



## PHYSICAL TRAINING

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### ABSTRACT :

*The defense mechanisms are available but child has to be guided at what extent these ego-defense mechanisms have to be used and up to what extent.*

*"Sound mind leaves in sound body" It indicates co-ordination between body and mind for achieving success whether is in any field. It indicates the importance of physical training. Certainly physical training provokes individual to control over negative psychological traits.*

*Exercise has been shown to protect against coronary heart disease, high blood pressure, diabetes, osteoporosis, and some cancers. Regular exercisers also benefit from leaner bodies, improved flexibility and stamina. While most people are aware of these physical health benefits, many are not familiar with the range of mental health benefits that can be derived from regular exercise.*

**KEYWORDS :** physical health benefits, Sports, Health Benefits.

### INTRODUCTION



### Construction of Physical Training Module

Module of physical training for adolescents of was prepared on the basis of previous researches and with the help of trained instructors of the respective fields. Module 1 was related to Yoga and module 2 was related to Physical exercises. Modules were prepared with the help of yoga and physical experts the necessary changes were incorporated and finally two modules for training were prepared.

### MODULE 2 – Physical Exercises

Students learn yoga and physical exercises by observing a demonstration given by the instructor while listening to instructions. In addition, the instructor spent time with each subject correcting their practice (e.g. repositioning their limbs) with verbal instructions. The detailed description of these modules are given below: Table 1 represents the outline of training module 2.

**Table 1**  
**Outline of Training Module 2**

Exercise	Schedule	Duration
Warm- up	Daily	3 – 5 minutes
Running	Daily	5 – 10 minutes
Cross Country	Daily	5 – 10minutes
Pull ups, Push ups, Sit ups, Standing Broad Jump	One daily	3 – 5 minutes
Kho-Kho, Kabaddi, Basket Ball	Daily but one game in a day	25 - 30 minutes

Module 2 included physical exercises (aerobic and anaerobic) to develop and maintain over all health (Appendix 3). It is said that frequent and regular physical exercise boost immune system and thus improve physical and mental health. It also increases energy and raise one's threshold for pain. In this module aerobic exercise like walking running and anaerobic exercise like push ups pull ups etc. were included to increase muscles strength. Module was formed in such a way that it became interesting for subjects. At initial level subject were given logic of these exercises through lecture to inculcate their interest in the training programme.

**The details of these exercise are as follows.**

#### **Warm up**

Small steps of jogging were initiated to warm-up the body. It is essential to tone the body for any type of physical exercise.

#### **Running**

The next best step of the warm-up is light running. It was done in groups of 10 adolescents each. This activity accelerates the oxygen intake in body and also increases the capacity of lungs and heart.

#### **Cross Country**

It was done in their respective school grounds. The distance was 4 kms. This activity also includes oxygen intake and increases the ability of muscles to take use of oxygen. In long term, oxygen is beneficial for the brain as it increases the oxygen flow to the brain.

#### **Pull ups**

This physical exercise increases arm and shoulder strength. A student should grasp the bar with his palms facing away from his body until his chin is over the bar and then lower it again to the starting position with his arms fully extended.

#### **Sit ups**

This physical exercise is done to increase abdominal strength and endurance. In this exercise the student lies flat on the back with knees bent and feet on the mat with the heels no more than 1 foot from the buttocks. The knee angle should not be less than 90 degrees. The fingers are interlocked and placed behind the neck he elbows touching the floor. The feet are held securely by a partner. The students then curls up to a sitting position and touches the elbows to the knees. This exercise is repeated as many times as possible in the time requirement.

#### **Push ups**

This physical exercise is done for strengthening capacity and power of arms and shoulders. It is done by laying down the student in the manner that his face is towards the ground then body is pushed upwards with the support of both hands, with both palms on the ground. Again student has to pull up his body upwards remaining his hand on the ground in the initial posture. It is repeated till student regrets to do it.

#### **Standing Broad Jump**

This physical exercise is done to increase the power. In this exercise the student stands behind a takeoff line with his feet several inches apart. Before jumping, the student dips at the knees and swings the arms -backward. He then jumps forward by simultaneously extending the knees and swinging the arms forward.

#### **Sports**

Three sports activities were executed namely, Kho- Kho, Kabaddi and Basket Ball. These sports activities were conducted to increase strength, power, running capacity, agility, flexibility and endurance. These games are considered important for physical and physiological parameters and inculcate feeling of co-operation, boosting morale and develop competition habits. These games were executed one in a day according to the wish of students. Module was prepared for 1 hour. Rest was given to subjects, whenever required.

**Instructions: The separate instructions for test is given below:****Eight State Questionnaire (अष्ट परिस्थितियाँ पैनावली)**

इस पुस्तिका में अधिकांश व्यक्तियों द्वारा किसी एक अथवा अन्य समय पर व्यक्त होने वाली मानसिक दशा एवं भावनाओं से सम्बन्धित कथन दिये गये हैं। इनमें कहीं "सही" अथवा "गलत" उत्तर जैसी कोई बात नहीं है। चूँकि हर व्यक्ति के विचार एक दूसरे से भिन्न होते हैं, इसलिये आपको इन कथनों के उत्तर केवल इस आधार पर देने हैं कि प्रैन पाने के बाद कथन या प्रश्न के संबंध में आप उस क्षण कैसे महसूस कर रहे हैं। आपके प्रश्नों के उत्तर आपकी भावनाओं के सामान्य रूप से महसूस होने वाले विचारों पर आधारित न होकर, कथन या प्रैन की तत्क्षण होने वाली प्रतिक्रिया के आधार पर होने चाहिये।

कृपया अपने उत्तर पत्र पर ही लिखें। प्रत्येक प्रैन के चार विकल्प यथा —ए एवं CI एवं sal दिये गये हैं। उनमें से एक विकल्प को चुनिये जो कि आपकी उस क्षण महसूस भावना को सबसे अच्छा प्रतिबिम्बित करता है। तत्पश्चात चुने हुए इस उत्तर को आप विकल्प के सामने सही चिन्ह ( ✓ ) द्वारा निर्दिष्ट कीजिए। प्रत्येक प्रैन के लिए केवल एक ही विकल्प पर सही का चिन्ह अंकित करें। इस बात कंवल भली भाँति जाँच कर लीजिए कि प्रश्न पुस्तिका पर दिए गए कथन क्रमांक वही हों जो उत्तर-पत्र में आपके द्वारा लगाए गए सही चिन्ह वाले विकल्प के अक्षर का उत्तर क्रमांक है।

उदाहरण

(1) मैं प्रसन्नचित महसूस करता हूँ।

**अत्यधिक**

इ. प्रायः सत्य

ब. प्रायः असत्य

क. अधिकतर असत्य

इनमें से किसी एक उत्तर का चुनाव निश्चित ही आपको करना है। यदि इस समय आप सचमुच में ही प्रसन्नचित महसूस कर रहे हैं तो आप 'ए' का चुनाव करेंगे तथा उसी पर सही का चिन्ह ( ✓ ) अंकित करेंगे। यदि आप इस क्षण अत्यधिक अप्रसन्न महसूस कर रहे हैं तो आप 'क' विकल्प पर सही का चिन्ह ( ✓ ) लगाइये। विकल्प इ एवं CI के द्वारा चिन्हित उत्तर तो सामान्य प्रसन्नता अथवा अप्रसन्नता को ही व्यक्त करेगा। परन्तु CI एवं sal उत्तरों का उपयोग तब तक न कीजिए जब तक आप यह महसूस भली-भाँति न कर लें कि तत्क्षण भाव के आधार पर 'अथवा' DI विकल्प को चुनने में आप असमर्थ हैं।

**निम्न बातों का ध्यान रखिए :**

1. अपने उत्तरों को सोचने में अत्यधिक समय न लगायें, इस क्षण आप उस कथन के संबंध में कसा महसूस करते है, उसमें प्रथमतः महसूस होने वाले स्वाभाविक उत्तर को ही लिखें।
2. जाँच कर लें कि उत्तर पुस्तिका पर लिखें गए उत्तर क्रमांक वही हैं जो पत्र-पुस्तिका में कथन क्रमांक हैं।
3. प्रत्येक उत्तर पर प्रत्युत्तर दीजिए। चाहे आपकी दृष्टि में उस कथन का उत्तर आप पर प्रयुक्त नहीं होता हो। आपका उत्तर पूर्णतः गोपनीय रखा जाएगा।
4. जो भी आपकी भावनाओं एवं विचारों में हैं, वही सत्य एवं ईमानदारी से प्रत्युत्तर रूप में लिखिए। कृपया किसी ऐसे उत्तर पर चिन्ह न लगाएँ जो सही बात कहने सा प्रतीत हो रहा है।
5. इस क्षण में जो आपकी मनःस्थिति है उसी के अनुसार ही उत्तर लिखिए।

Psychosocial aspects of physical activity (Peter Nieman, 2011)

**HEALTH BENEFITS**

The health benefits of regular physical activity have been studied and are well described in the literature. The psychosocial benefits of regular physical activity, which are considered to be as important as the health benefits, are less clear.

The current data regarding the impact of physical activity on children's psychosocial health confirm an associative, rather than a causal link in many studies. Definitive research is also made difficult by the Hawthorne effect. The Hawthorne effect refers to subjects who change their behaviour as a result of being part of a study.

A physical exercise is a bodily activity that develops and maintains physical fitness and overall health. It is often practiced to strengthen muscles and the cardiovascular system, and to have athletic skills. These physical exercises help in increasing the blood and oxygen flow to brain, creating new nerve cells and increasing chemicals in the brain that helps cognition.

Various studies have been conducted on effect of physical exercises on physical and psychological aspects of individuals. Such as Karp (1985), Murphy (1995), Selly (1998), Homme and Tosti (1998). Very few

literature is viewed regarding the effect of physical activities on psychological parameters of adolescents. Therefore, the present study is aimed to find out the differential impact of yoga and physical exercise on psychological variables namely anxiety, stress, depression, regression, fatigue, guilt, extraversion, arousal, intelligence and body image.

The systematic plan was made for the present study. As it is mentioned that the study design is pre-post the subjects were selected in a manner that it fulfills the requirement of the design. First of listing of all the schools of Sangli District of Maharashtra is done and through randomization total 10 schools were selected after contacting personally a permission is taken for conducting the study. After getting the permission the total 300 subjects were contacted 25 subjects together at their respective schools. After they were seated comfortably and rapport building they were asked to fill the personal bio-data sheet ensuring them that all the information should be used for study purpose and also should be kept confidential. Then, the selected tests were conducted with a systematic manner and according to standardized test conduction procedures. The intervention programme of physical training is introduced for experimental group for a time of 3 months..

On the basis of results they were categorized according to necessity of prepost experimental design of the study.

**Table 2 Detailed Plan of Study**

<ul style="list-style-type: none"> <li>• Listing of Schools at Sangli District of Maharashtra</li> <li>• Selection of 10 Schools through randomization.</li> <li>• Permission From Selected schools</li> <li>• Distribution of subjects in two groups (Control and Experimental)</li> <li>• Rapport Establishment with Students at their respective institutes.</li> <li>• Conduction of study</li> </ul>			
Aspects of Study	Tests & Techniques Used	Mode of Instruction and Administration	Average time Taken
Pre Testing of Bot	i Groups (Control and Experimental)		
Anxiety, Stress, Depression, Regression, Fatigue, Guilt Arousal, Extraversion	Eight State Questionnaire by Curran & Cattell adopted in Hindi by Malay Kapoor & Mahesh Bhargava	maximum 05 subjects at a time	30 minutes
Physical Training I and 75 females) No Intervention till	ntervention of 3 months for Experimental Group (75 males and 75 females) 3 months for Control Group (75 males and 75 females)		
Anxiety, Stress, Depression, Regression, Fatigue, Guilt Arousal, Extraversion	Eight State Questionnaire by Curran & Cattell adopted in Hindi by Malay Kapoor & Mahesh Bhargava	maximum 05 subjects at a time	30 minutes
<ul style="list-style-type: none"> <li>• Data Collection according to the need of experimental design.</li> <li>• Scoring through Manuals &amp; Scoring Keys of selected tests.</li> <li>• Data Analysis.</li> </ul>			

### OBJECTIVES

1. To study the overall psyche of boys and girls studying in Xth grade.
2. To study the Anxiety and Stress level of selected subjects before and after imparting physical training.
3. To study the Depression and Regression level of selected subjects before and after imparting physical training.
4. To study the Fatigue and Guilt level of selected subjects before and after imparting physical training.
5. To study the Extraversion level and arousal state of selected subjects before and after imparting physical training.

### HYPOTHESES

1. There is no effect of physical training on anxiety and stress of secondary students.
2. There is no effect of physical training on depression and regression of secondary students.
3. There is no effect of physical training on fatigue and guilt of secondary students.
4. There is no effect of physical training on extraversion and arousal of secondary students.

### CONCLUSIONS

There is no significant difference between anxiety scores of control and experimental group during pre-test situation of students (boys & girls). It further infers that both the groups are homogeneous. There is no significant difference between anxiety scores of control and experimental group during Post-test situation of students (boys & girls). It highlights the effectivity of physical exercises on controlling anxiety of students (boys & girls).

There is significant difference between Depression scores of pre and post test situation of boys of experimental group. It infers that due to physical exercises there is a reduction in Depression level of boys. There is significant difference between Depression scores of pre and post test situation of girls of experimental group. It further infers that due to physical exercises there is a reduction in Depression level of girls. There is no significant difference between Depression scores of control and experimental group during Post-test situation of students (boys & girls). It highlights the effectivity of physical exercises on controlling Depression of students (boys & girls).

There is no significant difference between Regression scores of pre and post test situation of students (boys & girls) of control group. There is significant difference between extraversion scores of pre and post test situation of boys of experimental group. It further infers that due to physical exercises there is enhancement of extraversion level of boys. There is no significant difference between arousal scores of pre and post test situation of boys of control group. There is no significant difference between arousal scores of pre and post test situation of girls of control group. There is no significant difference between arousal scores of pre and post test situation of students (boys & girls) of control group.

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