CHAPTER - V

CONCLUDING DISCUSSION OF RESULTS
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The succession of steps taken in the course of this investigation was directed to a great extent by the results and their implications as they came up. It has, therefore, been found necessary to present much of the discussion part by part. It now remains to attempt to interpret as many of the findings as possible in the following ways:

1. The possibilities of democratising physical education among the youths in particular and the people in general, as a means to introducing it effectively in the Schools or in other educational institutions at all levels, are investigated to an extent from the point of view of the important influence of physical education which is education imparted through physical activities like exercises, sports, games, etc., on the health, physical fitness of boys in the Schools of Manipur.
The samples for the present investigation consisted of 250 boys of the age group, 14 - 16, randomly selected from 7 (seven) different High Schools in Manipur. Physical fitness of the boys were determined by administering the National Physical Efficiency Test propounded by the Government of India in 1960. After giving six months' training in different exercises, the trained students were subjected to vigorous physical fitness tests.

2. It is of interest to note that the final picture that emerges from a detailed analysis of results is very encouraging. It has been revealed that there is a profound influence of physical education not only on physical fitness but on the development of total personality of an individual.

3. Participation in exercise or rather, taking part in physical education activities brings the results in the desired area of physical fitness of boys. Twelve different forms of exercises were chosen for the convenience of the present study, and the boys were trained in these fields with an aim to -
i) strengthen the neck, and ensure better mobility of the neck girdles;

ii) strengthen the arms, and ensure better mobility of the shoulder girdles;

iii) improve mobility and flexibility of the trunk and spinal region;

iv) develop back muscles of thigh, and strengthen the waist;

v) improve flexibility and agility of the whole body;

vi) develop power and strength of the lower part of the body, including trunk and legs;

vii) develop and strengthen various muscles of the body;

viii) enhance cardio-vascular endurance, and body speed;
ix) maintain body balance; and

x) co-ordinate the physiological make-up of the whole body.

4. There is a strong indication that the boys who have had training for six months duration in twelve selected areas of exercises achieved better results in their performances in the physical fitness tests exposed to them than those who did not participate in such exercises.

The four areas of efficiency/fitness tests, namely 100 metres race, long jump, shot put, and carrying a weight equal to one's own weight, appear to be very essential factors for determining the influence of exercises or rather physical education in the physical fitness of boys.
6.(i) **100 metres race**:

The scores of the initial and final test performances of the students from Moirangkhom Junior High School in respect of 100 metres race in terms of co-efficient of variation (C. V.) is from 2.03 to 2.88. In the case of students from Raja Dumbra Singh High School, the C.V. in the initial and final test ranges from 3.22 to 4.80, while it is from 2.59 to 2.92 in the case of Maibam Pali High School students. The performance of students from Heibong Makhong High School, Irong High School, Adim Jati High School and M.B.C. High School in the initial and final test in terms of C.V. is from 3.16 to 3.51, 4.26 to 5.37, 3.75 to 3.65 and 3.87 to 3.41 respectively. The participants did well in the 100 metres race; the test was successful, on the whole. It may therefore, be inferred that the exercises imparted had an impact on the development of strength, muscle power of legs and hands to make the individuals fit to perform well in physical education activity tested.
(ii) **Long Jump**:

While considering the result of the second item of fitness test, namely long jump, it has been shown that the exercises meant for strengthening body muscles, particularly those of hands, legs and trunk and the flexibility of legs and speed worked well and they contributed towards building up of the body fit, enabling oneself to perform satisfactorily in the test item.

In Table No. 2, it has been indicated that except in the case of students from M.B.C. School, the students from the remaining sex Schools showed considerable improvement from initial test to final test. The Mean (M) of the initial test and final test-performance in the long jump for the students of Moirangkhom Junior High School, Raja Dumbra Singh High School, Maibam Pali High School, Heibong Nakhong High School, Irong Junior High School and Adim Jati High School is 14.49 and 14.91, 13.93 and 14.52, 13.60 and 13.89, 14.63 and 15.16, 14.52 and 15.55, 14.49 and 15.57 respectively. The result is very encouraging.
(iii) **Shot Put**:

Again, after looking into the performance of boys in the six Schools in the Shot Put item of test, it has been indicated that there has been a significant gain on the part of the boys in carrying out the performance after participating in the exercise course. It, however, does not mean that the exercise which meant to give an impact on carrying out the test item was effective in all cases of trainees. It has come to lime light that the performance of students from Irong High School and Adim Jati High School in the Shot Put was not satisfactory compared to those of other counterparts. It is apparent from a perusal of Table No. 3. It may be like this that the students from the Irong and Adim Jati High Schools could not carry out the exercises effectively on account of inadequacy of training or for want of proper nutrition, lack of interest or personality differences. Any one of these factors could have been the possible reasons for showing low trend of response by them in the test item, as stated by Scotth (1984) who studied on fitness programme variable, associated with adherence to a personalised fitness programme.
(iv) **Carrying a Weight equal to One's Own Weight**

To carry a weight equal to one's own weight demands tremendous amount of strength, endurance, power and co-ordination of the whole body systems. To improve these aspects of physical fitness, proper exercises are called for. The exercises given to the trainees appear to have given effect on the development of these areas of fitness of the body. This has been elucidated by the results achieved by the trained students in the test item. The final analysis of the mean values of performances in the initial and final test of students from Moirangkhom Junior High School, Raja Dumbra Singh High School, Heibong Makhong High School, Irong Junior High School, Adim Jati High School and M.B.C. High School are 321.15 and 350.00, 353.70 and 364.67, 268.80 and 282.92, 295.00 and 312.19, 326.75 and 383.75, 337.67 and 389.00, 325.10 and 378.79 respectively.

Although the highest score in performance of this test item was made by the students from Heibong Makhong High School, Maibam Pali High School, Raja Dumbra Singh
High School and Moirangkhom Junior High School, it has also been revealed that there has been a general trend of increase from the initial test to the final test. This implies that the exercise given to the students served as an important influencing factor for enhancing physical fitness of boys.

7. When analysing the four items of tests, namely 100 metres run, long jump, shot put, and carrying a weight equal to one's own weight, the following salient features have cropped up -

(i) The first two items are closely related, and so is the case with the 3rd and 4th items. The participants responded to the training imparted to them in respect of 100 metres race and long jump during the period of time interval between the initial and final test. However, on close examination, it has been found that the responses need to be improved further as indicated by the wide variation in the responses of the participants. In the initial test, the performance of the competitors remained consistent while it was not so in
the final test. The possible reason for this may be due to the inadequacy in imparting training to the participants. In this regard, further attempts may be made for imparting uniform training/instruction to participants.

(ii) Another feature that has been revealed is that the performance of participants in the shot put and carrying a weight equal to one's own weight is not found to be quite satisfactory. This is evident from the analysis of the results in the final test. The shortfall in this area may also be attributable to the fact that the training imparted to the trainees to strengthen the muscles needed to perform the shot put and its counterpart was inadequate. One possible reason for this shortfall could have been that the time available at the disposal of the present researcher was limited. However, it is suggested that this aspect can be looked into carefully in future research.
8. Despite certain such negative indications in the desired results, it has been found that there is consistence and keen competitions amongst the competitors. Therefore, it cannot be denied that as a whole, there is improvement in the performance of participants from the first test to the final test. The overall results of the final test are better than those of the first test. The heterogeneity in responses may be removed by giving orientation training programme effectively. The present finding appears to have relevance of exercises on the physical fitness of boys. The selected sports items are interrelated with the performance of the students.

9. Marsh (1983), has stated that the self-concepts of physical fitness and academic achievements are related to 14 field and laboratory indicators of physical fitness and academic achievements. In this context, his findings are in agreement with the present finding that the components of fitness like the cardio-vascular endurance, power, dynamic strength, and body composition are influenced by exercises as indicated in the present final test results.
10. The sports items employed in the present investigation, namely 100 metres race, long jump, shot put, and carrying a weight equal to one's own weight served as important yard stick for determining the efficiency or the physical fitness of boys. On the other hand, physical fitness measures one's acquired ability to do well in a wide range of physical exercise.

11. The present researcher is of view that certain factors such as family tradition of living style, environment and the urge or interest of an individual to take part in physical education programme may as well have positive influence on physical fitness.

12. In Fig. 43 & 44, it has been amply illustrated that the response of the trainees from the Haibam Pali High School is almost negligible on 100 metres race and long jump. The response of the trainees from the Heibong Makhong High School is most negligible. The results could have been improved under the guidance of able instructors and by providing adequate diet to the trainees. In doing that, the fluctuation in the response may possibly be reduced.
The above argument is in line with the finding of Knutson (1971), who derived a conclusion from a comparative study of the physical fitness and sports skill performance of 155 subjects (82 boys and 73 girls) that the mean performance of subjects was significantly higher under the supervision of the trained teachers.

13. The present finding also confirms the finding of Wilson (1991), that students who are engaged in physical education programme under the guidance of the specialists achieve higher percentage of efficiency than those who lacked training under the supervision of specialists. The present author is aware that the duration of six months' exposition of students to selected exercises could have been strengthened for achieving better results.

14. Steinhardt et al. (1989), opined that social environment, physical behaviour and psychological factors played significant role in motivating the youths to participate in physical education activities. In the course of the present study, the investigator discovered at the beginning
of selection of boys for the initial test that most of the boys and girls showed negative attitude towards participation in physical education activities. On further enquiry, it was revealed that there was a wrong notion in the minds of the parents of those children reading in the selected schools that participation in games and sports or in other forms of physical exercises may affect reading, writing in the school subjects and may retard their academic performance. In this context, there are reports of Carmichael (1946), and Overstreet (1955), that the unique power of home environment and parental attitude towards children remain their chief environment and become inextricably part of children before the world outside has any modifying influence. This holds good in certain aspects of life’s adjustment.

However, in later years, Fisher (1987), after making an intensive study on the relationship between physical fitness of boys through participation in physical education activities and academic achievements of 180 Elementary and Secondary School students, asserted that there were no significant relationships between the reading scores and
the physical fitness scores for any of the grade levels. In other words, participation in the activities of physical education like the exercises, sports and games, do not have adverse effect on the attainment of academic achievements. To the contrary, participation in the activities of physical education promote physical fitness, emotional adjustment in all life's situations. This has further been confirmed by a survey study made by Segbultz (1971), in which he determined the relationship between athletic achievement and academic achievement of High School athletes. He concluded that participation in athletics did not adversely affect academic achievement.

15. Physical education provides emotional stability. Findings in this area indicate that participation in physical education activities develop self control, self discipline, alertness which help to exert positive influence on the speed, agility, endurance - tests of the boys. While taking part in the activities of physical education, the individual learns to behave properly in the School. Had there been no positive influence of physical education on participation of the test - items, the overall performance of the boys in the tests could have been otherwise, but this was not so.
16. It may, therefore, be emphasised that physical exercise and other physical activities help the organic systems of the body function smoothly, and as a result, the individual can perform many desirable, interesting and valuable things. This is evidenced from the overall results of the final test of the present study.

17. It may also be inferred that physically active boys are less likely to suffer from chronic disabling conditions. In other words, physical education has positive modifying influence on the health of the boys. This has been confirmed from the fact that during and after the administration of the selected exercises and exposing the participants to rigorous tests of physical fitness in terms of speed, endurance, agility, etc., there was no incidence of ailment of any kind among the participants. The findings of the present study on the aspect of health too corroborate those of Updyke et al. (1969).

18. In conclusion, it may be stated that there are cultural possibilities of human body through adoption of suitable activities of physical education. The fitness of
boys or for that matter, any individual can be raised by doing regular exercises. In doing that the problems of boys who have poor physical fitness can be solved to a great extent.

It is therefore, suggested that every individual irrespective of age, caste and creed should have basic knowledge of physical education and participate in one kind of physical education activity or the other so that fitness for all by 2000 A.D., as envisaged in the New Education Policy (1986) is achieved for the ultimate strength, welfare, survival and progress of the Country.
SUGGESTIONS FOR FUTURE RESEARCH

1. There is considerable scope of improving physical fitness of the youths of the country. Similar research may be carried out in the field of physical education which would aim at promoting health, physical fitness of girls in the Schools of Manipur.

2. Mass motivation is required for making aware of the importance of physical education in the promotion of health, physical fitness and wholesome personality of individuals.

3. Physical education should be introduced effectively in the School of Manipur or in other educational institutions making the subject relevant to the needs of the individual, society or the nation for which the required facilities should be provided at all cost.