

CHAPTER V

DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the findings and conclusions of the study and recommendations for further research. The results of the present study based on the data collected and analyzed, are discussed here under the following three sections as follows:

- (a) The students' attitudes toward physical activity:
 - (i) As a social experience;
 - (ii) As an ascetic experience;
 - (iii) As catharsis;
 - (iv) As an aesthetic experience;
 - (v) For Health and Fitness;
 - (vi) As a pursuit of vertigo
- (b) Relationship between the students' attitudes toward physical activity and their academic fields of study.
- (c) Relationship between the students' attitudes toward physical activity and their athletic involvement.

The primary aim of this study was to determine the attitudes of the secondary school female students, average age 16, towards physical activity. The second objective of this study was to determine whether the students' attitudes toward physical activity differ in terms of their academic fields of study or athletic involvement. All subjects in this study were students studying in Senior Methodist Girls' School, Kuala Lumpur.

The research approach selected for this study was a descriptive, comparative study. The Kenyon multi-dimensional Attitude Inventory for Women (ATPA) and a background questionnaire were used to gather information about the subjects on their personal independent variables. The test instrument consists of 54 statements, each of which is classified under one of the following six sub-domains of attitude toward physical activity: (i) aesthetic (items 3, 8, 14, 19, 30, 35, 41, 45, 48); (ii) catharsis (items 12, 16, 21, 26, 31, 37, 44, 51, 54); (iii) health and fitness (items 4, 6, 10, 15, 18, 23, 27, 32, 36, 40, 47); (iv) social (items 11, 17, 20, 25, 29, 33, 39, 49); (v) vertigo (items 1, 7, 13, 22, 28, 38, 42, 50, 53); (vi) ascetic (items 2, 5, 9, 24, 34, 43, 46, 52).

Although a population of 212 students, comprises of all the form four students in the Senior Methodist Girls' School, age 16, was identified for the

study, only 166 students were present on the day the survey was carried out. Data on the study were analyzed with the use of SPSS For Windows Made Simple Version 7.5 to determine the findings of the study. The research hypotheses were tested at the 0.05 level of significance as the measure of statistically significant differences.

5.1 Discussion of Findings

(a) The Students' Attitudes toward Physical Activity:

(i) As a social experience

Generally speaking, the students ($n=105$; 63.3%) emphasize a positive attitude toward the social value of physical activity. The social mean score obtained by the entire group ($N=166$) was 28.70 with a standard deviation of 3.87. This present finding was similar to Kenyon's (1968b) study, in regard to the female adolescents who possessed a positive attitude toward physical activity when it is perceived as a social function.

Physical education by its interactive nature, provides avenues for social interaction and interpersonal understanding development. As such, the probable

explanation for the present finding of in this study might be that the physical educator has designed and constructed various situations and positive learning experiences to help the students to meet their social needs and interests. As posited by Williams and Brownell (1948), physical education is a powerful socializing agent and provokes participation in many ways. Besides, physical education activity is a social experience and involves the emotions. Emotions that are well established help an individual to socialize well.

Blair (1984) in her study found that the female subjects in her study generally had a good attitude toward the social value in physical activity. She attributed her finding to the fact that more women than ever before are participating in physical activity and as such the opportunity to develop new friendships is obvious. She also mentioned that it could probably be due to the usually relaxed atmosphere in physical education that this affective area is gaining in importance and acceptance. The general positive attitude toward physical activity as a social experience of the students found in this present study could probably be explained by the same reasons as cited by Blair.

Another probable explanation for the social positive attitude of the students ($n=105$, 63.3%) in general in this present study would be due to the physical education setting where active learning takes place as compared to the

sedentary nature of most classroom situations whereby the students are largely found to be passive participants. In other words, the students could have found the outlets for their emotions for example, the desire to belong, to be accepted, and their competitive drives, in the physical education activity that was offered to them during the physical education lessons. According to Cartledge and Milburn (1978, cited in Singer & Dick, 1980), a number of social behaviours are related to success in school. The social experiences that the students valued in this present study suggest that there are ways to improve their social skills through physical activities in physical education which in turn would enhance teacher effectiveness, student learning and relationships among students.

Opportunities to interact among themselves during the drills and games activities could have explained why the students in this present study value the social domain of physical activity. It is also possible that the activities mentioned have been incorporated with some elements of competition to motivate the students to work and communicate together in pairs or small groups. Moreover, such situations could have enabled the students to learn and experience to get along with each other, being part of a team, learning to face defeat, accepting referee's judgement, sportsmanship, fair-play, tolerance, building self-confidence, self-esteem, etc. The physical educators might have guided and directed the students in understanding their social-emotional behaviours during the physical

lessons. In other words, the findings of this study indicates that the students in this study still believe that physical activity provides the opportunity to meet new friends and to socialize. The increasing number of female participants in physical activity provides the opportunity to develop new friendship and this is obvious. Studies have also indicated that female subjects possessed excellent attitude toward physical activity as a social experience; thus giving support to the present study (Petrie, 1971; Spreitzer & Synder, 1975 cited in Blair, 1984; Hergert, 1970; Kenyon, 1968b, Hendry, 1975).

Studies have shown that early-life socialization experiences in physical activity have some long-term effects on patterns of involvement in physical activity (Howell & McKenzie, 1989). The finding from these researchers could therefore be an indicator to the physical educators to recognize the socializing need of the learners through physical activity as shown by the students in this present study. In other words, positive attitudes toward physical fitness and activity can be developed through the development of the social-personal-emotional value that can be found through physical activities. Thus the researcher of this present study feels that if the students continue to emphasize the social value of physical activity, teachers and adults in future will have to look at this value (socialization) of physical activity in a more positive manner. In this case, the teacher can therefore achieve exercise/physical activity promotion through the

utilization of the students' social environment (Theodorakis & Goudas, 1997). According to Evans and Roberts (1987), students who are physically active on a regular basis enjoy greater social success (Evans & Roberts, 1987); and according to Keays and Allison (1995), exhibit better academic achievement.

Another contribution to the favoured social sub-domain by the students in this study, might well be the role-played by the physical educator during the physical lessons that could have affected the attitudes of the subjects significantly. Therefore, this finding implies that if physical educators are to be effective in aiding the physical development of students, it appears that in addition to being well-informed about the subject-matter that they teach, they must also enjoy engaging in the dynamic interaction of teaching during a physical lesson. Results of this present finding could have therefore given an insight to the students' attitude toward the teacher behaviour which could have subsequently affected the students' present values toward physical activity as a social experience. As Lickona (1991) writes, "We teach who we are". Therefore, not only "how" and "what" we teach are essential in role modeling; we also need to know "who" we are and "why" we teach.

(ii) As an ascetic experience

The ascetic mean score (mean =28.48) of the entire group of students in this present study indicated that they generally had a positive attitude toward the ascetic value. Frequency distribution on the ascetic sub-domain scores of the students indicated that 104 (n=104, 62.7%) students showed positive attitude, 56 (n=56, 33.7%) showed neutral attitude and six (n=6, 3.6%) showed negative attitude toward the sub-domain. Giving support to the finding of the present study was the results of a study by Kenyon (1968b) who found a similar attitude prevailing in the females toward the ascetic value which was once identified as a male sub-domain. On the other hand, in a local study carried out by Tan (1991), the female students in her study showed an unfavourable attitude toward physical activity perceived as an ascetic experience.

The probable explanation for the positive attitude of the students in this present study would be that the physical activities planned and devised by the physical educators for the physical education classes might have provided satisfying learning experiences that met the desires and needs of the students such as *the desires for challenges, risk, adventure and excitement*. Some elements of competition could have been added to this variety of activities mentioned as to motivate the students to play and learn actively and creatively together while

being challenged at the same time. The apparatus used during the physical classes might have added more challenges to the students. With the proper guidance and instruction from the physical educators, the students could have experienced success while participating in the activities. The success experienced could have made the students look forward to the next physical education class for a repeat of the experiences.

The findings in this study revealed that there is a positive shift in the emphasis of the female students toward the ascetic sub-domain if the present finding is to be compared to the reason suggested by Tan (1991) on the negative attitude of her female subjects in her study in this case. Therefore, as such, physical educators have to take note with regard to the importance and acceptance of the ascetic value by the female students indicating that the students might have looked at their future roles beyond the traditional roles of housewives and mothers only.

With this present findings in view, physical education in schools could include “lifetime” or “carryover” sports such as orienteering, climbing walls and rope courses leading to outdoor adventure activities which have a lot to offer in terms of risk and excitement found in earth’s natural environment, to motivate the

students to lead an active lifestyle through physical activities throughout their lifetime at an early age.

(iii) **As a cathartic function**

The catharsis mean score (mean = 31.16) of the whole group of students indicated that in general the students showed positive attitude toward the cathartic function in physical activity. Frequency distribution on the individual catharsis scores showed that 99 students (n=99, 59.6%) indicated positive attitude, 64 (n=64, 38.6%) showed neutral attitude, and three (n=3, 1.8%) showed negative attitude toward the sub-domain.

The probable explanation for this present finding could be that the activities planned by the physical educators were conducted with the elements of fun and enjoyment, with time to laugh, shout and to act vigorously while learning takes place. With laughter and humor associated with the motor skill acquisition process, chances of physical activity becoming a pleasant experience will increased. It is here that physical activities became a function of immediate pleasure, enjoyment and recreation. Giving support to this present finding were

studies done by Blair (1984) and Tan (1991) in regard to their female subjects who were positive toward the recreational-relaxation value of physical activity.

School life tends to be sedentary with more workload from the other school examinable subjects in most secondary schools. Stress has been recognized as a contributor to heart diseases (Health Today, Nov./Dec. 1998; p. 53.) Physical education has the elements of play and sport. Play is cathartic in nature and has a preventive as well as medicinal effect on the development of the emotional aspect (Cooper, 1983). As such, the physical activities planned by the teachers and conducted during the physical lessons could have played its therapeutic role in providing for release of tensions and self-expression to the students in this present study. This present finding indicates that it is imperative that physical educators should put an emphasis on the importance and contributions of physical activity in helping to control the physical and emotional stress present in our daily lives to the students.

(iv) As an Aesthetic experience

Generally the students in this present study had a positive attitude toward the aesthetic value. The aesthetic score frequency distribution showed that 87

(n=87, 52.4%) students showed positive attitude toward the sub-domain, 70 (n=70, 42.2%) showed neutral attitude, and nine (n=9, 5.4%) showed negative attitude toward it. The aesthetic mean score of the entire group was 30.75 with a standard deviation of 4.31.

Similar results from previous studies also found that the female subjects in the studies emphasized the aesthetic function of physical activity (Sepasi, 1975; Dorfman, 1968 cited in Onifade, 1983; Kenyon, 1968b). The result of these findings indicates that it was in line with the growing emphasis on aesthetic areas of physical education and sport (Freeman, 1982).

The probable explanation for the present finding in this case could be due to the exposure to televised aesthetic physical activity that enables the students to watch and understand the activity more closely. The activities such as aerobic and dance movements conducted during the physical classes could have provided various ways to the students to express their individuality. The movements in jumps, runs, hops and exercises could have enabled the students to experience themselves as movers as well as gave them opportunities to watch and appreciate the movements, struggle, joy, effort and feelings of others during the physical lessons. All these could have explained the positive attitude of the students in this present study toward the aesthetic value in physical activity.

(v) For Health and Fitness

Of 166, 57 (n=57, 34.3%) students showed positive attitude toward health and fitness in this present study. Ninety-seven (n=97, 58.5%) students indicated neutral toward physical activity for health and fitness. There were 12 (n=12, 7.2%) students who showed negative attitude toward health and fitness. The small percentage of the students (34.3%) indicating positive attitude toward health and fitness in this present study could therefore explain for the unsatisfactory physical fitness report of the school age children in Malaysia by the Sports Division, Ministry of Education.

The number of students who expressed marginal attitude (n=97, 58.5%) toward health and fitness showed that they can be affected significantly if physical educators would put in more effort in helping the students in understanding and experiencing what they are doing, why and the benefits from being fit. We do not learn and 'remember' fitness as we do for motor-skills and such "learning" implies that there is a need to structure learning experiences that will enhance the students' chance of continuing their physical activity pursuits. In other words, there is a need to emphasize the cognitive and affective learning of the concepts and principles that underlie a particular physical activity (Taylor & Chiogioji, 1987) to the students. Thus physical educators have to ensure that the

students have an adequate knowledge base of fitness and health and satisfying learning experiences to prepare them for a lifetime of activity. Students who have acquired positive attitudes toward physical activity and an adequate knowledge base of fitness and health are more likely to choose an active lifestyle toward physical fitness (Lee, Carter & Greenockle; 1987). According to Lambert (1987), knowledge precedes attitude and practice.

Besides the attainment of knowledge relating to physical fitness and health, steps to practice the concepts leading to health and fitness as well as the development and maintenance of the physical self ought to be acquired and experienced by the students. Iso-Ahola (1980) noted that active participation was a more effective method of attitude change than a passive exposure to information. Teachers therefore could provide the students feedback on progress toward reaching cardiovascular fitness goals that can help convince the students of the benefits of physical activity and its long-term involvement. Students who understand why physical activity is important are more likely to be physically active all their lives, as suggested by Terry, Erickson and Johnson (1977). The students can also be taught to observe and recognize self-improvement in heart rate and endurance. Limited research has indicated that the attitude of students toward physical activity, health and fitness can be altered by appropriate physical education experiences (Osness, 1982).

As suggested by Simons-Morton, O'Hara, Simons-Morton, & Parcel (1987) that adult disinclination to exercise was linked to a lack of favourable physical activity during adolescence. The subjects in this present study are adolescents who are beginning to have more control over how they spend their time and make their own choices. As such the physical education programme in the school should link the activities and information on fitness and health to adult behaviors in order to help these secondary students in this present study to develop an adult perspective on the role of physical activity and exercise in lifelong health. According to Bandura (cited in Ferguson et al. 1989) health messages must instill people with the belief they can alter their health habits, which can increase an individual's determination to modify detrimental health habits. Therefore, physical education programmes that enhance students' belief in their ability to exercise and that promote interest in maintaining an exercise programme could influence intent to exercise as well as long-term exercise behaviour (Ferguson et al., 1989).

Another probable explanation for the marginal attitude of the students (n=97, 58.5%) toward health and fitness generally in this present study would be time constraint on the teacher, inadequate space and equipment and large class size, which might have restrained the teacher from fulfilling an effective health-related fitness physical education lesson (Haywood, 1991). Situations whereby

students standing in line waiting for their turn to hit the ball could not have met the students' needs during the physical lessons, therefore affecting the attitudes of the students toward physical activity.

Since potential health problems have always been related to the lack of physical activity, emphasis on the positive health benefits that can be derived from regular physical fitness activity such as feeling and looking good, feeling positive and successful, and weight control should be stressed to the students. As Fox and Corbin (1987) puts it; knowledge and understanding of exercise mechanisms strengthen students' attitudes and motives.

(vi) As a pursuit of vertigo

The vertigo mean score of the entire group (mean=28.21) indicated that the students in general had a neutral attitude toward the sub-domain. Frequency distribution of the vertigo scores of the students showed that 45 (n=45, 27.1%) students showed positive attitude toward the sub-domain, 107 (n=107, 64.5%) showed neutral attitude, and 14 (n=14, 8.4%) showed negative attitude toward the pursuit of vertigo in physical activity. The lack of thrill and excitement is quite

likely when one considers that in most schools only a minimal amount of time is allotted to physical education.

Studies have found similar results to the present finding of this study (Kenyon, 1968b; Tan, 1991; Mathes & Battista, 1985). The probable explanation for the present finding on the students in this study would be that the pace of the activities conducted during the physical lessons was not dynamic enough to keep the students moving actively all the time. In other words, the students desired a variety of drills and activities along with equipment that could help them to learn more about themselves such as their physical potentials. The facilities and equipment used should be able to evoke the students' creativity and urge them to do something new and exciting to bring them thrill and excitement. Perhaps because of the increased mechanization and impersonal, fast-paced life-styles that are the norm today, many people are turning to high-risk adventurous activities for fun, thrill and excitement. Physical education can provide such experiences through its various learning settings if the physical activities are planned and conducted to fulfil this desire of the students- the thrills and excitement and within the time constraint of the physical lesson. As Tannehill and Zakrajsek (1993, cited in Strand and Scantling, 1994) emphasize as society and schools change, physical education programmes are challenged by the needs of children in this changing environment.

(b) **Relationship between the Students' Attitude toward Physical Activity and Their Academic Fields of Study**

The Arts group of 102 students obtained a mean score of 27.62 with a standard deviation of 4.04 toward the vertigo sub-domain while the Science group of 64 students obtained 29.16 with a standard deviation of 3.60. T-test of significance on the mean difference between the Arts group of students and the Science group showed that there was a statistically significant difference between the two groups of students toward the pursuit of vertigo value in physical activity. The Science students (mean =29.16) showed more emphasis on the pursuit of vertigo in comparison to the Arts students (mean =27.62).

T-test of significance on the health and fitness, catharsis, aesthetic, social and ascetic mean differences between the Arts students and Science students showed that there were no significant differences between the two groups toward the sub-domains mentioned. However, the Science students showed higher scores in all the six sub-domains except the social sub-domain as compared to the six sub-domains mean scores of the Arts students. Some studies, however, did not agree with this present finding. In a study by Jamhaydary (1984), findings showed that the social science and science students showed favourable attitudes toward

physical activity but the social science students scored significantly higher than the science students did. Tan (1991) and Bu-Salih (1984) reported similar findings in their studies.

The probable explanation for the above finding in the present study could be that the Science students are more active, creative and motivated by the nature of their programme of study that requires a lot of thinking skills and that has full of opportunities for challenges. Subjects such as Physics, Biology, Chemistry, Additional Mathematics, which offer a lot of analytical reasoning and mental challenges are offered to the Science students in schools. The desire for the element of challenges and competition in physical activity as indicated by the Science students would have contributed to the more favourable attitudinal score of this group of students toward physical activity as a pursuit of vertigo than the Arts students. Cognitive achievement may very well be another contributing factor which influence this difference of attitude toward physical activity perceived as a pursuit of vertigo (thrill and excitement) between the two groups of students in this case.

The present findings conclude that there is a relationship between the attitudes of the students toward physical activity as a pursuit of vertigo and their academic fields of study. *In this present study, the Science students showed a*

more significant score toward the pursuit of vertigo compared to the Arts students. There was no significant relationship found between the attitudes of the students toward physical activity as an aesthetic experience, as catharsis, for health and fitness, as a social and as an ascetic experience, and their academic fields of study.

(c) **Relationship between the Students' Attitudes toward Physical Activity And Their Athletic Involvement**

In this study, the athletes comprising 60 students with a social mean score of 29.90 scored significantly higher in the social sub-domain than the 106 non-athletes whose social mean score was 28.02. T-test analysis on the mean differences between the athletes and non-athletes towards the six attitudinal sub-domains revealed that there was a significant difference in the social sub-domain of attitude between the two groups mentioned. Similar findings were reported by Tan (1991), Bu-Salih (1984), Onifade (1983), Alderman (1970; cited in Blair, 1984), Yandell (1966; cited in Onifade, 1983), Wilkins (1974; cited in Onifade, 1983), Simpson (1971) and Davis (1965) in their studies.

Onifade (1983) reported that competitive sport experience for females was significantly related only to the social attitude sub-domain and males showed a

significant relationship between competitive sports experience and the social and aesthetic sub-domains of attitude. Wilkins (1974, cited in Onifade, 1983) reported that intercollegiate athletes perceived physical activity more as a social, ascetic and vertigo experience as opposed to the intramural and non-participants. Health and fitness, the element of competition, and social factor found in physical activity were found to be the interest of the athletes in the study made by Mathes and Battista (1985).

However, Tan (1991) found that the females who had past competitive sports experience perceived physical activity as an ascetic experience more favourably than those without competitive experience did. Simpson (1971) reported that ascetic and catharsis sub-domains of attitude toward physical activity were expressed as the highest values of physical activity by the athletes, followed by health and fitness and social experience. The athletes also responded negatively to physical activity as aesthetic.

Female students in the secondary schools tend to associate physical activity with the social function, according to review of literature in the 60's (Kenyon, 1968b). Like in the past, the female athletes in this study continue to enjoy socializing. Another probable explanation for the present findings could be that the female athletes in this study are more exposed to physical activities than

the non-athletes. These athletes are trained to compete for the school, district or zone, inter-district and if required, the state and national meets for competition all year round. Some of the athletes might have participated in more than one sport and this might also have contributed to more opportunities to socialize as they have always enjoyed socializing. As such, the suggested reasons above could have contributed to the more favourable attitude of the athletes toward physical activity as a social experience than the non-athletes in this study could. As Knapp and Leonhard (1968) has this to say; “athletics are a splendid medium for social amalgamation”.

5.2 Findings

The findings of the present study with respect to the six sub-domains of attitude toward physical activity are as follows:

1. In general, the students in this present study expressed positive attitudes toward physical activity: as a social experience, an ascetic experience, a cathartic function, and as an aesthetic experience. On the other hand, the students in general expressed neither positive nor negative attitudes toward physical activity: for health and fitness and as a pursuit of vertigo.

2. Each attitudinal sub-domain mean score revealed that the students differed significantly in their relative emphasis on the importance of the six sub-domains of attitude toward physical activity.
3. There were no significant differences in the mean attitude scores on the aesthetic, catharsis, health and fitness, social, ascetic sub-domains between the students of different academic fields of study. However, a significant difference was found in the pursuit of vertigo sub-domain whereby the Science students showed a more favourable attitude toward the vertigo sub-domain of attitude than the Arts students.
4. There were no significant differences between students' attitudes toward physical activity and their athletic experiences on the aesthetic, catharsis, health and fitness, vertigo, ascetic sub-domains. However, a significant difference was found in the social attitudinal sub-domain in this case. The athletes showed a more positive attitude toward the social sub-domain than the non-athletes.
5. The students in general in this present study feel that the activities in the physical education programme have contributed to the social, aesthetic, ascetic, and

catharsis sub-domains of physical activity but not on the health and fitness and pursuit of vertigo (thrill and excitement) aspects.

5.3 Conclusions

Based on the findings of the present study, the following conclusions were drawn:

1. Overall, the female students in general showed positive favourable attitudes toward physical activity as a social experience, as catharsis, as an ascetic experience and as an aesthetic experience. Generally speaking, the students also revealed that they had neither positive nor negative attitudes toward physical activity for health and fitness, and physical activity as a pursuit of vertigo. Emphasis by the students on each sub-domain of attitude toward physical activity was different as indicated by their expressed attitudinal mean scores.
2. The direction of attitude of the students in general showed that they value physical activity perceived as a social experience, as physical challenges, as a relaxation-recreation valve, and as an aesthetic experience. However, there were students ($n=97$, 58.5%) who showed neither positive nor negative toward physical

activity for health and fitness and as a pursuit of vertigo. Although there was presence of a very small number of students in general who showed negative attitudes toward all the domains, no student in this study as a whole has indicated a very negative attitude in this study.

3. The Science students in this present study scored better mean scores in all the sub-domains except for the social sub-domains. Statistical t-test on the mean score differences between the Arts and Science group of students indicated that the Science students had a better score toward the pursuit of vertigo than the Arts students. Both groups indicated different emphasis on each of the sub-domains of attitude toward physical activity respectively.
4. Findings also revealed that there was a significant difference between the athletes and non-athletes toward physical activity as a social experience in this study. The mean attitudes expressed by the athletes toward physical activity as a social experience was significantly different from the non-athletes; whereby the athletes expressed better attitudes. Although both athletes and non-athletes expressed different score means in the health and fitness domains, there was no significant difference between them. Results also indicate a different emphasis on each of the values of physical activity by the two groups respectively.

5. On the basis of the differences among the groups, the following probable explanations are presented:

(a) The Science students are more active, creative and motivated by the nature of the subjects (Physics, Biology, Chemistry, Additional Mathematics) in their programme of study in school. The creative and active characteristics of the Science students might have played a role in the better attitudinal score of the Science students toward physical activity as a pursuit of vertigo compared to their counterparts. Another contributing factor could be the better cognitive achievement of the Science students (as indicated in their Lower Secondary School Assessment Results) which could have influenced this difference of perceived value of physical activity as a pursuit of vertigo between the Science and Arts students as in this case.

(b) In the case of the athletes, the probable reason could be that they had more opportunities to socialize and to make new acquaintances than the non-athletes, thus contributing to the more favourable attitude of the athletes toward physical activity as a social experience.

6. Findings in this study indicated that there is a change in the emphasis of attitude toward the six values of physical activity.

7. The attitudes of the students in general can be affected significantly. There is every indication that the students generally appreciate every function of what physical activity can offer to them although a neutral indication was found toward the values of health and fitness and the pursuit of vertigo. The students are telling us about their values, which in other words also tell us about their needs.
8. From this study, students' attitudinal responses provide insight into what contributions the Physical Education programme in school has provided for them and aid the teachers in evaluating the effectiveness of their programmes in relation to the needs and interests of the students.
9. Results of the finding showed that factors beyond the desire for social experience, physical challenges, catharsis and aesthetic values could have contributed significantly on the attitudes of the students toward physical activity.

5.3 Recommendations

Further research suggested by this study is recommended for the following:

1. A study on a comparison of attitudes of students from the rural and urban areas. In which direction do the attitudes favour?
2. A study could be done to examine the relationship between attitude toward physical activity; health and fitness and academic achievement.
3. A study on the influence of family socioeconomic status and educational background on students' attitudes toward physical education.
4. A longitudinal study on the attitudes of the students should be attempted on Malaysian students so as to see the consistency in their expressed attitudes toward physical activity in physical education.
5. A study on a comparison of attitudes toward specific physical activity in physical education between male and female secondary school students.
6. A local study on the secondary student preferences towards physical education.

7. An analysis of psychosocial factors influencing intentions to exercise of secondary school students.
8. A study on secondary school students' attitudes toward physical education, teachers, and personal health.