CHAPTER-VI
SUMMARY, CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH
6.1 SUMMARY

6.1.1 Introduction

Education is important for human beings. It helps mankind to improve the quality of life, leading to the development process, advancement of the country as a whole. As Gandhi (1937) said, "By education, I mean, an all-round drawing out of the best in child and man-body mind and spirit."

According to Atkinson (1961), the ultimate aim of education is the development of the whole man—morally, physically and mentally. This is consistent with the aims of National Education Scheme (1960) which encompassed the following four major areas viz:

1. Moral Education
2. Physical Education
3. Intellectual Education
4. Practical Education.

According to Dewey (1966), education is life, education is growth, education is social-process. It supports the view that affairs of education are basically related to those aspects of human life which allow him to
function both as an individual and in association with other individuals.

These components of the national education have to be communicated to the students. It has been a long-standing assumption that individuals having a particular specialized skill may differ in some psychological, physiological and sociological make-up from those individuals who are not members of the group. In the area of university, there are certain individual students who are trained to participate in activities like exercises, games and sports. These two categories of students are known as athletes and non-athletes. The question here has been: are athletes different in some ways from those individuals who do not participate in all kinds of sports and games or physical activities that is from those who are non-athletes?

The investigator has ventured to examine if differences exist between the groups of athletes and non-athletes by considering some important psychological variables of personality traits, achievement-motivation, interests, intelligence and academic achievement.

The purpose of the study was, therefore, to find out the differences in the two groups with respect to independent variables and thereby make the policy-makers conscious of the various psychological and intellectual problems of the university students.
Thus, the present understanding is found to be very significant and important for the simple reason that it is the first of its kind as a scholarly attempt to investigate such a socially oriented problem in the Prince of Songkhla University, Thailand.

6.1.2 Statement of the Problem

The proposed study may be precisely stated as under:
"A STUDY OF PERSONALITY TRAITS ACHIEVEMENT-MOTIVATION INTERESTS - INTELLIGENCE AND ACADEMIC ACHIEVEMENT OF ATHLETES AND NON - ATHLETES OF PRINCE OF SONGKHLA UNIVERSITY THAILAND."

6.1.3 Objectives of the study

1. To study and compare the personality traits of athletes and non-athletes
2. To study and compare achievement-motivation of athletes and non-athletes
3. To find out and compare interests of athletes and non-athletes
4. To find out and compare intelligence of athletes and non-athletes
5. To study and compare academic achievement of athletes and non-athletes
6. To find out and compare the interrelationships of the independent variables among athletes and non-athletes.
6.1.4 **Hypotheses**

To achieve the objectives of the study stated above, several hypotheses have been formulated. These are stated below:

1. The personality traits of athletes will be significantly different from those of non-athletes.
2. The achievement-motivation of athletes will be significantly higher than that of non-athletes.
3. The interests of athletes will be significantly different from those of non-athletes.
4. The intelligence of athletes will be significantly different from that of non-athletes.
5. The academic achievement of athletes will be significantly different from that of non-athletes.
6. There will be significant relationships among the athletes and non-athletes with respect to personality traits, achievement-motivation, interests, intelligence and academic achievement.

6.1.5 **Design of the Study**

The study is descriptive in nature involving the measurement and comparison of the variables of personality traits, achievement-motivation, interests, intelligence and academic achievement of athletes and non-athletes of Prince
of Songkhla University, Thailand, from the freshmen students.

The survey method was used for the study.

The second part of the study was concerned with the computation of intercorrelations among different variables separately for athletes and non-athletes with regard to five variables (below). The study was confined to the first year students of Prince of Songkhla University, Thailand, for the session 1990-1991 only.

The groups consisted of both male and female students from 11 faculties. The variables used in this study were:

1. Personality traits
2. Achievement-motivation
3. Interests
4. Intelligence
5. Academic achievement.

6.1.6 Population and Sample

The total population consisted of 2,014 students from 11 faculties.

The sample for the present investigation was drawn randomly from the first year students from 11 faculties vide Table 3.1. The entire population consisted of 364 including both athletes (N = 59 males 43, females 16,) and non-athletes (N = 305, males 113, females 192) who were taken-up as subjects in this research.
The percentage of athletes and non-athletes was vide Table 3.2, for the personality traits and sex-wise based on the total sample (N = 364). For extraversion, 28 males (47.46%) and 11 females (18.64%), neuroticism 9 males (15.25%) and 11 females (18.64%) are athletes. For extraversion males 74 (24.26%) and females 135 (37.01%), neuroticism males 40 (13.11%) and females 67 (21.67%) are non-athletes, respectively.

Faculty-wise showing the percentage of 10.71% and 5.49% (39 students are extraversion and 20 students are neuroticism), and 54.40% and 29.40% (198 students are extraversion and 107 students are neuroticism), respectively.

6.1.7 Delimitation of the Study

1. The study was delimited to the first year freshmen students of Prince of Songkhla University Thailand, for the session 1990-1991 only

2. The groups consisted of both male and female students from 11 faculties

3. The athletes were checked from the sporting records of Vice-Chairman, Student Welfare of Prince of Songkhla University, Thailand

4. The non-athletes were selected by random sampling from the 11 faculties of Prince of Songkhla University, Thailand
5. The total size of population was 2,014 students.

6.1.8 Tools and Their Description

The present research study required the collection of data from the sample with respect to their

1. Personality-traits
2. Achievement-Motivation
3. Interests
4. Intelligence
5. Academic achievement.

The following tools were used in order to collect the aforementioned data pertinent to the investigation at hand. The tools have been presented below:

2. Deo-Mohan Projective Test of Achievement-motivation (nAch), by Pratibha Deo and Asha Mohan (1986)
5. Academic achievement of each athlete and non-athlete was taken as a measure of academic achievement by GPA from Registration Records of Prince of Songkhla University of Thailand, year 1990.
6.1.9 Data Collection Procedure

The data pertaining to the present investigation were collected with the help of the Deans and Lecturers in the respective faculties. Each questionnaire had a written note which helped to solicit co-operation from students. During the actual collection of the data, the investigator went to each class and with the help of the lecturers, divided the students into athlete and non-athlete groups. There he administered the questionnaires. All the tools were time-bound, so the investigator fixed the time for each questionnaire and the students were advised to start another questionnaire the time limit for one was over. All questionnaires were completed in about 3 hours meaning thereby that each questionnaire took about 45 minutes. It took one day for the collection of data from one faculty.

Thus, the total time for the collection of data from the 11 faculties was 11 days. Finally, the investigator collected all the response sheets and took them to his own office in the Department of Physical Education of the same University at Pattani Campus.

6.1.10 Method of Data Analysis

The analysis of the data was made possible by employing different statistical techniques. In order to examine the scores of the different groups under study on the various variables, means, S.D. and t-test were employed. To see the relationship among the various variables, the
intercorrelation matrix was used. Analysis of variance (ANOVA) is used to compare the different groups and subgroups of subjects on a certain set-scores.

6.1.11 **Mode of Computation**

All statistical calculations and analyses were made with the assistance of computer in the Centre for Computer Science and Application of Panjab University, Chandigarh-14, India.

6.2 **CONCLUSIONS**

The present investigation is aimed at the study of personality traits, achievement-motivation, interests, intelligence and academic achievement of athletes and non-athletes of Prince of Songkhla University, Thailand.

On the basis of discussion of the results presented in Chapter-V, the following conclusions may be arrived at on the basis of the hypotheses tested in this present study. These conclusions are presented below:

**Objective 1**: To study and compare the personality-traits of athletes and non-athletes.

**Hypothesis 1**: The personality traits of athletes will be significantly different from those of non-athletes.

**Findings**: The results of analysis of variance (ANOVA) comparing between athletes and non-athletes presented vide Table 4.2, showed that there are no significant differences on the variable of personality traits of the students.
However, the mean scores of both the groups (vide Table 4.15) i.e., the athletes and non-athletes revealed that the athlete group gets a higher mean scores (M = 56.73) than the non-athlete group (M = 54.26). It may be concluded that the personality traits of the athlete and non-athlete students do not differ from each other. Hence, this hypothesis is rejected.

Objective II: To study and compare achievement-motivation of athletes and non-athletes.

Hypothesis II. The achievement-motivation of athletes will be significantly higher than that of non-athletes.

Findings: The analysis of the data (vide Table 4.2) showed that there exists a significant difference on the variable of achievement-motivation comparing between the athletes and non-athletes, significance is at .01 level. In case of the value of means, (vide Table 4.15) it appears that the non-athlete students (M = 139.30) achieve a higher mean scores than the athlete students (M = 130.93). This further explains that non-athlete students differ from the athlete students on the variable of achievement-motivation. In this regard, the hypothesis that "The achievement-motivation of athletes will be significantly higher than that of non-athletes" is rejected.

Objective III: To study and compare interests of athletes and non-athletes.

Hypothesis III: The interests of athletes will be significantly different from those of non-athletes.
Findings: Results of analysis of variance (ANOVA) vide Table 4.2, revealed significant differences in comparing the athletes and non-athletes on the variable of interests, significant at .01 level. A glance at the means (vide Table 4.15) presents that the non-athlete group (M = 75.66) bears a higher mean scores than the counterpart (M = 64.73). Thus, it can be interpreted that the athlete and non-athlete students differ from each other on the variable of interests. Hence, the hypothesis that "The interests of athletes will be significantly different from those of non-athlete" is rejected.

Objective IV: To find out and compare intelligence of athletes and non-athletes.

Hypothesis IV: The intelligence of athletes will be significantly different from that of non-athletes.

Findings: The results vide Table 4.2 show that the athlete and non-athlete students differ on the variable of intelligence, favouring the non-athlete group (M = 108.44), while the athlete group of students obtained M = 100.83, (vide Table 4.15). This further suggests that the mental ability of the non-athlete students is greater than that of the athlete students. On the basis of this conclusion, the hypothesis that "The intelligence of athletes will be significantly different from that of non-athletes" is fully accepted.
Objective V: To study and compare academic-achievement of athletes and non-athletes.

Hypothesis V: The academic achievement of athletes will be significantly different from that of non-athletes.

Findings: The analysis of the data vide Table 4.2 illustrates that there exists a significant difference on the variable of academic achievement in comparing the athletes and non-athletes. The difference is in favour of the non-athlete students ($M = 255.50$), whereas, the athlete students get $M = 227.97$ (vide Table 4.15). Thus, it is concluded that the academic achievement of the athlete and non-athlete students differ from each other. The non-athlete students have a mean score higher than their counterparts. In light of these conclusions, the hypothesis stated thus, "The academic achievement of athletes will be significantly different from that of non-athletes", got a full support.

Conclusion of the results based on 5 x 5 intercorrelation matrix.

Objective VI: To find out and compare the interrelationships of the independent variables among athletes and non-athletes.

Hypothesis VI: There will be significance in the relationships among the athletes and non-athletes with respect to personality traits, achievement-motivation, interests, intelligence and academic achievement.
6.2.1 Conclusions Based on the Athlete Students

Findings: The results on the basis of the total sample (N = 59) vide Table 4.33, reveal that a significant relationship exists between the variable of intelligence and academic-achievement. It is positive and significant (r = .402 at 0.01 level).

6.2.2 Conclusion Based on the Non-athlete Students

In the case of total for non-athlete students (N = 305), the results of the intercorrelation matrix vide Table 4.34, show that there is a significant and positive relationship between the variable of personality-traits and interests (r = .135, significant at .05 level), between achievement-motivation and interests (r = .211, significant at .01 level) and between intelligence and academic achievement (r = .253) significant at .01 level.

6.2.3 Conclusions Based on the Total Sample

The results on the basis of the total sample (N=364) vide Table 4.35, reveal that a significant relationship exists between the variable of personality-traits and interests (r= .133, significant at .01 level), between interests and achievement-motivation (r = .240, and finally between intelligence and academic achievement (r = .280), being significant at .01 level.

The results vide Table 4.3 reveal that
1. The personality traits (f = 3.503) of the students of the faculty of management sciences show the highest
(M = 62.158) while it shows the lowest for the students of the faculty of science and technology (M = 44.430)

2. In case of achievement-motivation (F = 6.266), again the students of the faculty of management sciences are the highest (M = 150.421), whereas it is found lowest for those of the faculty of engineering (M = 124.78)

3. The interests (F = 2.880) of the students of the faculty of sciences are highest (M = 89.818) but lowest in the case of the students of the faculty of engineering again (M = 61.978)

4. The intelligence (F = 29.649) shows that the highest is the students of the faculty of medicine (M = 115.103), whereas it shows that the lowest in those of the faculty of education (M = 101.158)

5. For the academic achievement (F = 5.026). It is found that the highest is in the students of the faculty of dentistry (M = 273.740 while it is the lowest in those of the faculty of engineering (M = 226.780)

The results of the coefficient of correlation with respect to the faculty-wise variation among the athlete and the non-athlete students show that there exists a significant relationship among various faculties as well as variables.
Based on these results, the following conclusions may be drawn:

6.2.4 **Relationship between the variables of interests and achievement-motivation**

Significant relationship also is found between the variable of interests and achievement-motivation in case of faculties of engineering \( r = .445 \), education \( r = .415 \), medicine \( r = .420 \), humanities and social sciences \( r = .434 \), pharmacy \( r = .467 \), nursing \( r = .437 \), dentistry \( r = .438 \), sciences \( r = .506 \), natural resources \( r = .376 \) and science and technology \( r = .390 \), vide Table 4.58, through 4.68.

6.2.5 **Relationship between the variables of achievement-motivation and personality traits**

Results of the intercorrelation matrix vide Table 4.58 through 4.68, reveal that a significant relationship between the variables of achievement-motivation and personality traits in case of faculties of humanities and social sciences \( r = -.557 \), management science \( r = .6262 \), sciences \( r = -.605 \) science and technology \( r = -.505 \).

Conclusion based on the athlete group faculty-wise.

6.2.6 **Relationship between the variables of interests and academic achievement**

Significant relationship is found between the variables of interests and academic achievement in case of faculty of medicine \( r = .828 \) (vide Table 4.38) and
faculty of nursing ($r = .993$) (vide Table 4.42), significant at .01 level.

6.2.7 Relationship between the variables of personality traits and intelligence

The only significant and positive relationship is observed on the variable of personality traits and intelligence in case of faculty of humanities and social sciences ($r = .987$) significant at .05 level (vide Table 4.39).

Conclusions based on the non-athletes group faculty-wise.

6.2.8 Relationship between the variables of personality traits and academic achievement

A significant and positive relationship is observed on the variable of personality traits and academic achievement in case of faculty of humanities and social sciences ($r = .565$), significant at .05 level (vide Table 4.51).

6.2.9 Relationship between the variables of interests and academic achievement

Again, the only significant relationship is observed between the variable of interests and academic achievement in case of faculty of natural resources ($r = -.518$), significant at .01 level (vide Table 4.56).
6.2.10 **Relationship between the variables of personality traits and intelligence**

There exists a significant relationship between the variable of personality traits and intelligence. In case of faculty of education \( r = -.404 \), there is a negative significance at .05 level (vide Table 4.48).

6.2.11 **Relationship between the variables of personality traits and interests**

Personality traits and interests are found to be correlated in case of faculty of nursing \( r = .375 \), significant at .05 level (vide Table 4.53).

In the light of these conclusions, it may be observed that there exists a significant relationship among the various variables. Thus, the conclusions lead to the partial acceptance of Hypothesis No. VI, that "There will be significance in the relationship among the athletes and non-athletes with respect to personality traits, achievement-motivation, interests, intelligence and academic achievement."

6.3 **EDUCATIONAL IMPLICATIONS OF THE FINDINGS**

The present study entitled, "Personality traits, achievement-motivation, interests, intelligence and academic achievement of athletes and non-athletes", reveals some implications for the educational practitioners as well as research workers. These findings have a message for others also, particularly coaches, parents, trainers, lecturers,
counsellors, administrators etc. who have responsibility towards the development of the nation in some respect.

The athletes have low academic achievement. Comparing the education of all such athletes and non-athletes is an important goal of our nation. The compensatory educational programmes have to be recognised systematically for the group of athletes.

It is also necessary to recognise and strengthen the curricular programmes by considering the cognitive abilities and personality and other differences of athletes so as to enable them to develop their full intellectual potential. The counsellors, coaches, administrators, as well as teachers may also know the real nature of relationships between personality traits, achievement-motivation, interests, intelligence and academic achievement differentials of such two groups in order to provide necessary guidance in this regards for improvement and development.

The teachers teaching the athletes’ groups should be specially trained for this purpose. They have to pay more attention to each group for educational needs and progress.

Special incentives to the athletes have to be considered to motivate and retain them in university for longer time.

This study has a message for the parents of athletes in understanding their interests, achievement-motivation and personalities and help their wards accordingly.
Finally, this study has implications for teachers, physical educators and administrators to find ways to maximise the educational input for the athletes to enable them to deliver the goods better in the class-room situations.

6.4 SUGGESTIONS FOR FURTHER RESEARCH

The touchstone of any research investigation happens to be its potentiality to indicate new fields of study or to raise some new questions to be investigated. The present study brings into light several topics on which further research can be directed. Some of these areas are listed below:

i) In the present investigation, the samples from each faculty were limited to a small number of athletes and non-athletes. Therefore, it would surely be useful to re-study this problem on a larger sample for further evidence of the findings obtained herein.

ii) It is also advisable to conduct investigations of similar type employing different variables other than those involved in the present study.

iii) In order to come up with clear origins of athletic abilities, it is desirable to conduct research of this kind at various levels of education.

iv) It is suggested also that more studies be undertaken using better research instruments,
standardized particularly for the sample involved in the study.

v) A similar research endeavour may be sought by employing various research designs and statistical techniques apart from the ones which have been employed in the present investigation.

These are simply suggestion for further exploration. Although there are immense possibilities to carry out research with theoretical and practical implication, it is beyond the scope of this work to suggest designs of such studies. But the investigator wishes to state the importance of this domain which will contribute towards the field of sociological education, physical education and psychological research needed for the study.