results are presented in the above table. It shows that,

- The control group and Callisthenic Exercise Group difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (p<0.05) at 5% level of significance. It means that, the post-test Systolic Blood Pressure scores of Primary School Children are significantly smaller in Control Group as compared to Callisthenic Exercise Group.
- The Control Group and Aerobics Exercise Group difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (p<0.05) at 5% level of significance. It means that, the post-test Systolic Blood Pressure scores of Primary School Children are significantly smaller in Control Group as compared to Aerobics Exercise Group.
- The Control Group and Yogasana Group difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (p<0.05) at 5% level of significance. It means that, the post-test Systolic Blood Pressure scores of Primary School Children are significantly smaller in Control Group as compared to Yogasana Group.
- The Callisthenic Exercise Group and Aerobics Exercise Group difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (p<0.05) at 5% level of significance. It means that, the post-test Systolic Blood Pressure scores of Primary School Children are higher in Aerobics Exercise Group as compared to Callisthenic Exercise Group.
- The Callisthenic Exercise Group and Yogasana Group do

not difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (p>0.05) at 5% level of significance. It means that, the post-test Systolic Blood Pressure scores of Primary School Children are similar in Callisthenic Exercise Group and Yogasana Group.

- The Aerobics Exercise Group and Yogasana Group do not difference significantly with respect to post-test Systolic Blood Pressure scores of Primary School Children (p>0.05) at 5% level of significance. It means that, the post-test Systolic Blood Pressure scores are similar in Aerobics Exercise Group and Yogasana Group. The mean scores of pre-test and post-testSystolic Blood Pressure scores of Primary School Children in four Groups (Control, callisthenic exercise, aerobics exercise and yogasana) are also presented in the following figure.

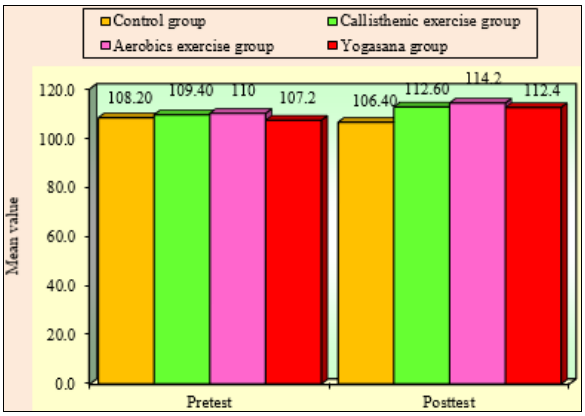

Fig 4.1: Comparison of four groups with respect to pre-test and post-test systolic blood pressure scores of primary school children

The above figure 4.11 Indicates that the Comparison of four Groups with respect to pre-test and post-test Systolic Blood Pressure scores of Primary School Children.

Discussion of the hypothesis

The Hypothesis was formulated on the reasoning that practices of Callisthenic, Aerobics and Yogasanas leads to increase the Physical and Physiological Fitness among the practitioners, because regular involvement in Callisthenic, Aerobics and Yogasanas activates develops Systolic Blood Pressure in muscle and joints. Experimental and Control indicates the influence of Callisthenic, Aerobics and Yogasanas more on Control Group, in pre-test Mean was 108.20 and post-test mean 106.40, Experimental Callisthenic Exercises Group in pre-test Mean was 109.40 and post-test 112.60, Aerobics Exercises Group pre-test Mean was 110 and post-test 114.2, and Yogasanas Group pre-test Mean was 107.2 and post-test 112.4. The Aerobics Group has higher Systolic Blood Pressure than by Callisthenic and Yogasanas Group.

Hypothesis: There is no significant difference between pre-test and post-testSystolic Blood Pressure scores of Primary School Children in four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana).

To achieve this hypothesis, the paired t-test was applied and the results are presented in the following table.

Table 2: Comparisonpre-test and post-testSystolic blood pressure scores of primary school children in four groups (Control, callisthenic exercise, aerobics exercise and yogasana).

Group	Test	Mean	Std. Dv.	Mean Diff.	SD Diff.	Paired t	P-value
Control Group	Pre-test	108.20	6.90	1.80	7.76	1.1603	0.2573
	Post-test	106.40	7.00				
Callisthenic Exercise Group	Pre-test	109.40	7.12	-3.20	4.76	-3.3607	0.0026*
	Post-test	112.60	5.97				
Aerobics Exercise Group	Pre-test	110.00	7.36	-4.20	4.72	-4.4520	0.0002*
	Post-test	114.20	5.89				
Yogasana Group	Pre-test	107.20	7.65	-5.20	4.44	-5.8505	0.0001*
	Post-test	112.40	6.31				

*p<0.05

The results of the above table, it can be seen that the following:

1. No significant difference was observed between pre-test and post-test Systolic Blood Pressure scores of Primary School Children in Control Group (t=1.1603, p>0.05) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the pre-test and post-test Systolic Blood Pressure scores of Primary School Children in Control Group are similar.
2. A significant difference was observed between pre-test and post-test Systolic Blood Pressure scores of Primary School Children in Callisthenic Exercise Group (t=-3.3607, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-test Systolic Blood Pressure scores are significantly higher as compared to pre-test Systolic Blood Pressure scores of Primary School Children in Callisthenic Exercise Group.
3. A significant difference was observed between pre-test and post-test Systolic Blood Pressure scores of Primary School Children in Aerobics Exercise Group (t=-4.4520, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-test Systolic Blood Pressure scores are significantly higher as compared to

pre-test Systolic Blood Pressure scores of Primary School Children in Aerobics Exercise Group.

4. A significant difference was observed between pre-test and post-test Systolic Blood Pressure scores of Primary School Children in Yogasana Group (t=-5.8505, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-test Systolic Blood Pressure scores are significantly higher as compared to pre-test Systolic Blood Pressure scores of Primary School Children in Yogasana Group. Further, the effect size of each group after intervention programme was calculated by using Wilks Lambda and partial eta and the results are presented in the following table.

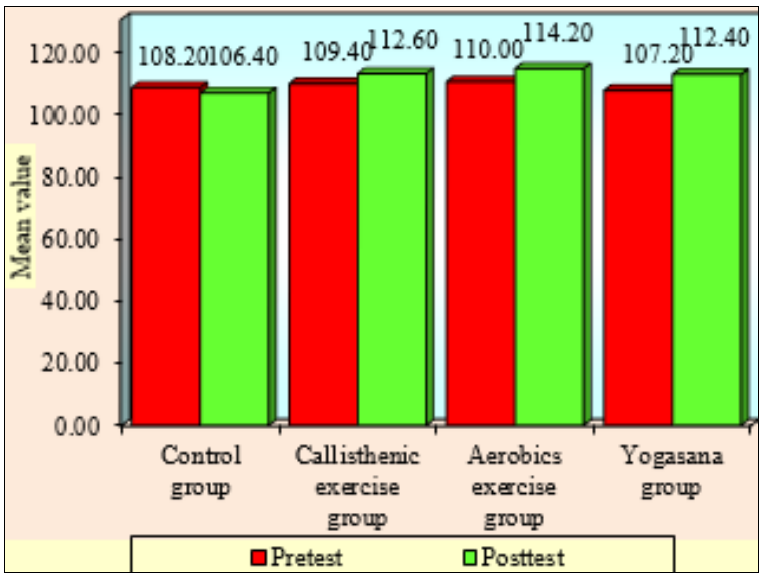

Fig 2: Comparison mean of pre-test and post-test systolic blood pressure scores of primary school children in control, callisthenic exercise, aerobics exercise and yogasana group.

The above figure 4.12 Indicates that the Comparison of Mean of pre-test and post-test Systolic Blood Pressure scores of Primary School Children in Control, Callisthenic Exercise, Aerobics Exercise and Yogasana Group.

Discussion of the hypothesis

The Hypothesis was formulated on the reasoning that practices of Callisthenic, Aerobics and Yogasanas leads to increase the Physical and Physiological Fitness among the practitioners, because regular involvement in Callisthenic, Aerobics and Yogasanas activates develops Systolic Blood Pressure in muscle and joints. Experimental and Control indicates the influence of Callisthenic, Aerobics and Yogasanas more on Control Group, in pre-test Mean was 108.20 and post-test mean 106.40, Experimental Callisthenic Exercises Group in pre-test Mean was 109.40 and post-test 112.60, Aerobics Exercises Group pre-test Mean was 110 and post-test 114.2, and Yogasanas Group pre-test Mean was 107.2 and post-test 112.4. The Aerobics Group has higher Systolic Blood Pressure than by Callisthenic and Yogasanas Group.

Hypothesis: There is no significant difference between four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) with respect to pre-test and post-test Diastolic Blood Pressure scores of Primary School Children.

To achieve this hypothesis, the Analysis of covariance (ANCOVA) (pre-test scores as covariate) technique has been applied and the results are presented in the following table.

Table 4: Mean of pre-test and adjusted mean of post-test diastolic blood pressure scores with comparison between four groups (Control, callisthenic exercise, aerobics exercise and yogasana) with respect to pre-test and post-test diastolic blood pressure scores of primary school children by analysis of covariance (ANCOVA).

Groups	Pre-test		Post-test		
	Mean	SD	Mean	SD	Adjusted Mean
Control Group	108.20	6.90	106.40	7.00	106.69
Callisthenic Exercise Group	109.40	7.12	112.60	5.97	112.19
Aerobics Exercise Group	110.00	7.36	114.20	5.89	113.44
Yogasana Group	107.20	7.65	112.40	6.31	113.27
F-test	0.8267@		6.9613#		
P-value	0.4823		0.0001*		
Pair wise comparison of four groups by Tukeys multiple post hoc procedures					
Control v/s Callisthenic Exercise			p=0.7400		p=0.2109
Control v/s Aerobics Exercise			p=0.9915		p=0.0002*
Control v/s Yogasana			p=0.8195		p=0.1436
Callisthenic Exercise v/s Aerobics Exercise			p=0.5605		p=0.0361*
Callisthenic Exercise v/s Yogasana			p=0.9990		p=0.0001*
Aerobics Exercise v/s Yogasana			p=0.6520		p=0.2109

*p<0.05, @one way ANOVA applied, # ANCOVA applied

The results of the above table clearly show the following:

The results of the above table represents the mean of pre-test and adjusted mean of post-test Diastolic Blood Pressure scores of Primary School Children in four Groups. The pre-test mean Diastolic Blood Pressure scores in Control Group is 66.20±4.85 as compared to 64.80±4.44 in Callisthenic Exercise Group; 66.60±5.72 in Aerobics Exercise Group and 65.00±4.33 in Yogasana Group. But mean post-test Diastolic Blood Pressure scores are higher in Aerobics Group (73.40±4.01) as compared to Callisthenic Exercise Group (70.60±3.63) followed by Yogasana Group (70.80±3.44) and Control Group (68.60±4.90). The adjusted mean of post-test Diastolic Blood Pressure scores of Primary School Children are presented in the above table.

1. The four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) do not difference significantly with respect to pre-test Diastolic Blood Pressure scores of Primary School Children ($F=0.8267$, $p>0.05$) at 5% level of significance. It means that, the pre-test Diastolic Blood Pressure scores of Primary School Children are similar in Control Group, Callisthenic Exercise Group, Aerobics Exercise Group and Yogasana Group.
2. A four groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children ($F=6.9613$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, thepost-test Diastolic Blood Pressure scores are different in four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana). It means that, the post-test Diastolic Blood Pressure scores of Primary School Children are significantly higher in Aerobics Exercise Group as compared to Callisthenic Exercise Group and Yogasana Group followed by Control Group.
3. Further, if F is significant, to know the pair wise comparisons of four groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) of Primary School Children by applying the Tukeys multiple post hoc procedures and the results are presented in the above table. It shows that,

- The Control Group and Callisthenic Exercise Group difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children ($p<0.05$) at 5% level of significance. It means that, the post-test Diastolic Blood Pressure scores of Primary School Children are significantly smaller in Control Group as compared to Callisthenic Exercise Group.
- The Control Group and Aerobics Exercise Group difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children ($p<0.05$) at 5% level of significance. It means that, the post-test Diastolic Blood Pressure scores of Primary School Children are significantly smaller in Control Group as compared to Aerobics Exercise Group.
- The Control Group and Yogasana Group difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children ($p<0.05$) at 5% level of significance. It means that, the post-test Diastolic Blood Pressure scores of Primary School Children are significantly smaller in Control Group as compared to Yogasana Group.
- The Callisthenic Exercise Group and Aerobics Exercise Group difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children's ($p<0.05$) at 5% level of significance. It means that, the post-test Diastolic Blood Pressure scores of Primary School Children are higher in Aerobics Exercise Group as compared to Callisthenic Exercise Group.
- The Callisthenic Exercise Group and Yogasana Group do not difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children ($p>0.05$) at 5% level of significance. It means that, the post-test Diastolic Blood Pressure scores of Primary School Children are similar in Callisthenic Exercise Group and Yogasana Group.
- The Aerobics Exercise Group and Yogasana Group do not difference significantly with respect to post-test Diastolic Blood Pressure scores of Primary School Children ($p>0.05$) at 5% level of significance. It means that, the post-test Diastolic Blood Pressure scores are similar in Aerobics Exercise Group and Yogasana Group.

The Mean scores of pre-test and post-testDiastolic Blood Pressure scores of Primary School Children in four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana) are also presented in the following figure.

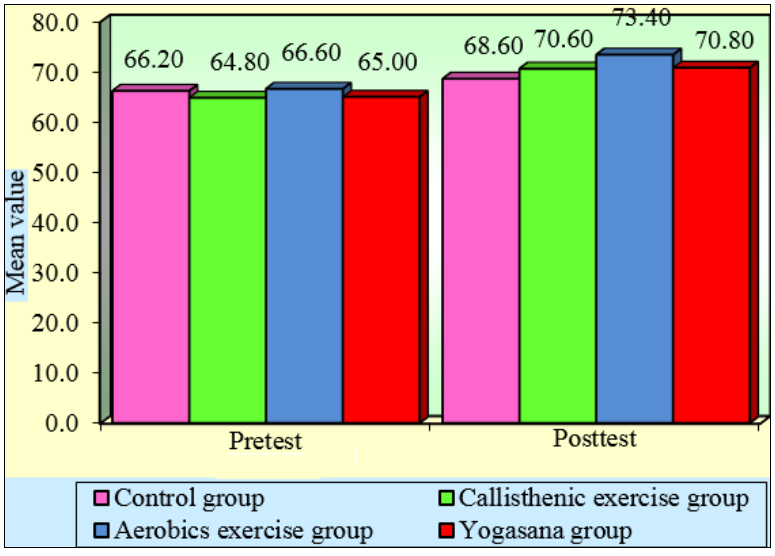

Fig 3: Comparison of four Groups with respect to pre-test and post-test diastolic blood pressure scores of primary school children

The above figure 4.13 Indicates that the Comparison of four Groups with respect to pre-test and post-test Diastolic Blood Pressure scores of Primary School Children.

Discussion of the hypothesis

The Hypothesis was formulated on the reasoning that practices of Callisthenic, Aerobics and Yogasanas leads to increase the Physical and Physiological Fitness among the practitioners, because regular involvement in Callisthenic, Aerobics and Yogasanas activates develops Diastolic Blood Pressure in muscle and joints. Experimental and Control indicates the influence of Callisthenic, Aerobics and Yogasanas more on Control Group, in pre-test Mean was 66.20 and post-test mean 68.60, Experimental Callisthenic Exercises Group in pre-test Mean was 64.80 and post-test 70.60, Aerobics Exercises Group pre-test Mean was 66.60 and post-test 73.40, and Yogasanas Group pre-test Mean was 65.00 and post-test 70.80. The Aerobics Group has higher Diastolic Blood Pressure than by Callisthenic and Yogasanas Group.

Hypothesis: There is no significant difference between pre-test and post-test Diastolic Blood Pressure scores of Primary School Children in four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana).

To achieve this hypothesis, the paired t-test was applied and the results are presented in the following table.

Table 5: Comparisonpre-test and post-test diastolic blood pressure scores of primary school children in four groups (Control, callisthenic exercise, aerobics exercise and yogasana).

Group	Test	Mean	Std. Dv.	Mean Diff.	SD Diff.	Paired t	P-value
Control Group	Pre-test	66.20	4.85	-2.40	6.79	-1.7677	0.0898
	Post-test	68.60	4.90				
Callisthenic exercise group	Pre-test	64.80	4.44	-5.80	3.12	-9.2874	0.0001*
	Post-test	70.60	3.63				
Aerobics Exercise Group	Pre-test	66.60	5.72	-6.80	4.76	-7.1414	0.0001*
	Post-test	73.40	4.01				
Yogasana Group	Pre-test	65.00	4.33	-5.80	3.12	-9.2874	0.0001*
	Post-test	70.80	3.44				

*p<0.05

From the results of the above table, it can be seen that the following:

- No significant difference was observed between pre-test and post-test Diastolic Blood Pressure scores of Primary School Children in Control Group (t=-1.7677, p>0.05) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the pre-test and post-test Diastolic Blood Pressure scores of Primary School Children in Control Group are similar.
- A significant difference was observed between pre-test and post-test Diastolic Blood Pressure scores of Primary School Children in Callisthenic Exercise Group (t=-9.2874, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-test Diastolic Blood Pressure scores are significantly higher as compared to pre-test Diastolic Blood Pressure scores of Primary School Children in Callisthenic Exercise Group.
- A significant difference was observed between pre-test and post-test Diastolic Blood Pressure scores of Primary School Children in Aerobics Exercise Group (t=-7.1414, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-test Diastolic Blood Pressure scores are significantly higher as compared to pre-test Diastolic Blood Pressure scores of Primary School Children in Aerobics Exercise Group.
- A significant difference was observed between pre-test and post-testDiastolic Blood Pressure scores of Primary School Children in Yogasana Group (t=-9.2874, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-testDiastolic Blood Pressure scores are significantly higher as compared to pre-test Diastolic Blood Pressure scores of Primary School Children in Yogasana Group.

Further, the effect size of each group after intervention programme was calculated by using Wilks Lambda and partial eta and the results are presented in the following table.

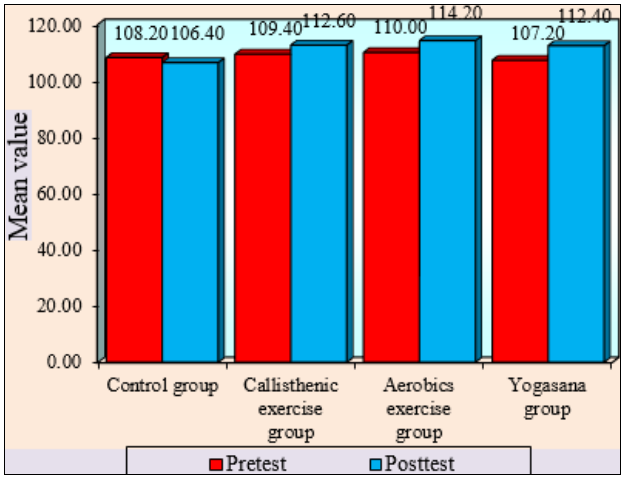

Fig 4: Comparison mean of pre-test and post-test systolic blood pressure scores of primary school children in control, callisthenic exercise, aerobics exercise and yogasana group.

The above figure 4.14 Indicates that the Comparison of Mean of pre-test and Post-test Systolic Blood Pressure scores of Primary School Children in Control, Callisthenic Exercise, Aerobics Exercise and Yogasana Group.

Discussion of the hypothesis

The Hypothesis was formulated on the reasoning that practices of Callisthenic, Aerobics and Yogasanas leads to increase the Physical and Physiological Fitness among the practitioners, because regular involvement in Callisthenic, Aerobics and Yogasanas activates develops Diastolic Blood

Pressure in muscle and joints. Experimental and Control indicates the influence of Callisthenic, Aerobics and Yogasanas more on Control Group, in pre-test Mean was 66.20 and post-test mean 68.60, Experimental Callisthenic Exercises Group in pre-test Mean was 64.80 and post-test 70.60, Aerobics Exercises Group pre-test Mean was 66.60 and post-test 73.40, and Yogasanas Group pre-test Mean was 65.00 and post-test 70.80. The Aerobics Group has higher Diastolic Blood Pressure than by Callisthenic and Yogasanas Group.

Conclusions

The pre-test Blood Pressure scores of Primary School Children are similar in Control Group, Callisthenic Exercise Group, Aerobics Exercise Group and Yogasana Group. The post post-test Blood Pressure scores are different in four Groups (Control, Callisthenic Exercise, Aerobics Exercise and Yogasana). The post-test Blood Pressure scores of Primary School Children are similar in Control Group and Callisthenic Exercise Group. The post-test Blood Pressure scores are similar in Aerobics Exercise Group and Yogasana Group. The post-test Blood Pressure scores are significantly smaller as compared to pre-test Blood Pressure scores of Primary School Children in Yogasana Group.

References

1. Emily Carruth, Nadine Taylor. The Influence of Aerobic Exercise on State Anxiety in College Students. Journal of Undergraduate Research. 2009; 7:1-18.
2. Fillmore D, *et al*. The Effects of Yoga Postures on Balance, Flexibility, and Strength in Healthy High School Females. Journal of Women's Health Physical Therapy. 2010; 34(1):10-17.
3. Franks B, Don, Moore, George C. Effects of Callisthenic and Volleyball on the AAHPER Fitness Test and Volleyball Skill. Research Quarterly. American Association for Health, Physical Education and Recreation. 1969; 40(2):288-292.
4. Gasti M. Appanna, Hiremath M, Rajashekhar. Effect of Callisthenic, Aerobic Dance, and Combination of Callisthenic and Aerobic Dance on Body Composition of Adolescents. 2012; 2(2).
5. Jaykishan Santoshi. Effect of Callisthenic and Yogic Practices on Selected Physical and Physiological Variables International Research Journal. 2010; 1(13):61-62.