Chapter-v

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of the study was to determine the effect of Asanas and Pranayama on selected anthropometric and psycho-physiological variables of school going children.

The subjects were equally assigned to the four groups by using random sampling procedure i.e. three experimental groups and one control group.

The experimental Group A was administered Asanas, Group B was administered Pranayama and Group C was administered combination of Asana Pranayama and Group D control group was given no training.

Quantitative measures of the selected variables for each of the subjects were taken in the beginning and at the conclusion of an experimental period of twelve weeks.

For Anthropometric variables anthropometric rod was used to obtain the subject’s height score to the nearest centimeter (Cm). Weight was measured to the nearest kilogram (Kg) with the help of Weighing machine. B.M.I (Body mass index) was measured to kg/m² with the help of \( \text{B.M.I} = \frac{\text{Mass (Kg)}}{[\text{Height (M)}]^2} \). Body fat was measured by the length skin fold calipers and the sum of the skin fold thickness of all the four sites of the body was converted in to percentage by body fat as suggested Durnin & Womersley. Psychological variables Self concept scores of the subject were obtained by using children’s self concept scale (CSCS) by Dr. S.P Ahluwalia and Dr. Hari Shankar Singh, The anxiety scores of the subject were obtained by using general anxiety scale for children (GASC) by Dr. Anil Kumar, The stress scores of the subject were obtained by using stress inventory for school students (SISS) by Seema Rani and Dr. Basant Bahadur Singh. for Physiological Variables dry spirometer was used to obtain the subject’s vital capacity score to the nearest C.C. Pick flow rate was recorded to the nearest liter per minute with the help of peak flow meter. Resting respiratory rate was recorded by the rate of respiration in unit counts per minute by carefully watching the moment of the
abdomen and measured by the stopwatch. Maximum breathing holding time was recorded to nearest second by using stop watch.

The study was conducted for a period of twelve weeks in the month of August, September, October, November. the climate condition was rainy and atmospheric temperature was varying from 25°C to 38°C.

Experimental population of 90 subjects were assembled in Activity Hall at Muni International School, A-2/16-18, Mohan Garden, Uttam Nagar, New Delhi-110059, India. experimental training was executed from 9 AM onwards for approximately 45 minutes, for six days a week were as Sunday has been observed as weekly rest day. Four groups comprising of 30 subjects each were formed i.e. three experimental groups and one control group.

Research scholar himself personally administered the three forms of yogic programme for twelve weeks. The research scholar did constantly supervise the training session and data on Height, Weight, B.M.I, Body Fat (%), Self concept (Behaviour, Intellectual and school status, Physical appearance and attributes, Anxiety, Popularity, Happiness and satisfaction), Anxiety, Stress, Vital capacity, Peak flow rate, Resting pulse rate, Resting respiratory rate, Maximum breath holding time (Positive breath holding time, Negative breath holding time) were collected as pre test prior to beginning of programme as a post test after at the end of twelve weeks.

Analysis of covariance was used exclusively to compare the effect of three yogic experimental treatments programme for school going children. After statistical analysis findings show significant and insignificant effect of all three experimental groups.

The Asanas, Pranayama and Asana Pranayama programme had insignificant effect on height (p-value for the F-statistic is .322 which is higher than 0.05), in case of weight three yogic experimental treatments programme had significant effect (p-value for the F-statistic is 0.000 which is less than 0.05), and in case of B.M.I three yogic experimental treatments programme had also significant effect (p-value for the F-statistic is 0.000 which is less than 0.05), but in case of Body fat percentage (%) yogic experimental treatments programme had insignificant effect (p-value for the F-statistic is
.555 which is higher than 0.05). The Asanas, Pranayama and Asana Pranayama programme had significant effect on behavior (p-value for the F- statistic is 0.000 which is less than 0.05), intellectual and school status (p-value for the F- statistic is 0.000 which is less than 0.05), physical appearance and attributes (p-value for the F- statistic is 0.000 which is less than 0.05), anxiety (p-value for the F- statistic is 0.000 which is less than 0.05), popularity (p-value for the F- statistic is 0.000 which is less than 0.05), happiness and satisfaction (p-value for the F- statistic is 0.000 which is less than 0.05), self concept (p-value for the F- statistic is 0.000 which is less than 0.05), anxiety (p-value for the F- statistic is 0.000 which is less than 0.05), vital capacity (p-value for the F- statistic is 0.000 which is less than 0.05), peak flow rate (p-value for the F- statistic is 0.000 which is less than 0.05), resting pulse rate (p-value for the F- statistic is 0.000 which is less than 0.05), resting respiratory rate (p-value for the F- statistic is 0.000 which is less than 0.05), positive breath holding capacity (p-value for the F- statistic is 0.000 which is less than 0.05), negative breath holding capacity (p-value for the F- statistic is 0.001 which is less than 0.05).

The three experimental programme were found significantly and insignificantly effective in selected anthropometric, psychological and physiological variables of school going children.

**Conclusions**

On the basis of obtained results and within the limitations of this study, the following conclusions were drawn:

1. Significant improvement was not found in Height as a result of the experimental treatment in all the three experimental groups.
2. Asanas and combination of Asana Pranayama can significantly reduce the Weight of school going children.
3. Asanas and combination of Asana Pranayama can significantly reduce the B.M.I of school going children.
4. Significant improvement was not found in Body fat percentage (%) as a result of the experimental treatment in all the three experimental groups.
5. Asanas, Pranayama and combination of Asana Pranayama also improve the Behaviour of school going children.

6. Asanas, Pranayama and combination of Asana Pranayama also improve the Intellectual and school status of school going children.

7. Asanas, Pranayama and combination of Asana Pranayama also improve the Physical appearance and attributes of school going children.

8. Asanas, Pranayama and combination of Asana Pranayama also decrease the Anxiety of school going children.

9. Asanas, Pranayama and combination of Asana Pranayama also improve the Popularity of school going children.

10. Asanas, Pranayama and combination of Asana Pranayama also improve the Happiness and satisfaction of school going children.

11. Asanas, Pranayama and combination of Asana Pranayama also improve the self concept of school going children.

12. Asanas, Pranayama and combination of Asana Pranayama also decrease the Anxiety of school going children.

13. Asanas, Pranayama and combination of Asana Pranayama also decrease the Stress of school going children.

14. Significant improvement was found in Vital capacity performance as a result of the experimental treatment in all the three experimental groups.

15. Significant improvement was found in Peak flow rate performance as a result of the experimental treatment in all the three experimental groups.

16. Asanas, Pranayama and combination of Asana Pranayama can significantly reduce the Resting pulse rate of school going children.

17. Asanas, Pranayama and combination of Asana Pranayama can significantly reduce the Resting respiratory rate of school going children.

18. Significant improvement was found in Maximum breath holding time (Positive) performance as a result of the experimental treatment in all the three experimental groups.
19. Significant improvement was found in Maximum breath holding time (Negative) performance as a result of the experimental treatment in all the three experimental groups.

**Recommendations**

Research scholar is of view that this study has successfully accomplished the purpose and goals for which the study was envisaged while conceptualization in opinion the finding of the study have effectively contributed in the going management process of school going children. Hence, in the light of findings the research scholar would like to offer the following recommendations:

1. Asanas and Pranayama programme should be an essential part of routine of the children’s daily life schedule.
2. Yoga based therapeutic exercise programme must be appropriately blended with effective yogic Asanas and appropriate Pranayama.
3. A study of similar type may be conducted on the male and female of different age group.
4. A study of similar type may be conducted considering various other Anthropometric, Psychological and Physiological Variables.
5. More combination of Yogic Asanas, varieties of Pranayamas, Kriyas, Mudras and Meditation also can be in cooperated to experiment and to find out the efficacy on the total health aspects of the children.