“Assessing the impact of Yogic exercise on physical, physiological and psychological efficiencies of adolescence students of CBSE/UPMSP school in Kanpur Nagar”

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CHAPTER- I

INTRODUCTION

Engaging in regular yoga exercise has been shown to be especially effective in the prevention of several chronic illnesses, including as obesity, depression, cardiovascular disease, diabetes, cancer, hypertension, and osteoporosis. Multiple studies have shown that the practise of Yogic Exercise and engagement in health-related physical fitness may have a positive impact on the well-being of young individuals, fostering the cultivation of a healthy lifestyle.

STATEMENT OF THE PROBLEM

"Assessing the impact of Yogic exercise on physical, physiological and psychological efficiencies of adolescence students of CBSE/UPMSP school in Kanpur Nagar"

OBJECTIVES OF THE STUDY

The Objective of the study is to determine the Impact of yogic exercise physical, physiological and psychological efficiencies of adolescence students of CBSE/UPMSP school in Kanpur Nagar"

HYPOTHESIS OF THE STUDY

The following null and research hypotheses formulated for the present study.

1. There would be no significant difference of the yogic exercise physical, physiological and psychological efficiencies of adolescence students of CBSE/UPMSP school in Kanpur Nagar
2. There would be significant difference of the yogic exercise physical, physiological and psychological efficiencies of adolescence students of CBSE/UPMSP school in Kanpur Nagar

DELIMITATIONS OF THE STUDY

1. The study will be delimited to the adolescence of aged between 14 to 17 years.
2. The study will be delimited to only adolescence students.
3. The geographical area will be delimited to the jurisdiction of adolescence students at CBSE/UPMSP schools Kanpur.
4. The period of training programme will be delimited to 20 weeks and 3 days per week.

LIMITATIONS OF THE STUDY

There are a number of limitations restricting the generalize ability of this study are as

1) Since the adolescence students belong to different level of performance hence the prior Experience of the students may be considered as limitation of the study.
2) There will be no control of research scholar on the diet of the subjects.
3) The effect of weather conditions will be considered as limitations.
4) No motivation techniques will be used during administrating the test.

DEFINITION & EXPLANATION OF TERMS

Physiological Efficiency: Ability to Physiological work capacity of human body system.

Resting Heart Rate: The heart rate is differenced as the frequency or number of heart in one minute.

Respiratory Rate: It is deficient as the total number if breathe in one minute.

Breath Holding Capacity (Expiration): The time for which one can hold air after full expiration is called breathing holding capacity after expiration.

Breathing Holding Capacity (Inspiration): The time for which, one can hold air after inspiration.

Blood Pressure: The blood pressure is the pressure of the blood within the arteries. It is produced primarily by the contraction of the heart muscle.

Body Mass Index:

Body Mass Index will be measured by individual's body mass divided by the square of his height.

DEFINITION & EXPLANATION OF TERMS (Contd.)

- **Agility:** A rapid whole-body movement with change of velocity or direction in response to a stimulus.
- **Flexibility:** The intrinsic property of body tissues, which determines the range of motion achievable without injury at a joint or group of joints.
- **Balance:** It as the act of maintaining, achieving or restoring a state of balance during any posture or activity
- **Academic Resilience -** Academic resilience refers to the capacity of students to perform well in school despite a disadvantaged background or more precisely the heightened likelihood of success in school despite environmental adversities brought about by early traits, conditions, and experiences

CHAPTER- II

REVIEW OF RELATED LITERATURE

Chen T.L. et al. (2009), done a research on "The Effect of Yoga Exercise Intervention on Health Related Physical Fitness in School-Age Asthmatic Children". The study contains the following. The purpose of this study was to investigate the effect of yoga exercise on the health-related physical fitness of school-age children with asthma. The study employed a quasi-experimental research design in which 31 voluntary children (exercise group 16; control group15) aged 7 to 12 years were purposively sampled from one public elementary school in Taipei County. The yoga exercise program was practiced by the exercise group three times per week for a consecutive 7 week period. Each 60-minute yoga session included 10 minutes of warm-up and breathing exercises, 40 minutes of yoga postures, and 10 minutes of cool down exercises. Fitness scores were assessed at pre-exercise (baseline) and at the seventh and ninth week after intervention completion. A total of 30 subjects (exercise group 16; control group 14) completed follow-up. Results included: 1. Compared with children in the general population, the study subjects 50 (n = 30) all fell below the 50th percentile in all five physical fitness items of interest. There was no significant difference in scores between the two groups at baseline (i.e., pre-exercise) for all five fitness items. 2. Research found a positive association between exercise habit after school and muscular strength and endurance among asthmatic children. 3. Compared to the control group, the exercise group showed favourable outcomes in terms of flexibility and muscular endurance. Such favourable outcomes remained evident even after adjusting for age, duration of disease and steroid use, values for which were unequally distributed between the two groups at baseline. 4. There was a tendency for 28 all item-specific fitness scores to increase over time in the exercise group. GEE analysis showed that yoga exercise indeed improved BMI, flexibility, and muscular endurance. After 2 weeks of self-practice at home, yoga exercise continued to improve BMI, flexibility, muscular strength, and cardiopulmonary fitness.

Rajakumar J (2010), done a research on "The Impact of Yogic Practices and Physical Exercises on Selected Physical Variables among Inter-Collegiate Soccer Players". The study contains the following. The purpose of the study is to analyze the impact of yogic practices and physical exercises on selected physical variables among intercollegiate soccer players. To achieve this purpose, sixty (60) male intercollegiate soccer players from Chennai were selected at random. The selected subjects were divided into three equal groups of 20 each, namely yogic practice group (Group A), physical exercises group (Group B) and control group (Group C). The experimental groups have undergone 12 weeks of training. The control group (Group C) maintained their daily routine acti/*-vities and no special training was given. The subjects of all the three groups were tested using standardized tests and procedures on the selected physical variables before and after the training period to find out the training effects using the following test items: 50 meters. Run to measure speed, shuttle run to measure agility, sit and reach to measure flexibility. The yogic practice group showed significant improvement on flexibility. The physical exercises group showed significant improvement on speed, agility, then the other two groups after 12 weeks of training.

Madanmohan, Mahadevan S.K. et al. (2008), done a research on “Effect of Six Weeks Yoga Training on Weight Loss Following Step Test, Respiratory Pressures, Handgrip Strength and Handgrip Endurance in Young Healthy Subjects”. The study contains the following. The present study was designed to test whether yoga training of six weeks duration modulates sweating response to dynamic exercise and improves respiratory pressures, handgrip strength and handgrip endurance. Out of 46 healthy subjects (30 males and 16 females, aged 17-20 year), 23 motivated subjects (15 male and 8 female) were given yoga training and the remaining 23 subjects served as controls. Weight loss following Harvard step test (an index of sweat loss), maximum aspiratory pressure, maximum expiratory pressure, 40 mm endurance, handgrip strength and handgrip endurance were determined before and after the six week study period. In the yoga group, weight loss in response to Harvard step test was 64 +/- 30 g after yoga training as compared to 161 +/- 133 g before the training and the difference was 52 significant ($n = 15$ male subjects, $P < 0.0001$). In contrast, weight loss following step test was not significantly different in the control group at the end of the study period. Yoga training produced a marked increase in respiratory pressures and endurance in 40 mm Hg test in both male and female subjects ($P < 0.05$ for all comparisons). In conclusion, the present study demonstrates attenuation of the sweating response to step test by yoga training. Further, yoga training for a short period of six weeks can produce significant improvements in respiratory muscle strength and endurance.

Rathore B.S. et al. (2009), done a research on “Critical Analysis of Cardiovascular and Motor Fitness Abilities of Inter-University Players”. The study contains the following. The purpose of this study was to examine cardiovascular and motor fitness profile (abilities) of inter-university players of University of Rajasthan. An insignificant difference between individual game and team game players (t value of .06 was less than the table value of 1.96 required for 't' test to be significant at 0.05 level with 118 degree of freedom) was observed in cardiovascular endurance, explosive strength, muscular strength and endurance of arms and shoulders, agility and total J.C.R. scores. Key Words: Cardiovascular profile, motor fitness, individual game players and team game players.

CHAPTER- III

Methodology

Selection of subjects/population

Sample size and sampling design of the study

Collection of data

SELECTION OF VARIABLES

A) **Physical Efficiency:-**

- Agility
- Flexibility
- Static Balance
- Dynamic Balance

B) **Physiological efficiencies:-**

- Resting heart rate
- Respiratory rate.
- Breath holding capacity
- Systolic Blood Pressure
- Diastolic Blood Pressure
- Body Mass Index

B) **Psychological efficiencies:-**

- Academic Resilience

Selection of test items or tools

Statistical techniques

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