

# Study the Effect of Skipping Jump Rope Program on Performance of Jump Rope over a period of 24 week on grade 4th and grade 8th Students from Venus World School, Pune

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## ABSTRACT

*The Purpose of the study is to study the performance of Extracurricular skipping Jumps Program Introduced by school for a period of 24 weeks in Venus World Schools, Hadapsar pune. For this research, 43 Students of Grade 4th and 31 Students from Grade 8th from Venus World School Pune were selected Using Non- probability based Convenience Sampling Technique. In this Research Researcher Studied the consistency in the Number of Jumps that was Done by the Students in the Venus World school For Making an World record of the Maximum Jumps in the 24 weeks by the 1100 Students. So Researcher wants to study that How Consistently children's are performing the Jump Ropes over period of 24 weeks. So, the researcher took the Jump Rope data of both the classes for 4TH A and 8TH B and Distribute them in 4 quarters of 25 days each. And analysis it with Descriptive Statistics to analysis the research data and interpret it for Hypothesis testing. For the 4th grade record in the 1st phase the mean scored 1908 (SD 156±). The Mean of 2nd phase scored 2173 (SD 362±), the Mean of 3rd phase scored 2317 (SD 335±), and mean of 4th phase scored 2189(SD 344±). And for the grade 8thmean for the phase 1st scored 1013(SD 264±), for the 2nd phase mean scored 1152 (120±), for the phase 3rd mean scored 1280 (SD 82±), and for the 4th phase mean scored 1848 (SD 263±) respectively. Anova was used for analysis of variance, and scheffe's post hock test were used to identify which phase is differ from each other.*

*Hence it is Conclude that for the 4th grade there is no as such result Improved as expected but for the 8th Grade there is a Significant Change Happened.*

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**Keywords** : Skipping Jumps, 24 Weeks Program, Consistency

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## Introduction

According to the WHO - Regular physical activity is proven to help prevent and manage non communicable diseases (NCDs) such as heart disease, hypertension, stroke, diabetes and several cancers. It also helps to maintain a healthy body weight and can improve mental health, quality of life and well-being. Physical activity refers to all movement. Popular ways to be active include walking, cycling, wheeling, sports, and active recreation and play, and can be done at any level of skill and for enjoyment by everybody. Work such as household chores or jobs requiring physical labor is another way to be physically active.

The researcher Divided these 24 weeks in 4 phases like each phase is divided into 25 days. Convenient Sampling Technique is used for the purpose of Data collection. In this Research Researcher Studied the consistency in the Number of Jumps that was Done by the Students in the Venus World school For Making an World record of the Maximum Jumps in the 24 weeks by the 1100 Students. So Researcher wants to study that How Consistently children's are performing the Jump Ropes over period of 24 weeks. Researcher used their daily class wise record for checking the improvement in the Number of Jump Ropes they made. For that purpose researcher Made 4 phases of 25 days each and compare them with each other. The data collected was entered in excel and coded for Gender, Age, Standard, Division, fitness test, pre-test and for the posttest and descriptive Analysis was done to describe the Level of performance changes in pre and post-tests. and divide all the 100 days Skipping data of 4th and 8th grade students in 4 phase each consist of 25 days each looking for the Gradual improvement in the number jumps.

### The Objectives of the study –

1. To Study the Effect of Skipping Rope Program Among Student.
2. To Study the Consistency in the Number of Jumps Perform by the Students within 24 weeks.

## Methodology

Research Study is conducted in Venus World School, Hadapsar pune Students. There are Grade 1st to Grade 10 th Students are studding Out of which Researcher selects the 43 students Studding in 4thA grade And 31 students from 8th A Grade are selected using Convenience Sample Technique. After Selecting the Sample

Researcher Analyze the Daily Record of the Jump Ropes of grade 4th and Grade 8th of the whole 24 weeks By dividing them into 4 phases And Check progression in Each Phase.

## Analysis and Interpretation

### Results :

**Table No. 1 :** Summary of Descriptive analysis for Phase wise record of Jump Rope (Grade 4th)

Phases	N	Mean	Std. Deviation	Std. Error	Min	Max
Phase 1	25	1908	156	31	1654	2178
Phase 2	25	2173	362	72	1459	2489
Phase 3	25	2317	335	67	1729	3208
Phase 4	25	2189	344	69	1460	3206

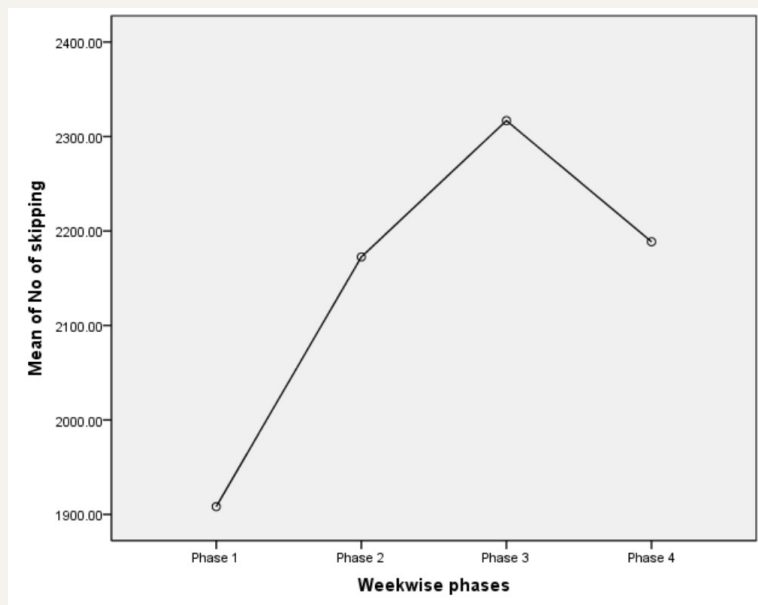
According to the above table descriptive analysis of week wise record of jump rope of grade 4th is catagarised in the phases.

According to the data analysis Phase 1 The Mean is 1908 and the standard Deviation is 156 for first 25 days. The Mean of phase 2 is 2173 and the standard deviation is 1459.

The Mean of Phase 3 is 2317 and the standard deviation is 1729. Mean of Phase 4 is 2189 and standard Deviation is 1460.

With Respect to Mean of all phases the Average Jump Rope Score is High in Phase 3.

Where minimum no of jump ropes are 1729 and maximum Number of jump ropes are 3208. we can see that Number of Skipping Jumps Are decreasing in last 4th quarter of skipping jump program. The reasons behind decreasing in number of jumps can be lack Intrest level, lack of motivation, rewards or it can be the Boredom or repetition of the same activity.



**Fig. No. 1 :** Trend of Skipping Jump Participation Over Time of 4 Phases

From the above graph we can see that Number of Skipping Jumps Are decreasing in last 4th quarter of skipping jump program. The reasons behind decreasing in number of jumps can be lack Interest level, lack of motivation, rewards or it can be the Boredom or repetition of the same activity.

**Table No. 2 :** Analysis of Variance Results for Comparing the Effects of Four Phases of Skipping Rope Program.”

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2205536.030	3	735178.67	7.611	.000
Within Groups	9273540.720	96	96599.38		

From the above table Anova is calculated and Mean difference Within Group is 96599.38 and Critical Sig level is .000 level

**Table No. 3 :** Scheffes Post Hoc Analysis of Multiple Phases Analysis

Weekwise phases	Weekwise phases	Mean Difference (IJ)	Sig.
Phase 1	Phase 2	-264	.034

	Phase 3	-409	.000
	Phase 4	-280	.021
Phase 2	Phase 1	264	.034
	Phase 3	-144	.446
	Phase 4	-16	.998
Phase 3	Phase 1	409	.000
	Phase 2	144	.446
	Phase 4	128	.549
Phase 4	Phase 1	280	.021
	Phase 2	16	.998
	Phase 3	-128	.549

After Applying Anova it was seen that there is a significant difference in the phases but it was not clear in which phase the major significant difference is occurred that's why researcher apply Scheffe POST HOC test where researcher found significant difference in 3 phase.

According to the analysis researcher did not found the major significant difference in phase 1 (mean difference is 264) and phase 2(MD 409) but compare to first Two Phases there is a significant differences found in Phase 3(MD and Phase 4.

**Table No. 4 :** Summary of Descriptive analysis for Phase wise record of Jump Rope (Grade 8th)

	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Phase 1	1013	264	53	539	1526
Phase 2	1152	120	24	843	1298
Phase 3	1280	82	16	1043	1376
Phase 4	1848	263	53	1378	2127

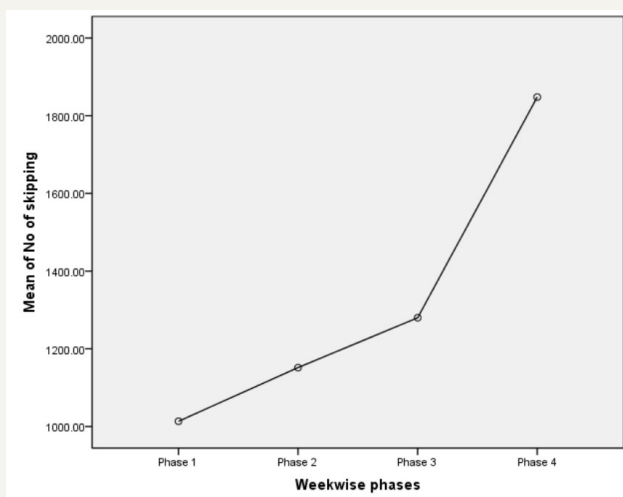
According to the above table descriptive analysis of week wise record of jump rope of grade 8th is catagarised in the phases.

According to the data analysis Phase 1 The Mean is 1013 and the standard Deviation is 264 for first 25 days. The Mean of phase 2 is 1152 and the standard deviation is

120.

The Mean of Phase 3 is 1280 and the standard deviation is 82. Mean of Phase 4 is 1848 and standard Deviation is 263.

With Respect to Mean of all phases the Average Jump Rope Score is High in Phase 4 means in the last Quarter of the Skipping Rope program where minimum no of jump ropes are 1378 and maximum Number of jump ropes are 2127.



**Figure No. 2 :** Trend of Skipping Jump Participation Over Time of 4 Phases

From the Above graph we can see that Number of Skipping Jumps Are gradually Incrising day by day in last 4th quarter of skipping jump program. The reasons behind incrise in number of jumps can be incrise in the compition between the classes, Intrest level, motivation by the classmates and teachers.

**Table No. 5 :** Analysis of Variance Results for Comparing the Effects of Four Phases of Skipping Rope Program

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10066444.040	3	3355481.347	83.976	.000
Within Groups	3835919.200	96	39957.492		
Total	13902363.240	99			

From the above table Anova is calculated and Mean difference Within Group is 39957.2 and Critical Sig level is .000 level

**Table No. 6 : Multiple Analysis**

(I) Weekwise phases	(J) Weekwise phases	Mean Difference (I-J)	Sig.
Phase 1	Phase 2	-138	.121
	Phase 3	-266	.000
	Phase 4	-835	.000
Phase 2	Phase 1	138	.121
	Phase 3	-128	.168
	Phase 4	-696	.000
Phase 3	Phase 1	266	.000
	Phase 2	128	.168
	Phase 4	-568	.000
Phase 4	Phase 1	835	.000
	Phase 2	696	.000
	Phase 3	568	.000

After Applying Anova it was seen that there is a significant difference in the phases but it was not clear in which phase the major significant difference is occurred that's why researcher apply Scheffe POST HOC test where researcher found significant difference in 3 phase.

According to the analysis researcher did not found the major significant difference in phase 1(Mean differences 138) and phase 2(MD 128) but but compare to first Two Phases there is a significant differences found in Phase 3 and Phase 4

## Discussion

As there in Discussion there is Significant Change in number of Skipping Jump Done by students of 4th standard and 8th standard but not the Consistent Change in all the phases equally and Gradually Over a 24 weeks. It can be seen that there is no significant change is phase 1 and 2 compare to phase 3 and 4. In the Phase 1 There is no significant change happen as compare to in 2nd Phase. Number of Skipping Jumps Are gradually Incrising day by day in last 4th quarter of skipping jump program. The resons behind incrise in number of jumps can be increse in the compition between

the classes, Interest level, motivation by the classmates and teachers.

There is good significant Difference found but not as much expected by the researcher so for that reason Teachers have to focus on the program is effective in the initial stage it remains to be so on continuous basis. Although the students are doing the practice on a daily basis. Although the Number has not increase. This implies consistency in the practice but lack of improvement either due to lack of Motivation or Boredom. (elder & Acar, 2018) Looked at how jumping rope during physical education classes affects the strength, speed, and VO2 max of 10-12 year old boys. In conclusion, positive effects were determined on weight, fat ratio, speed, leg strength and VO2 max after 10 in all sports branches can accelerate the development of the players, as well as contribute to the week rope training program. It can be said that the rope-jump training program accelerated and increased the development of these parameters of the children at this age. For this reason, the inclusion of rope programs in physical education and sports curriculum is important to contribute the motor skills. Especially the fact that there is a rapid development of this age group reveals the importance of this program. In addition, placing a rope-jump exercise variety of training. Including rope-jump programs in physical education, sports lessons, and sports training for kids aged 10-12 can help improve their motor skills and speed.

(Barrio, et al., 2023) Studied the effect of jump rope training for health and fitness in school – aged participants: secondary analysis from a systematic Review Changing certain factors while doing jump rope training (JRT) can be a new way to adjust and improve the specific training results. JRT is often used as a traditional game in schools for kids (SAP) in many countries. . In conclusion, adjusting the weight of the rope, using specific recovery strategies, choosing the type of jump, and controlling the total number of jumps can help make JRT programs better for the health and fitness of kids. As an alternative to traditional plyometric jump training, JRT can offer meaningful improvements in health and fitness measures in SAP. Manipulation of JRT moderator variables can be a novel training guide to strength and conditioning coaches for designing and implementing their training programs.

(wang, Zhang, Li, & Zhang, 2022) Study the Effect of fancy rope Jumping exercise on creativity of elementary school student The goal of this study was to see how doing fancy rope jumping exercises with moderate intensity for 6 months would affect the creativity of elementary school students.

## Conclusion

The Research Findings Suggest that Effect of Skipping Jump Program is Significant and students performs the Jump Number of Skipping Jumps Are gradually Increasing



day by day in last 4th quarter of skipping jump program. The reasons behind increase in number of jumps can be increase in the competition between the classes, Interest level, motivation by the classmates and teachers. In the Phase 1 There is no significant change happen as compare to in 2nd Phase. Number of Skipping Jumps Are gradually Increasing day by day in last 4th quarter of skipping jump program. The reasons behind increase in number of jumps can be increase in the competition between the classes, Interest level, motivation by the classmates and teachers.

## Recommendation

1. Include a control group in future studies to compare the performance of students who participate in the Skipping Jump Rope Program with those who do not. This would help in establishing a clearer causal relationship between the program and the observed improvements in jump performance.
2. Incorporate qualitative methods such as interviews or focus groups to explore the students' experiences, perceptions, and motivations regarding the Skipping Jump Rope Program. Understanding the subjective experiences of participants can provide valuable insights into the factors influencing program effectiveness

## References

- Barrio, E. D., Alvarez, C., Thapa, R., Ramchandran, A., Singh, U., & Campillo, R. R. (2023, January). Jump rope training for health and fitness in school- aged participants. *international journal of kinesiology and sports sciences*.
- Elder, N., & Acar, H. (2018). The effect of rope jump Training Program in Physical Education Lesson On strength, Speed and VO2 Max in children. *Research Gate*, 340-345.
- Wang, C., Zhang, X., Li, H., & Zhang, G. (2022). The Effect of Fancy Rope Jumping Exercise on Creativity of Elementary School Students