

TITLE: A Case Study of Girls' Attitudes to a School P.E. Program and their Subsequent Participation in Physical Activity

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Abstract

This study focussed on the major barriers and reasons to be physically active in a case study of 214 female former students who attended Cyril Jackson Senior High School between 1984 and 1993. The major purpose of the study was to determine if there was a relationship between physical education experiences in a known secondary school physical education (P.E.) program and physical activity at least twice a week after leaving school. The subjects were given a questionnaire on their own experiences, current level of physical activity, barriers to physical activity, motives to be physically active and influences on their physical activity since leaving school. Frequencies, correlations and T tests revealed that the former students were positive about their P.E. experiences, and that students who received a higher grade in P.E. and more recent students (born 1976-78) responded more positively than lower grade students and earlier students (born 1970-72). The major barriers to current physical activity were work, study and family commitments and times that were not convenient. The strongest motives to be active were getting in shape/staying in shape (97%), to relax (97%), for fun and enjoyment (99%), to feel better physically (98%) and mentally (93%), and to participate with friends (88%). Students with a higher P.E. grade felt there were fewer barriers to physical activity and more reasons to be active than lower grade students. Earlier students did not find the barriers to physical activity to be as much of a problem as the later students but were less motivated to be active. Students who felt encouraged by their physical education experiences to be active since leaving

school were more positive about their experiences in physical education, found study to be more of a barrier to physical activity and were more highly motivated to be active than the students who did not feel encouraged by their physical education experiences to be active. Implications for secondary school P.E. programs are discussed, including the benefits of feedback to the P.E. teacher and suggestions to improve the current P.E. experiences. Future work is recommended that will strengthen the link between secondary school P.E. experiences and a lifetime of physical activity.

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1.0 Introduction

The benefits of regular physical activity for physical and mental well being are well documented. Add to this the element of fun and enjoyment, being with friends, improving skills and a host of other advantages and you have an irresistible package - or have you? After leaving behind the compulsory Physical Education (P.E.) curriculum, this package becomes increasingly resistible, particularly for girls. This is a major concern of P.E. teachers who rarely receive feedback on their effectiveness in teaching towards lifelong participation in physical activity.

It is viewed by most teachers of girls' P.E. that a successful P.E. program would be enjoyable with physical, mental and social benefits and that the girls' P.E. experiences would encourage them to be active after leaving school (Scruton, 1987). In subjects other than P.E. much can be learned from the methods of program assessment despite the variety of objectives found in each subject area. This research also focuses on attitudes to P.E. experiences and the reasons to be active and the barriers to physical activity as expressed by young women and girls in elite sport, organised sport and physical activity.

Fifteen years ago, with few guidelines from the Western Australian Education Department, many schools offered taster courses in which as few as 4 to 6 hours would be spent on each physical activity. This exposed students to a large range of activities with the philosophy (in part) that they might find some activity they would enjoy enough to continue once they had left school.

More recently, with the advent of unit curriculum, the directive has been to study fewer sports but for up to 13 hours, aiming to develop students' confidence in performing that activity and a high enough level of skill to increase the chance that they would continue in that activity after leaving school. Co-education P.E. classes were encouraged and it became unlawful to offer an activity to one sex that was not offered to the other sex (Equal Opportunity Act, 1984). Soon after this, on the east coast of Australia, Dyer (1986) wrote about what was happening in P.E. classes throughout Australia.

Girls enthusiasm for and participation in all forms of physical activity, including sport, decline rapidly during their early high school years. Girls' average levels of fitness decline in absolute terms during these years and decline very markedly compared to boys. It is not just in school based activities that girls lose interest during these years. Their interests in all sporting and physical activities decline generally. Current educational practices in this area obviously are doing little to arrest this declining interest and must therefore be changed if they are to meet girls' needs and expectations (p2).

The Australian Sports Commission, whose National Policy and Plan for women in sport contained a section on education, acknowledged that there was a problem that needed to be addressed. This policy encouraged the appointment of specialist P.E. teachers in all schools and supported in teacher training courses greater attention to the needs, realities and perceptions of women and girls in sport. It was not an effective policy document due to the change of practices in schools becoming the responsibility of the least experienced teachers instead of the responsibility of all P.E. teachers. In retrospect the document had no teeth and effected little, if any, change.

The current P.E. curriculum in W.A. is quite flexible. Each school and P.E. department can make decisions on many issues. Schools determine how many minutes a week will be spent on compulsory P.E. and how many optional P.E. classes can be selected in addition to compulsory P.E. The P.E. department makes decisions about the amount of time spent on each activity (within Education Department Guidelines), the number of activities undertaken in each semester, the number and type of options offered to students (e.g. dance, surfing, racquet sports, outdoor education), and the activities that make up each semester's program of compulsory P.E. Teachers can therefore teach to their strengths and interests and this type of flexibility should lead to a more successful P.E. program. But how do the students feel about this?

The major purpose of this study is to determine if there is a relationship between known P.E. experiences in a secondary school and physical activity at least twice a week after leaving school. The study focuses on the barriers and reasons to be physically active in a case study of 214 female former students who attended Cyril Jackson Senior High School (C.J.S.H.S.) between 1984 and 1993.

1.1 Statement of the Problem

The research question in the present study concerns P.E. experiences of girls in a secondary school and whether or not they are related to their subsequent participation in physical activity after leaving school. There are no study hypotheses, however, it is anticipated that while P.E. experiences of girls in secondary schools can influence participation in young adulthood,

other variables are likely to be more predictive of participation in physical activity.

1.2 Significance of the Study

First, the present study will provide the only feedback P.E. teachers at Cyril Jackson Senior High School will have received, and will likely facilitate improvements in the P.E. experiences offered to current and future students. Second, since the instrument devised to evaluate the experiences of past students also may be transferable to other similar schools. P.E. programs in other schools may be altered to provide for an increased likelihood of girls participating regularly in physical activity after the age of 15 years.

1.3 Delimitations and Limitations

Delimitations

The scope of the study is limited to a case study of one school only, due to the difficulties of investigating a known P.E. curriculum.

Furthermore, at this school, the girls have only ever had two female P.E. teachers, and one is conducting the study which may affect responses.

Limitations

Many of the subjects have changed address and are difficult to contact. Responses, therefore, are difficult to obtain. Furthermore, in all instruments requiring truthfulness, there is always a limitation.

1.4 Definition of Terms

Caspersen, Powell and Christenson (1985) have defined physical activity as "bodily movement produced by skeletal muscles that results in energy expenditure" (p126) and exercise is physical activity that is planned, structured and repetitive that has a primary objective of improving or maintaining physical fitness. Although these definitions have been used in recent related research (e.g. Delaney, 1993; Willis & Campbell, 1992), neither definition is appropriate for this research.

The P.E. teachers' goal of physical activity for life for their students suggests a minimum level of activity for an effect on the student or former student's health, which would not, of course, restrict the reason for participation to improving or maintaining physical fitness. However, while a more appropriate definition tailored to this study would exclude a person doing the dishes, but include a person dancing at a nightclub for an evening, an appropriate definition of **physical activity** for this study is "movement at more than average walking pace for longer than twenty minutes".

P.E. experiences include compulsory P.E. and any interschool team or dance performances and any other P.E. options available in school time. These might include special netball, recreation, outdoor education, special gymnastics, and dance.

2.0 Review of Related Literature

2.1 Introduction

There has been little research investigating any link between secondary school P.E. experiences and the subsequent participation in physical activity of adolescent girls and young women. However, there have been many findings related to motivation for participation in or withdrawal from organised sport and the attitudes of secondary schoolgirls to many aspects of their P.E. experiences. Although no attempt has been made to evaluate the secondary school P.E. curriculum, reviews have been conducted in two subject areas in secondary education in Western Australia. The literature reviewed for this research is in the following areas: evaluation of teaching programs; elite sport; organised sport; girls, women and physical activity; and school and physical activity.

2.2 Evaluation of Teaching Programs

In secondary schools in Western Australia, one of the major methods of assessing a teaching program is by an external examination, the Tertiary Entrance Examination. Some other forms of assessment have recently been undertaken. These include reviews of the Social Studies curriculum and English as a Second Language (ESL).

The Social Studies curriculum was reviewed by Print (1990) who discussed the relevance of the subject matter. Through public meetings teachers and parents were asked about their perceptions of the curriculum. However, the only assessment by the clients (students) was ascertained from the numbers choosing to study Social Studies-based subjects in Years 11 and

12. No attempt was made to explore student opinions about the curriculum nor the relevance of the Social Studies curriculum and experiences upon behaviour after leaving school.

English as a Second Language (E.S.L.) was the only other subject to undergo and publish a review (Herriman, 1990). The clients were surveyed on many occasions to gauge changes in their perceptions of the course, changing needs and factors affecting student progress. Parents, teachers (E.S.L. and others) and public submissions were also part of the comprehensive review.

To date, no review of the P.E. curriculum or P.E. experiences has been undertaken in Western Australia. One of the main aims of P.E. teachers however, is that their students enjoy physical activity as a way of life from the time they join the class, beyond school, to the time they are no longer able to take part (Evans, 1983; Scraton, 1987).

2.3 Elite Sport

Although sport is only a part of physical activity and elite sport involves relatively few people, trends can be observed and inferences made from results of studies examining the motives of females to participate in all forms of physical activity. Gould, Feltz, Horn and Weiss (1982) investigated the reasons why girls aged 10 to 18 years drop out of competitive swimming and found that 'too much pressure' was the main reason for dropping out. Girls aged 15-18 years also rated "no teamwork, parents and friends did not want me to, not a challenge, injured..." (p163) as more important reasons for dropping out than the younger swimmers who dropped out. These

findings were difficult to interpret due to some reasons being written negatively and some positively. Importantly, the authors noted that the different motives for different age groups should be catered for to keep participants in the sport.

In a later study by Gould, Feltz and Weiss (1985) it was found that swimmers aged 8-19 years of both sexes, were motivated by 'fun', 'fitness', 'challenge' and 'team atmosphere'. The females rated 'achievement' as highly as males, but placed greater importance on 'friendship' and 'fun'. Klint and Weiss (1986) found that male and female gymnasts aged 7-25 years dropped out because they had 'other things to do', 'injuries', 'dislike of the pressure', 'not enough fun' and 'too much time consumed'. Many who left swimming continued with other forms of physical activity. Similarly, artistic gymnasts (average age 14 years) who dropped out (Johns, Linder & Wolko, 1990) frequently reported that 'the amount of time' that had to be devoted to a sport was a reason for giving up and, to a lesser extent, that dropping out was also due to 'injury', 'loss of interest' and the 'mounting negative relationship between coach and athlete'.

2.4 Organised Sport

Organised sport is one step closer to the masses than elite sport, however the Australian Sports Commission (A.S.C.) (1991) reported a number of facts which show that women are still under-represented in organised sport. Females make up only about 23% of all registered participants and female athletes have fewer opportunities to compete. Women are under-represented at all levels of sport including administration,

coaching, the media, and the amount of sponsorship. Byrnes (1988) noted that female sport registration in N.S.W. had shown a decline from the peak in 1977/8 with metropolitan registrations declining further than registrations in country areas. These findings might surprise some of the adults involved in organising sport for adolescents and adults, but they have long been a concern of health professionals.

In a study by Gill, Gross and Huddleston (1983) boys and girls at a summer sports school (ages not mentioned) gave similar responses when asked why they participated, except that boys placed more emphasis than girls on 'achievement/status' reasons for taking part in physical activity. The most important reasons for participation were to 'improve skills', 'have fun', 'learn new skills', 'be challenged', and 'be physically fit'. These results were not surprising given that the youths chose to attend the summer school. A more recent summer school study (Tappe, Duda & Menges-Ehrnwald, 1990), in which the subjects were aged 15-17 years, found that females exercised to improve their 'appearance' and 'flexibility', 'manage stress', 'increase strength' and 'manage weight'. Both sexes reported that the greatest barriers to exercise were 'wanting to do other things', 'lack of interest', 'unsuitable weather' and 'school work'.

Petlichkoff (1988) found that perceived ability directly influenced sport persistence in interscholastic sports, but she did not mention age or gender. The subjects were able to accurately rate their own ability relative to others, and the role they assumed on their respective teams. Younger children aged 9-11 years were also found to persist in physical activity that

demonstrated their competence and avoided activities in which this was not possible (Roberts, Kleiber & Duda, 1981).

In a study by Roberts and Duda (1984), female students in a racquetball course, who played in a competition at the end of the course, attributed their ability to 'level of skill' and 'luck' rather than the 'win/loss result'. Females were less likely than males to compare themselves with others to determine their own competence.

A comparison between Australian and North American youths' motives to participate in physical activity showed mainly similarities, but with some cultural differences (Longhurst & Spink, 1987). The subjects were from junior sporting clubs covering five sports and aged 8-18 years. There were no motives that differed from studies mentioned previously, nor any new gender differences. The only major difference between the North American and the Australian data related to the motivation of 'fun' which was rated second in north America and ninth in Australia. The authors suggested that this may be due to different wording in the questions. In comparing participants by age, more information emerged that should help sports administrators target certain age groups more successfully. The younger participants wanted to 'get rid of energy', 'have fun', 'get out of the house', 'have something to do', 'be with and make new friends', and 'have some action and excitement' more than older participants.

A Western Australian study by Gordon (1989) examined the reasons for dropping out of organised sport. The reasons found were (in priority order) 'loss of interest/other interests', 'other commitments (work, study, family)', 'poor coaching', 'physical inability', and 'not enjoying sport'.

Suggestions were made to address the problems, some of which apply directly to girls and P.E. These suggestions include 'evaluation of the needs of the participants and emphasise fun', 'provision of better coaching', 'better organisational planning', 'reduction of costs', 'reduction of competitiveness', and 'increasing the number of events/competitions'. "An over emphasis on both elitism and competitive involvement is inconsistent with the motives of the participants (male and female)" (Gordon, 1989, p4).

2.5 Girls, Women and Physical Activity

Organised sport does not take into account the participants in all types of physical activity - the power walker, the lunchtime swimmer, the health club member or the participant in the popular multisports (indoor cricket, mixed netball etc). However, according to the A.S.C. (1991), only about 5% of adult Australian females take sufficient regular exercise to have a training effect on the heart and lungs. In recent research Biddle (1994) pointed out that within the broad category of physical activity, the areas of sport, exercise, physical education and recreational sport are not equally represented in motivational research. Motivation to play sport at elite or club level is well documented but exercise motivation is a relatively new and expanding field which overlaps with recreational motivation. "We now require a much greater research effort in the motivation of children in physical education contexts, or at least using samples that are representative of all ability and interest levels" (p121). Unfortunately, in an article that seemed to be increasing the flexibility of the research into motivation, Biddle

used the narrow definition of exercise defined by Caspersen et al. (1985) and this in a small way, limited the impact of this work.

However, no matter what the level of activity, "regardless of the stage of the life cycle, females more than males have been constrained in their participation in physical recreation" (Kane, 1990, p56). Women and girls have less access to leisure as they are expected to do 'more housework' and 'look after siblings or care for their own children' (Scraton, 1987). Even if women do want to participate and intend to participate in physical activity, Dzewaltowski, Noble and Shaw (1990) found that if an individual believes that he/she does not have the resources or opportunities to participate, he/she perceives they have low control and does not act on his/her intention. Even more restricted are blue collar workers (Sedgwick, 1988) and women of ethnic background (Carrington & Williams, 1988). There is also a disappointing lack of research on Australian Aboriginal women. Scraton (1987) reports the reasons for the restrictions of leisure for English working class women are 'less access to private transport' and 'financial restrictions', adding that 'violence on the streets' is also a restriction.

In a study of nearly 4,000 Canadians over the age of 10 years, Wankel, Sefton and Mummery (1991) found many significant differences between the sexes and age groups in relationship to physical activity. Older subjects were 'less likely to believe vigorous activity to be challenging or enjoyable' and 'more likely to fear injury', while younger subjects saw 'lack of support' and 'lack of confidence and ability' as barriers to physical activity. Women saw fitness as a goal but were faced with the barriers

previously mentioned. 'Behavioural control' and the 'support of significant others' predicted intention to be physically active more than in males.

For most women a substantial amount of leisure takes place in women-only settings and this is associated with anxiety about body weight and appearance (Deem, 1987). Sport seems to be engaged in by young single women more than other women but high level competition can and does alienate many women. The activities that were popular with women were those which were 'free or inexpensive', 'enjoyable', 'flexible' and 'accessible' e.g. walking. Young women who were middle class or who extended their education beyond secondary school were more likely to continue sport into their twenties and beyond. Most initiatives to increase women's participation in physical activity "tackle the symptom (women not doing sport) rather than the cause (the sexual division of labour, the institutionalisation of gender roles, women's inferior position in society and male domination of the public sphere of life)" (Deem, 1987, p430).

In a Western Australian study, Luckman (1990) described the findings of a series of youth forums. A cross section of 13-18 year old males and females throughout the state was asked six questions and the responses were taped. The descriptive paper shows trends, some of which are relevant to girls, young women and physical activity. Many of the results reflect the findings of previous studies but a different perspective emerged because subjects were selected on an age basis only. Girls, in particular, enjoyed 'team sports', emphasising the social aspects of being involved, but found it 'too competitive'. Both sexes would like to 'play against people of similar ability' and have 'shorter seasons' in organised

sport. Of 300 participants in the forums, only one aspired to play at an elite level (to represent the town). Girls were less active than boys and more likely to want to coach. They enjoyed their P.E. classes and their level of physical activity decreased with age. Working females were much less involved in sport than females at school. Although it was 'parents who got them involved in sport initially', 'friends were the main reason females stayed in sport'. The 'cost of organised sport through clubs' was reported to be too high and the girls 'did not know how to contact them' or 'what was available'. Although Luckman did not explain how the subjects were selected, an attempt was made to gain a balanced picture with subjects representing a range of socio-economic backgrounds, and city and rural areas.

2.6 School and Physical Activity

The A.S.C.'s National Policy and Plan for Women in Sport states "It is an A.S.C. objective to encourage the appointment of specialist physical education teachers in all schools. The A.S.C. supports greater attention in teacher training courses to the needs, realities and perceptions of women and girls in sport" (1987, p16). This was the A.S.C.'s education policy in its entirety. It appears that very little thought has been given to the role of schools in effecting change. In recent years no more P.E. specialists have been employed in W.A. primary schools, as it is up to the schools themselves to determine if their specialist allocation money goes to music, art or P.E. There is no extra money to ensure that specialist P.E. is part of every primary school's staffing formula.

P.E. teachers rarely get feedback about the strengths and weaknesses of the P.E. experiences they offer and are likely to be pessimistic about the attitudes to physical activity of girls, in particular. This opinion was, in part, explained by Nicholls (1978) who noted that at 12 or 13 years of age a child realises that no matter how hard they try, if they lack ability their capacity is limited. Previous to this stage of development, ability and effort were indistinguishable. Dropping out of organised sport certainly supports this theory for some participants, but why do participants continue to drop out over the next few years instead of all at once? Why do some go into other sports?

Evans (1983) found that "Contrary to the Physical Education Department's feelings most girls had a positive attitude to physical education in general. They saw the subject as important; they enjoyed the lessons and felt that they were a welcome change from classwork" (p19). Reinforcing this finding Keough (1962) discovered that while women were more positive than men about the importance of P.E., they were less likely than men to participate.

The Western Australian P.E. experiences are similar to those in the Canadian Catholic schools of Butcher's (1983) study except in the emphasis on competitive sport (both interschool and intraschool). The five factors most related to participation in physical activity of adolescent girls were 'skill satisfaction', 'parents' influence' and 'encouragement by significant others', 'opportunity i.e. socio-economic status and equipment', 'feeling of confidence', and 'attitude to P.E'. Community based activities were more closely related to the 'influence of parents' and 'socio-economic status and

equipment', 'feeling of confidence', and 'attitude to P.E'. Community based activities were more closely related to the 'influence of parents' and 'socio-economic status'. In a longitudinal study of one year group of the same schoolgirls through grades 6 to 10, Butcher and Hall (1983) found that the 'decrease in physical activity with age was more gradual for community based activities', 'satisfaction with P.E. was lowest in junior high school', 'physical activity for release of tension became more important while competition became less so', 'the image of the female athlete and the parental influence declined with age', 'equipment availability increased', and 'socialisation variables and socio-economic status separated participants from non-participants in community based sports'. This longitudinal study clearly illustrated the change in attitude to P.E. from early to mid teens. This enables teachers of girls in these age groups to tailor the P.E. programs to the needs and perceptions of the age group.

In another study, male and female year 7 to 9 students exercised for different reasons. Male students participated for 'competition' and female students participated in order to 'look better' (Godin & Shephard, 1986). The results also support the notion that involvement in physical activity early in life leads to later participation for both sexes.

Scraton (1987) examined how P.E. experiences might be received by the adolescent girl. She found that 'peer pressure led to fewer interschool teams and fewer girls in optional P.E. classes', 'the sullen and passive student (who could be ignored in a classroom) wielded power in P.E.', 'the P.E. uniform was often an embarrassment', 'changing was a trial and showering was much worse'. 'Low status activities were perceived to take

place in P.E. classes', and 'rules for everyone (no jewellery, hair tied back etc.) were perceived to stifle individuality'.

Year 8 and 9 students (average age 13 years) were surveyed as part of Gordon's (1989) investigation into dropping out of organised sport. An extremely high percentage of these students participated in organised sport (91%) and their first involvement in sport was with their family (60%). This was most likely to have been a male family member. Those who made their own decision to participate were less likely to consider dropping out. Their participation motives were similar to previously mentioned studies but the number one motive conflicts with the results of Longhurst and Spink (1987). Motives were (in priority order) 'for fun and enjoyment', 'to learn', 'improve and master game related skills', 'become fit and healthy', 'be with and make new friends', 'win and be the best', and 'burn off frustration and excess energy'. Both competitive and co-operative fitness programs for year 8 girls in an Australian high school were found to produce fitter girls (Marsh & Peart, 1988), however the co-operative program also 'enhanced perceptions of physical ability and, to a lesser extent, physical appearance' while the competitive program 'lowered the girls' positive perceptions'.

Does the length of time spent on each physical activity make a difference to perceived ability? If more activities are offered would it increase the likelihood that the students would find an activity in which they can feel confident? There is a need for research to answer these questions, but there is one area of the mechanics of how to present P.E. experiences that has been researched in depth - single sex versus mixed classes.

Historically, secondary schooling in W.A. was in single sex schools and

colleges. When secondary schools became co-educational many subjects were still segregated e.g. home economics, manual arts, P.E. To accommodate the 1984 Equal Opportunity Act many schools changed to mixed classes in the late 1980s as it was interpreted that this was the way to teach within the Act. However, this interpretation was not always in the best interests of girls. An observer of a mixed P.E. class found that no matter what the performances in practices, when a game was begun, for the most part, the girls were left out of play by the boys (Evans, 1989). Girls in single sex schools were more positive about P.E. than girls in co-educational schools (Williams & O'Neill, 1983) and this led to higher achievement in P.E. In contrast, boys do equally well in P.E. in both types of schooling, but their social skills are more developed in co-educational schools (Knoppers, 1988; Turvey & Laws, 1988).

A comparison of active girls and non active girls from years 7 to 11 in Australian schools found that the active girls held 'stronger beliefs about the benefits of physical activity' and 'weaker beliefs about the barriers to physical activity' (Delaney, 1993). They also felt that 'significant others and boys believed that girls should be involved in physical activity'.

2.7 Summary

The issue of feedback to P.E. teachers is crucial to this study, and in W.A. secondary schools it is almost non-existent. Various studies provide a small insight into the feelings of female students in other countries about their P.E. experiences. The students are positive about P.E. in general but have reservations about aspects such as: changing - the changerooms, the

uniform, the showers; single sex or mixed classes; and the type of activities offered.

Although there has been a great deal of research into motives to be active and reasons to drop out of physical activity, most of the subjects have participated in organised sport at some time. Consideration needs to be given to girls and young women who have never been involved in the type of organised sport that requires affiliation with a club e.g. the jogger or the netballer at the local recreation centre. Studies on young women and girls involved in elite sport, organised sport and school P.E. found they were active for social reasons for health and appearance, to improve, for something different from work, study etc., for affiliation and for the aspects of the activity that involve challenge and winning. Barriers to physical activity perceived by the same groups of young women and girls include lack of money and transport, no time (due to family, work or study), lack of knowledge of how to go about participating, injury or illness, their appearance and lack of support for participation.

However, the question of a link between school P.E. experiences and post-school participation, despite the importance of this issue to the P.E. teacher, remains to be answered.

3.0 Method

3.1 Sample

Study questionnaires were mailed to female former students who were in lower school at C.J.S.H.S. between 1984 and 1993. The questionnaire was constructed in order to find out how they viewed their P.E. experiences, whether they were participating in physical activity at the time of the survey and what their motives were whether active or inactive. Of 439 possible subjects, 286 addresses were confirmed. Nearly 75% of the questionnaires (214) were returned completed and used in data analysis.

3.2 Procedure

First, a pilot was conducted by video taping a discussion of a focus group of twenty 15 year old female students who were asked questions on their physical activity, what they liked and disliked about the P.E. program at C.J.S.H.S., the activities offered to them, the uniform, the hygiene requirements and their feelings about co-educational or single sex classes. A pilot questionnaire was then developed from the general trends of this interview.

Most (N=60) of the current 15 year olds in the school were subsequently surveyed with this questionnaire and, together with the results and speaking informally to a number of parents and teachers, it was decided that the following areas were to be investigated:

- a) current level of physical activity, types of activity, influences on the activities and reasons for being active

- b) restrictions to physical activity
- c) attitudes to both compulsory and optional P.E.
- d) suggestions to improve experiences in P.E. at C.J.S.H.S.

A pilot inventory was constructed from the previous questionnaire, together with information from the literature related to the four areas being investigated and this was administered randomly to forty-four former students. These former students were asked if they found any questions difficult and from their responses, minor changes were made before the final questionnaire was sent. The final version of the Physical Activity Questionnaire is attached as Appendix 1.

3.3 Treatment and Analysis of Data

Running under Windows on an IBM compatible computer, the SPSS statistical package was used to complete the calculations. Frequencies were used to describe the subjects, their attitudes to P.E. experiences, current physical activity patterns, barriers to physical activity and motives to be physically active. Correlations at the 0.05 level of significance determined if relationships existed between responses to: 'compulsory P.E.'; 'mixed classes for P.E.'; 'single sex classes for P.E.'; 'level of skill'; 'injury/illness'; and all the optional P.E. subjects.

In order to determine if there was any relationship between P.E. experiences and future physical activity, questions that linked the two were selected for testing: 'My P.E. experience encouraged me to participate in physical activity outside school' and 'My P.E. experiences encouraged me to participate in physical activity since leaving school'. The responses to the

rest of the questionnaire of students who answered strongly agree or agree were compared with students who answered disagree or strongly disagree. Current participation in physical activity (Question 7) compared the responses of those who were active once a week or less with the responses of those who were active twice a week or more.

T tests were also used to compare the responses of subjects born from 1970-1972 with those who were born from 1976-1978 because P.E. experiences were modified during the years 1984 to 1993.

Finally, T tests were used to compare the responses of students who were awarded an A or B with the responses of the students who were awarded a C, D or F in order to determine the relationship between perceived competence and motives for participation in physical activity (Klint & Weiss, 1978; Roberts, Kleiber & Duda, 1981).

4.0 Results

4.1 The Sample

More than half the respondents (64%) completed year 12, the final year of secondary school. Aboriginal students were difficult to contact and unfortunately the sample size was too small (N=7) to obtain meaningful results, but this group was included in the population, and there were no Torres Strait Islanders. Non-Aborigines made up the rest of the population (N=207).

4.1.1 Years of attendance.

The average age of respondents was 21 years. There was a broad cross section of students in all years as is seen in Table 1. Student enrolments dropped steadily during this time.

Table 1: Year of birth of respondents.

Year of Birth	1970	1971	1972	1973	1974	1975	1976	1977	1978
N	24	33	39	21	27	13	12	18	27
% Respondents	11.2	15.4	18.2	9.8	12.6	6.1	5.6	8.4	12.6

Throughout the years 1984 - 1993 many changes occurred in the P.E. experiences offered to C.J.S.H.S. students. Some of these changes, directives from the Western Australian Ministry of Education, were in number of hours spent on each activity and how many activities each student would study in lower school. Modifications from within the school were in a relaxation of the uniform policy to include shorts, yearly changes of sports and more variety in options. In addition to compulsory P.E., Recreation, Outdoor Education and Dance were offered from at least 1984 in order to attract more students to participate in physical activity in years 9 and 10. Two further units were added in 1986 - Special Gymnastics and Special Basketball - which enabled students to study that sport for 40 hours per term which was far beyond the 8-10 hours in lower school compulsory P.E. As the school numbers declined due to an aging population in the contributory suburbs, Special Netball was introduced in 1988 to try to halt the declining numbers and to fill a need for a Special Netball school. This course was supported by the Western Australian Netball Association and involved selecting students from the North East Region (a much larger catchment area than the usual school boundaries) to participate in at least 80 hours a year of instruction in netball for years 8-10.

To determine whether these made any difference to student attitudes and/or subsequent exercise behaviour, responses of students born 1970 - 1972 (earlier students) were compared with responses of students born 1976 - 1978 (later students) and the significant differences are reported in Table 2.

Table 2 Comparison of the attitudes of students born 1970 - 1972

(early) with students born 1976 - 1978 (late) : P.E. experiences; and motives and barriers to physical activity.

Attitudes to P.E. experiences 1=very negative 5=very positive	M early N=96	SD	M late N=57	SD	p
Compulsory P.E.	3.80	1.02	3.93	0.70	0.003
Single sex classes	3.71	1.07	3.26	1.58	0.000
1=strongly disagree 5=strongly agree					
I'd like to study sports in greater depth	3.14	1.12	2.88	0.91	0.002
Too little P.E. in timetable	2.98	1.19	2.75	0.99	0.021
Increased my fitness	3.70	1.03	4.09	0.61	0.000
I was encouraged to participate outside school	3.50	1.24	3.58	0.99	0.003
I was encouraged to participate since leaving school	3.32	1.16	3.79	1.02	0.002
How much I'd like to be active	4.52	0.62	4.30	0.91	0.047
Barriers to physical activity					
Venues too far away	2.35	1.07	2.66	1.26	0.045
No time, study	2.21	1.14	3.78	1.42	0.047
Don't know what's available	2.10	0.90	2.58	1.20	0.004
Can't get to venue	1.48	0.88	2.51	1.27	0.001
I look funny in sports gear	2.15	0.94	2.37	1.24	0.012
Physical activity takes time from friends	1.81	0.73	2.83	3.56	0.002
Administration turned me off	2.06	0.83	2.29	1.10	0.009
Motives to be physically active					
Physically active to meet people	3.64	1.01	4.11	0.74	0.008
Physically active to improve skills	3.76	1.11	4.28	0.55	0.003
Physically active to be challenged	3.63	1.10	4.08	0.76	0.001
Physically active for enjoyment	4.60	0.56	4.78	0.42	0.002
Physically active to be part of a team	3.27	1.26	4.23	0.80	0.000

As illustrated in Table 2, the later group more than the earlier group 'enjoyed P.E.', 'improved their fitness in P.E.' and 'felt encouraged to participate in physical activity outside school and since leaving school'. Other factors that could be indicative of the change in P.E. experiences between 1984 and 1993 were that the earlier students were more positive about single sex classes and would like to have been offered sports in greater depth than the later students. 'I'd like to have covered more team sports and sports that are not traditionally female' (early student). But as earlier stated, the later students were offered more options. Not surprisingly the later students (aged 16-18 at the time of the survey) had greater problems exercising 'because of study', and 'with transport to venues that were too far away'.

The earlier group was less likely to be restricted in physical activity because they felt 'they looked funny in sports gear', because it 'took time from friends' or because they were 'turned off by administration'. The later group wanted to exercise to be 'challenged', for 'fun and enjoyment', 'to meet people' and 'be part of a team' more than the earlier students.

4.1.2 Grade

As seen in Table 3, more than half the students averaged in A or B in compulsory P.E. Students who were awarded a D or F were more difficult to contact because Ds and Fs were commonly awarded for incomplete units due to truancy or changing schools. The D and F students would not necessarily be less skilled, but this is more likely. Table 3 shows

the percentages of respondents who were awarded each grade with an estimation of the grades likely to be awarded to a year group at C.J.S.H.S.

Table 3: Grades awarded for compulsory P.E.

	A	B	C	D	F
N	45	105	56	8	0
% for respondents	21.0	49.1	26.2	3.7	0.0
Estimated % whole population	25	35	20	15	5

Table 4 shows that the main differences between students who gained an A or B (higher grade) and those who gained a C or D (lower grade) were in their attitudes to P.E. experiences. Higher grade students more than lower grade students were positive about how they viewed their P.E. experiences in general, enjoyed optional P.E. and gained more from P.E. in terms of skill and fitness. Although there were few significant differences between higher grade students and lower grade students in barriers to physical activity and motives to be physically active, the higher grade students saw fewer barriers and reported more reasons to be active than the lower grade students.

Table 4: High and low grade students' attitudes to P.E. experiences and barriers and motives to be physically active.

Attitudes towards PE experiences 1=Very negative 5=Very positive	M High grade N=150	SD	M Low grade N=64	SD	p
Compulsory P.E.	4.05	0.81	3.32	0.88	0.007
Recreation experience	4.36	1.05	3.94	0.68	0.027
Dance performance	4.18	0.86	3.49	1.34	0.002
Special gymnastics	3.94	0.94	3.37	1.79	0.000
Special basketball	4.00	0.78	3.58	1.68	0.003
I increased my skill in P.E.	4.02	0.65	3.57	0.82	0.016
1=Strongly disagree 5=Strongly agree					
I was not part of a team in P.E.	1.70	0.65	2.25	1.05	0.000
Enjoyed P.E. experience	4.42	0.86	3.40	1.00	0.000
Increased fitness level in P.E.	4.00	0.86	3.33	0.99	0.000
P.E. was a welcome alternative to school work	4.28	0.85	3.34	1.10	0.001
P.E. did not help me relax	2.04	1.06	2.83	1.20	0.000
I felt encouraged to be active outside school	3.68	0.93	3.17	1.19	0.026
Barriers					
I look funny in sportswear	2.15	0.86	2.53	1.16	0.006
Physical activity is too tiring	1.96	0.68	2.36	1.15	0.017
Motives					
I have a reasonable level of skill	3.89	0.54	3.56	0.89	0.001
I am active to get in shape	4.58	0.49	4.41	0.73	0.024
I am active for health reasons	4.59	0.60	4.37	0.60	0.020

4.2 P.E. Experiences

The mainly positive responses of the students to the subjects offered by the P.E. department can be seen in Table 5. The response to compulsory P.E. is very positive and is consistent with the findings of Evans (1983) and Keough (1962). The positive response to the options is not surprising, as many students selected these courses themselves. 'I talked Mum and Dad into letting me to recreation. They wanted me to do typing'.

Table 5: Attitudes to compulsory P.E. and options

P.E. Subjects	% Very Negative	% Negative	% Unsure	% Positive	% Very Positive
Compulsory P.E. N=214	1.9	8.0	14.6	56.3	19.2
Option: Recreation N=180	0.6	2.2	6.1	54.4	36.7
Option: Outdoor Ed.	1.4	2.7	8.8	39.5	47.6
Option: Dance N=147	1.2	2.4	6.5	38.9	50.9
Option: Special Netball N=96	3.1	0.0	7.4	43.1	46.3
Option: Gymnastics N=65	8.0	5.0	15.7	55.8	15.7
Option: Basketball N=68	5.7	5.7	8.6	54.9	25.2

Apart from student responses to 'showers' and 'P.E. experiences allowing risk taking' which were distributed evenly among the categories, the P.E. experiences were viewed positively by most students and seen in Appendix 2. 'I learnt a lot in P.E. and not only physically but socially and mentally (attitude)' (from a recent student who chose a lot of options).

4.2.1 Compulsory and optional P.E.

The relationships between students who felt positive about compulsory P.E. and many of the other aspects of the P.E. opportunities is shown in Appendix 3. Compared with the students who did not like compulsory P.E., students who were positive about P.E. knew more about 'what was available' if they chose to be active, did not think they 'looked funny in sports gear' and did not see 'physical activity as tiring'. The group who enjoyed compulsory P.E. also felt stronger about reasons to exercise than the group who did not. But although there are significant relationships between compulsory P.E. and many of the reasons to be active, other factors such as 'parental influence' and 'the influence of significant others' have not been taken into account in this survey. The optional P.E. subjects showed significant relationships with a variety of motives to be active. Table 6 shows that students who studied outdoor education and students who studied recreation felt similarly about exercising because they were 'reasonably skilled' and 'to be part of a team'.

Table 6 Correlations between the responses of students who chose optional P.E. subjects and reasons to be active since leaving school.

(i) Recreation N=180	r	p
I am reasonably skilled	0.22	0.008
I am physically active to be with friends	0.18	0.030
Physically active to be part of a team	0.24	0.002
(ii) Outdoor Education N=147		
I am reasonably skilled	0.26	0.004
Physically active to improve/maintain health	0.19	0.029
Physically active to release aggression	-0.19	0.033
Physically active to be outdoors	0.18	0.043
Physically active to be part of a team	0.18	0.038
(iii) Dance N=167		
Physically active for fun and enjoyment	0.20	0.013
Physically active to feel better mentally	0.21	0.009
Physically active to feel better physically	0.17	0.040

However, the three most popular options, outdoor education, recreation, and dance, did not share any other motives to be physically active. It could be inferred from these results that the choice of options offered by the P.E. department of C.J.S.H.S. successfully catered for clients with a variety of aims in physical activity.

4.2.2 Mixed versus single sex classes

In the same way that the options cater for different types of students, so it seems do single sex and co-educational classes in P.E. There was little difference between the responses of the students to mixed classes and responses to single sex classes as illustrated in Appendix 3. However, the only case of the majority of each of these categories having a common response to any of the items was 'P.E. was a welcome alternative to school work'. Table 7 shows the variables that indicate a significant relationship with single sex classes and with mixed classes. As the relationships are quite different, this could indicate that students with different exercise objectives are being catered for in each type of class.

Table 7: Correlations between the responses of students who enjoyed single sex classes and the responses of students who enjoyed mixed classes.

Enjoyed single sex classes N=133	r	p
Welcome alternative to school work	0.15	0.026
I learned new skills in P.E.	0.16	0.017
Physical activity to stay in shape	0.21	0.004
Enjoyed mixed classes N=141		
Improved skills	0.25	0.000
Should be more time on P.E.	0.19	0.000
Enjoyed P.E.	0.30	0.000
P.E. was a welcome alternative to school work	0.21	0.002
P.E. was not relaxing	-0.27	0.000
I was able to be independent	0.28	0.000
I felt encouraged to be active outside school	0.16	0.022
I am active because my skills are reasonable	0.19	0.012
I am active to meet people	0.18	0.018

These varied responses were also seen in the comments. 'Mixed classes were much more enjoyable as they were competitive'. 'I wanted mixed classes to show the boys we were good too'. 'As an adolescent I found mixed classes embarrassing but now see it as a way of participating'. 'Didn't like mixed classes as the guys were rough or tried to show off'.

4.3 Physical Activity Outside School Time

Table 8: Responses to: 'My P.E. experiences encouraged me to participate in physical activity outside school time' (Question 6r).

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
N	6	48	29	89	42
% Responses	2.8	22.4	13.6	41.6	19.6

The results illustrated in Table 8 indicate that more than 60% of respondents felt encouraged by their P.E. experiences to participate in physical activity outside school time. The responses of students who strongly disagreed or disagreed to Question 6r (N=54) were compared with the responses of students who agreed or strongly agreed to Question 6r (N=131) and variables showing a significant difference are listed in Table 9.

Table 9: A comparison of responses of students who answered negatively (strongly disagreed or disagreed) or positively (agreed or strongly agreed) to Question 6r.

Responses 1 = Very Negative 5 = Very Positive	M Neg	SD N=54	M Pos	SD N=131	p
Compulsory P.E.	3.35	0.99	4.05	0.80	0.001
Recreation experience	4.02	0.64	4.38	0.64	0.007
Dance performance	3.60	1.40	4.08	1.10	0.027
Interschool sport	3.63	1.10	4.33	0.79	0.046
Changing clothes of P.E.	3.75	1.07	4.26	0.82	0.027
Change rooms	2.94	1.20	3.70	0.94	0.000
1 = Strongly disagree 5 = Strongly agree					
Too much staff emphasis on winning	2.31	0.97	1.90	0.76	0.000
I increased my level of skill	3.26	0.99	4.15	0.57	0.000
Sexual harassment in mixed classes	2.24	1.15	1.93	0.93	0.018
I enjoyed P.E.	3.59	1.02	4.38	0.73	0.011
Increase fitness	3.07	1.15	4.09	0.72	0.000
P.E. was a welcome alternative to school work	3.59	1.21	4.20	0.89	0.001
Activity now 1=Inactive 5=3 or more times a week	3.55	1.25	3.82	1.05	0.048
Barriers 1=Strongly disagree 5=Strongly agree					
Injury or illness	2.73	1.44	2.19	1.19	0.018
Activity takes time from friends	2.64	3.89	2.00	0.83	0.008
Activity is too tiring	2.41	1.28	1.96	0.74	0.000
Administration turned me off	2.52	1.18	2.11	0.21	0.004
Motives					
I have a reasonable skill level	3.62	0.92	3.87	0.68	0.002
Physically active to meet people	3.60	1.11	3.84	0.82	0.004
Physically active to participate with friends	3.75	1.15	4.19	0.69	0.000
Physically active to improve skills	3.39	1.37	3.99	0.85	0.000
Physically active to get outdoors	3.45	1.07	3.93	0.97	0.045

Most of the significant differences were found in the respondents' attitudes to P.E. experiences, and the group who felt encouraged were more positive in each significantly different response than the group who did not feel encouraged. The group who answered positively to Question 6r saw fewer barriers to physical activity and more reasons to be physically active than the group who responded negatively. Importantly, the students who felt encouraged to be physically active were actually more physically active at the time of the survey than the group who did not feel encouraged to participate outside school. Representative contrasting comments about encouragement from students were: 'The teacher should treat all students equally and encourage those who find activities difficult' and 'I wasn't sports oriented but was encouraged to participate. It's a matter of attitude'.

4.4 Physical Activity Since Leaving School

Table 10: Responses to: 'My P.E. experiences encouraged me to participate in physical activity since leaving school' (Question 6s).

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
N	7	52	29	91	33
% Respondents	3.3	24.5	13.7	42.9	15.6

Table 10 shows that nearly 60% of respondents strongly agreed or agreed that their P.E. experiences encouraged them to participate in physical activity since leaving school. The responses of students who felt their P.E. experiences encouraged participation in physical activity after leaving school were compared with the responses of students who answered strongly disagree or disagree.

As illustrated in Table 11, students who felt that their P.E. experiences encouraged them to participate in physical activity since leaving school were more positive about their P.E. experiences than the students who did not feel encouraged to participate in physical activity since leaving school. The most significant differences between the two groups were in their attitudes to P.E. in general, and in their views of the outcomes of the P.E. program: 'I increased my level of skill'; and 'I increased my fitness' from students who felt that their P.E. experiences encouraged them to participate in physical activity since leaving school.

Table 11: A comparison of the responses of students who answered negatively (strongly disagreed or disagreed) with responses of students who answered positively (agreed or strongly agreed) to Question 6s.

Responses 1 = Very Negative 5 = Very Positive	M Neg	SD N=59	M Pos	SD N=124	p
Compulsory P.E. experiences	3.39	1.02	4.07	0.75	0.000
Dance performance	3.57	1.36	4.14	1.08	0.009
Change rooms	3.05	1.18	3.73	0.93	0.001
1 = Strongly disagree 5 = Strongly agree					
Too much staff emphasis on winning	2.31	0.97	1.93	0.76	0.023
Increased skill level	3.46	0.93	4.10	0.59	0.000
Sexual harassment	2.22	1.19	1.96	0.93	0.010
Enjoyed P.E. experience	3.61	1.03	4.39	0.67	0.000
Mainly structured for boys	2.05	0.91	1.95	0.69	0.036
Increased fitness level	3.25	1.12	4.10	0.66	0.000
P.E. was a welcome alternative to school work	3.51	1.09	4.26	0.89	0.018
P.E. did not help me relax	2.68	1.14	2.06	0.93	0.001
Barriers					
No time, due to study	2.59	1.35	2.97	1.57	0.015
Motives					
Reasonable level of skill	3.59	0.95	3.87	0.70	0.001
Physically active to reach the top	2.12	1.08	2.85	1.17	0.014
Physically active to meet people	3.46	1.03	3.95	0.78	0.000
Physically active to improve skills	3.42	1.31	4.03	0.84	0.000
Physically active to win	2.24	1.19	2.64	1.31	0.036
Physically active to get outdoors	3.46	1.07	3.98	0.91	0.005
Physically active to be part of a team	2.87	1.20	3.91	1.01	0.007

Only one barrier to physical activity 'no time due to study' was significantly different and although neither group found this to be a barrier to exercise, students who felt encouraged to participate since leaving school felt that this was more of a barrier to physical activity than students who did not feel they were encouraged by their P.E. experiences. However, it is unlikely that school P.E. experiences would have any relationship with 'lack of time due to study' as a reason for lack of physical activity since leaving school. As no other barrier to physical activity was significantly different when comparing the two groups, it may be inferred that feeling encouraged by P.E. experiences to be physically active after leaving school has little or no relationship with the barriers to physical activity found by the respondents. When examining reasons to be physically active, the group who felt encouraged by their P.E. experiences to be active since leaving school felt more strongly about reasons to be active than the group who did not feel encouraged to be active since leaving school. Neither group reported that they exercised 'to win' or 'to reach the top', but the group that did not feel encouraged to be active since leaving school were significantly more negative about these variables. Table 12 shows how often the respondents exercised at the time of the survey. More than 65% of the respondents were exercising twice or more a week.

Table 12: Exercise frequency of respondents

Exercise frequency	None	1-2 per month	Once a week	2-3 per week	More than 3 per week
N	9	19	46	86	53
% Respondents	4.2	8.9	21.7	40.3	24.9

A comparison of the responses of students who exercised once a week or less (less active) with the responses of those who exercised twice a week or more (more active) is shown in Table 13. Very few significant differences were found between the two groups, particularly in their experiences in P.E. A contributing factor could be found in the research design, which may not have allowed for the comparison of the responses of two distinctly different groups. The question only considered current physical activity, not usual physical activity, and this did not take into account the respondents who were between sport seasons, those who were injured or those who were pregnant. In addition, there is not a great deal of difference between exercise once a week and exercise twice a week, and yet this was the method used to differentiate between the more active group and the less active group.

Table 13: A comparison of the responses of students who are active once a week or less (less active) with the responses of students who are active twice a week or more (more active).

Responses 1 = Strongly disagree 5 = Strongly agree	M less active	SD N=74	M more active	SD N=139	p
P.E. is a welcome alternative to school work	3.82	1.18	4.09	0.93	0.002
Barriers					
I am not active because I can't get a team together	2.33	0.91	2.34	1.20	0.015
Physical activity takes too much time from my friends	1.95	0.70	2.33	2.86	0.019
Motives					
Physically active to reach the top in sport	2.36	1.00	2.72	1.19	0.003
Physically active to meet new people	3.88	0.72	3.75	0.96	0.003
Physically active to win	2.19	1.03	2.63	1.31	0.000

Although neither group found it difficult to 'get a team together' or that 'physical activity took too much time from friends', interestingly, the more active group saw the barriers as more of a deterrent to activity than the less active group. The less active group engaged in exercise 'to meet people' more than the more active group and although neither group was active in order 'to win' or 'to reach the top in their sport', the more active group was more positive about these reasons to be active than the less active group.

4.5 Influences on Physical Activities Since School

In order to determine the major influences on the students' choices of activities they were asked questions on their three most frequent physical activities since leaving school, and the results are shown in Table 14. The physical activities and percentages are listed in Appendix 2. Netball, aerobics, walking and all forms of dance were the most popular activities.

Table 14: Influences on physical activity since leaving school

Response	By Self	With Family	At Primary School	At Secondary School	At a Club	With Friends	Other
(i) How were you first introduced to this activity?							
% Most frequent activity	21.5	15.7	25.1	7.9	21.5	4.7	3.7
% Second most frequent	18.4	19.0	13.3	11.4	29.1	5.7	3.2
% Third most frequent	21.4	17.1	12.0	11.1	31.6	4.3	2.6
(ii) What had the greatest influence in your skill level?							
% Most frequent activity	41.5	9.0	3.2	18.1	10.6	14.4	3.2
% Second most frequent	37.4	9.7	3.2	16.2	16.2	12.8	4.5
% Third most frequent	34.5	12.9	4.3	12.9	20.7	9.5	5.2
(iii) What influenced your confidence in this activity the most?							
% Most frequent activity	36.2	13.8	2.7	11.2	21.3	12.2	2.7
% Second most frequent	37.0	9.7	2.6	14.9	23.4	7.1	5.2
% Third most frequent	38.8	15.5	3.4	9.5	25.0	5.2	2.6
(iv) Where did you find out you enjoyed this activity?							
% Most frequent activity	22.2	10.6	20.6	15.9	14.8	13.2	2.6
% Second most frequent	21.6	14.4	9.2	15.0	20.9	15.0	3.9
% Third most frequent	27.6	12.9	7.8	12.9	25.0	12.1	1.7

As illustrated in Table 14 and set out more clearly in Table 15, secondary school was not the place where most students were introduced to the activities they have been participating in since leaving school, nor was secondary school ranked very highly as an influence on the students' confidence in these activities. However, secondary school had a greater influence on 'skill level' and was one of the main ways the students found out they 'enjoyed the activity'. The most consistent and strongest influence on all the aspects of choice of physical activity since leaving school that were investigated was 'self' as seen in Table 15. While appropriate for walking or jogging, 'self' gives little information about who provided the opportunity for the many other activities chosen by the respondents, which was the information sought. Certainly decisions about whether to take up the activity were made mainly 'by self' and often unaccompanied ('by self') and these interpretations may have been the reasons for the higher than expected frequency of 'self' as a response.

Table 15: Influences on the respondents' most frequent physical activity since leaving school in order of frequency.

Influences on Activity 1=Most frequent 7=Least frequent	By Self	With Family	At Primary School	At Secondary School	At a Club	With Friends	Other
(i) How were you first introduced to this activity?	=2	4	1	5	=2	6	7
(ii) What had the greatest influence on your skill level?	1	5	=6	2	4	3	=6
(iii) What influenced your confidence in this activity the most?	1	3	=6	5	2	4	=6
(iv) Where did you find out you enjoyed this activity?	1	6	2	3	4	5	7

4.6 Special Cases

Students with a medical condition (long term illness or injury) were more likely to be negative about P.E. experiences than the other students. 'My negative comments were due to injury - I would have benefited by changing to another subject - it was a waste of time'. Students from other countries had mixed reactions to their P.E. experiences from very positive to very negative. 'P.E. was the hardest subject for me, when I came to Australia. In India we weren't brought up to be active like this and it was

where I noticed I didn't fit in more than any other subject. The change rooms, the uniform, the activities I wasn't good at'.

4.7 Qualitative Responses

The responses to the open ended questions have been grouped according to the topic and whether it was favourable, unfavourable or constructive when applied to P.E. experiences.

(i) Compulsory activities/sports. There were no questions asked about activities or sports within the compulsory timetable, but athletics elicited a lot of comments. For every positive comment on athletics there were four negative comments: 'I hated athletics'. 'If you don't like doing something you shouldn't be made to do it e.g. athletics'. The students were referring mainly to the long distance running events. Many students singled out team games as being enjoyable. 'Team sports were the best'.

(ii) Uniform. some girls commented that they felt uncomfortable changing in front of others or showering (this was rarely enforced) 'I didn't like changing in front of my classmates. Teachers should be more sensitive to this'. 'Earlier students' suggested that shorts would have been more practical. The uniform policy was relaxed in the late 1980s.

(iii) Mixed versus single sex classes. Comments favouring mixed or single sex classes were usually vehement, but were evenly balanced. 'It was much better socially when the boys and girls mixed', 'I'm really glad most classes were single sex'. A few students commented with the benefit of hindsight: 'If you're not doing well at P.E., you feel more comfortable in single sex classes, but looking back maybe mixed is O.K.'

(iv) Too much pressure. Students made negative comments about being forced to do things they did not want to do. This implies an element of choice in compulsory P.E. and few, if any, would direct this criticism at English or Maths. 'Students should not have to participate in sports they don't enjoy, it makes them hate sport' and 'You shouldn't be forced to do things you don't want to do like perform in the rain or hot weather'.

(v) P.E. experiences. More positive than negative comments were recorded on issues outside the curriculum. Many of the negative comments were constructive criticisms: 'I suggest an advanced class for keen students and a general class for those not so keen' from a C student and 'Parents should be made more aware of what their child is good at so that they can continue out of school hours and after leaving school'. There were quite a few comments on P.E. staff. The negative comments such as: 'I never felt good enough to get the teachers attention' and 'Teachers were impersonal and I was not treated as an individual' were countered with many more positive comments for example: 'You were encouraged to do your best and praised for your efforts no matter where you came' and 'I miss the teachers encouraging you. No one encourages you now'. Many students wanted more variety and this was particularly true of the early students, whilst a small number of students wanted to find a sport they were good at and concentrate on that. A few students regretted that they did not make more of their time to be physically active: 'Now I will give almost anything a go. Not then, I was too embarrassed'.

(vi) Some students linked the sports they participated in directly with participation outside school: 'I'm glad I learnt squash at school. I play it

regularly now'. Others claimed no relationship with school, the influence on participation in a particular form of physical activity mainly coming from home: 'I was already dancing and kept it up through high school and I'm still dancing. It had nothing to do with school at all'. It was suggested by a few students to link community physical activity more directly with school. 'I suggest continuity between school and community sport - teams on weekends and student discounts etc'.

(vii) Reasons for inactivity. Many students found shift working (nursing, McDonald's etc) made participation in team sports impossible. A small number of students were pregnant and some respondents had chronic illness, and so did not participate in as much physical activity as they would have liked to.

4.8 Discussion and Summary of Results

The following section is a summation of the results together with the relationship of the results to other research.

4.9 The Sample

4.9.1 Years of attendance.

P.E. experiences for girls at C.J.S.H.S. changed between 1984 and 1993 and comparisons between the attitudes towards P.E. of the 'earlier students' and the attitudes toward P.E. of the 'later students' were probably largely due to changes made by the P.E. department. Compulsory P.E. was enjoyed more by the later group which suggests that the changes were mostly successful. The later group also felt more encouraged by their P.E.

experiences to participate in physical activity outside school hours and after leaving school.

The issue of the P.E. uniform as an embarrassment (Scraton, 1987) seemed to decrease as dress codes were relaxed and the students could choose shorts or a skirt or track pants in winter.

'Earlier' and 'later' students differed significantly in their reasons for not being as physically active as they would like. While these barriers seem to have more to do with lifestyle factors than differing P.E. experiences, the 'later' group had less access to money and transport which were barriers to physical activity also found by Scraton (1987). The 'later' group (average age 17) were more likely to be studying or involved in part-time shift work than the 'earlier' group (average age 22). Luckman (1990) also found that subjects who were working were less likely to be physically active than those who were studying. However, the barriers that did not involve lifestyle factors - 'I look funny in sports wear', 'physical activity takes time from my friends' and 'administration turned me off' - were also felt more strongly by the 'later' students. These responses suggest that the 'later' students felt less in control of their environment than the 'earlier' students.

The 'later' students were also more strongly motivated to be physically active: for social reasons 'to meet people' and 'to be part of a team'; for physical reasons 'to improve skill' and 'to be challenged'; and just for enjoyment.

4.9.2 Grade

In a comparison of students who scored an A or B with students who scored a C, D or E where there was a significant difference, the higher grade students held more positive attitudes about their P.E. experiences than the students who were awarded a lower grade. That higher grade students would be more positive about their P.E. experiences than lower grade students is not surprising and this supports the theory that perceived ability has an effect on exercise behaviour through attitudes to exercise found by Petlichkoff (1988) and Roberts et al. (1981). The higher grade students perceived the barriers to physical activity as less of a hindrance than lower grade students and felt stronger about reasons to be active than lower grade students.

4.10 Physical Education Experiences

There was only one significant difference in P.E. experiences between students who were active twice a week or more and students who were active once a week or less. The more active students held stronger beliefs that 'P.E. is a welcome alternative to school work' than the less active students.

4.10.1 Compulsory and optional physical education.

If P.E. teachers simply wanted to cater for the majority of the students during their compulsory and optional P.E. classes then, in this case study, the objective is being fulfilled. The students responded very favourably to most of their experiences in P.E. Together with other benefits

from their P.E. experiences, the students felt that they increased their level of fitness, improved their level of skill and generally felt positive about their P.E. experiences which is consistent with Evans (1983) and Luckman (1990).

Changing and showering were a major problem to a few students and this was also found by Scraton (1987), but as few students showered and separate cubicles will never be possible, these issues need to be dealt with in a different way. Most of the questions elicited responses that were easy to interpret, but Question 6f 'Too little time of the school curriculum is spent on P.E.' was ambiguous. If a student felt that enough time had been spent on P.E., she may have answered disagree, as would a student who felt that too much time was spent on P.E. The most negative comments concerned athletics and long distance running. Fitness can certainly be catered for within other activities - a game of netball, a dance sequence - and this will not turn off as many students. Some thought needs to be given to fitness testing - is it necessary, and if it is, how can it be presented in a more enjoyable way?

Students who are disaffected by their P.E. experiences - students with a long term injury or illness, and the migrant student - all need to be involved in decision making about P.E. in order to improve their experiences.

By increasing the number of optional P.E. classes, the girls had a greater variety of activities to choose from. However, more needs to be done to ensure that the girls who seek out greater variety in activities feel

comfortable about taking part in the options that offer choices e.g. recreation.

4.10.2 Mixed versus single sex classes.

P.E. at C.J.S.H.S. was presented in both mixed and single sex classes. In a comparison between students who enjoyed mixed classes and students who did not, both groups were positive about their P.E. experiences. However, the group of students who enjoyed mixed classes had stronger beliefs ($p=0.000$) that they 'improved skills', that there should be 'more time spent on P.E. in the school timetable' and that 'P.E. was relaxing', compared with the students who did not enjoy mixed P.E. There is obviously a place for both mixed and single sex P.E. classes, but as the options were mixed and the compulsory P.E. was largely single sex, the opportunity was there for all students to enjoy both. The students who enjoyed single sex classes held weaker beliefs about their P.E. experiences than the students who did not enjoy single sex classes and so it would benefit the greatest number of students to keep compulsory P.E. as largely single sex classes and consider some optional P.E. classes in addition to dance that would appeal to this group of girls.

4.11 Physical Activity Outside School Time

Students who felt encouraged by their P.E. experiences to be physically active outside school viewed their P.E. experiences quite differently from those who did not. In every case in which a significant difference was observed, the group who felt encouraged to be active outside

school reacted more positively to their P.E. experiences than the group that did not feel encouraged. Most significant differences ($p \leq 0.001$) were found in 'compulsory P.E.', attitude to the 'change rooms', 'too much emphasis from the staff on winning' (both groups disagreed), 'increased skill', 'increased fitness' and P.E. as a 'welcome alternative to school work'. Within these differences is the essence of a good P.E. program - increased fitness, improved skills, P.E. as a welcome alternative to school work and a positive feeling about P.E. experiences. However, it is difficult to credit the students' P.E. experiences entirely with these positive results. Students arrive at secondary school with both positive and negative predispositions toward physical activity and these have also influenced their responses to the opportunities offered to them.

In a link between school P.E. and physical activity, students who felt encouraged by their P.E. experiences to participate in physical activity outside school time were more likely to be physically active twice a week or more than students who did not feel encouraged to participate outside school time.

4.12 Physical Activity Since Leaving School

Students who felt encouraged by their P.E. experiences to be physically active after leaving school responded similarly to those who felt encouraged to participate outside school. Once again, the most significant differences between the group who felt encouraged to participate since leaving school and the group who did not ($p \leq 0.001$) were found in the responses to the broad aims of the P.E. program - increased fitness,

increased skill, enjoyment of P.E., and a positive response to compulsory P.E. Although both groups responded favourably to these essentials in a P.E. program, the group who felt encouraged by their P.E. experiences to be active after leaving school were significantly more positive. From this can be concluded that students' views of their P.E. experiences are related to their feeling of encouragement to be physically active outside school and after leaving school. However, it should be noted that feeling encouraged to be physically active and actually being physically active are quite different. Further research is necessary to determine why some students felt encouraged by their P.E. experiences to participate outside school and after leaving school and why other students experiencing the same opportunities did not. In addition, to determine how students perceive encouragement would enhance any teaching program.

Responses from students who were not able to be as physically active as they would have liked to are illustrated in Appendix 4. Some variables were seen to be a barrier to only a few students, some were barriers to more than half. Consistent with Gordon (1989) and Luckman (1990), 'work commitments' restricted many women and girls. It was shift work in particular that made team sports almost impossible. The 'time taken up by study' which was noted by Tappe et al. (1990) was a barrier to less than half the respondents, and 'family commitments' that restricted nearly half the respondents was also mentioned by Luckman (1990). Injury, illness or disability, although identified by a minority, were restrictive for some and this paralleled the findings of Gordon (1989) in organised sport, Gould et al.

(1982) with competitive swimmers, Johns et al. (1990) with artistic gymnasts, and Klint and Weiss (1986) with gymnasts.

Long term illness or injury to a school student who is well enough to be in the class but not well enough to participate, is a topic that needs attention in research in order to improve these students' physical and social well being. 'Self consciousness in sports gear', however only restricted a few women and girls. Physical activity was a barrier to 'spending time with friends' for only a small number of respondents and only a few students felt that 'physical activity was too tiring' or that they had 'no support from those close to me' which was an issue Wankel et al. (1991) reported for younger participants. A small number of respondents were 'put off by administration' or by 'coaching' as was found by Johns et al. (1990) and Gordon (1989), however, this was more of a problem in organised or elite sport. 'Level of skill' was a barrier to a small number of respondents, and cost which was also mentioned by Luckman (1990) was an issue for nearly 40% of respondents.

A very high percentage of respondents (80%), who have been physically active since leaving school, were motivated to be active because they had a 'reasonable level of skill' which agrees with the findings by Butcher (1983) that skill satisfaction was related to participation in physical activity. 'Challenge' motivated 71% of respondents which is consistent with findings by Gill et al. (1983) and Gould et al. (1985). 'To meet people' (79%) and 'be with friends' (88%) were motives to be physically active for a majority of the respondents who have been active since leaving school and these motives were also noted by Gordon (1989), Gould et al. (1985), and

Longhurst and Spink (1987). 'Improving skills' was cited as a reason to be active for 77% of the respondents, a motive consistent with findings by Gill et al. (1983) and Gordon (1989). 'Getting in shape/staying in shape' motivated an astounding 98% of respondents and this is consistent with findings by Deem (1987), Godin and Shephard (1986) and Tappe et al. (1990) that appearance is a strong motivator for physical activity. Physical activity as a form of 'relaxation or stress release' was a reason to exercise for 97% of the respondents who had been active since school and this was also found by Tappe et al. (1990) and Butcher and Hall (1983). 'Getting rid of aggression' was a motive for more than 60% of the respondents, but only Gordon (1989) found that using up energy was a motive to be active. Participation in physical activity 'in order to win' was only a factor in the younger male and female respondents of Gordon's (1989) study and in less than 30% of the respondents to this question. 'Fun and enjoyment' motivated 99.5% of the respondents and this result was reflected in findings by Deem (1987), Gill et al. (1983), Gordon (1989), Gould et al. (1985) and rated much higher than Longhurst and Spink (1987). More than 90% of respondents were active to feel better 'mentally' and 'physically' which was also cited by Gordon (1989). More than 70% were active to 'get out of the house' which was a motive listed by Longhurst and Spink (1987) or to be 'part of a team' (56%) as was found by Luckman (1990).

4.13 Influences on Physical Activity since Leaving School

The respondents' secondary school experiences were rated well behind the influence of 'clubs', 'themselves', 'family' and 'primary school'

on the three most frequent physical activities participated in since leaving school. This is consistent with Luckman (1990) in part, who found a strong influence from the family for initial involvement and the influence of friends for staying in the activity. Secondary school P.E. experiences had no influence on the skill level or introduction to walking of the 63 respondents who walk or power walk, but little credit was given for the compulsory and optional dance experiences giving the respondents the confidence and the skill to participate in night club dancing and aerobics classes.

4.14 Summary

In this case study, it was found that P.E. at C.J.S.H.S. successfully created a positive atmosphere for most students in which there were opportunities to improve skills and fitness, learn new activities and enjoy familiar ones. It does not cater for every student all the time but it is a dynamic program that changes to suit the perceived needs of the students. Although the program does exert some influence on the future activities of its students, there is not a strong link between school P.E. experiences and a level of regular physical activity in order to maintain a healthy lifestyle after leaving school.

5.0 Conclusions

5.1 Summary of Conclusions

1. Girls' P.E. experiences were not directly related to physical activity twice a week or more after leaving school.
2. The respondents viewed their P.E. experiences positively in most cases.
3. As a direct result of their P.E. experiences, the respondents felt that they benefited in many ways including improved skills and increased fitness.
4. Various changes between 1984 and 1993 which were designed to improve the girls' P.E. experiences, were successful. This is evident in the more positive attitudes of the later students and their perceptions of the benefits gained from their P.E. experiences.
5. Most students felt encouraged by their P.E. experiences to be active outside school and after leaving school. These students saw fewer restrictions to physical activity and were more motivated to be physically active than the students who did not feel encouraged by their P.E. experiences to be physically active.
6. More than 65% of respondents were active twice a week or more.
7. Respondents who were not as active as they would have liked to have been were most restricted by factors of time ('work', 'family commitments', 'study' and 'times not convenient'), 'cost' and 'not skilled enough to feel comfortable'.

8. Respondents who had been physically active since leaving school were active for a combination of reasons. The most common motives for physical activity were: 'fun and enjoyment', 'get in shape/stay in shape', 'to feel better physically', 'to relax', 'to feel better mentally and to participate with friends'.

5.2 Implications

This study has provided valuable feedback to the P.E. teachers at C.J.S.H.S. and can be used to enhance the P.E. experiences of girls at similar schools, with further implications for coaches and administrators of sporting and health clubs who deal with girls and young women.

1. Although P.E. options were positively perceived by female students, the selection needs to be expanded to interest more girls. Experiences that more closely resemble the activities chosen by young women after leaving school should be trialled e.g. health club activities which may include establishing a relationship between the school and the local health clubs.

2. Less emphasis needs to be placed on middle and long distance running in athletics and fitness testing. Cardiovascular fitness can be treated in different ways that do not cause the girls anxiety and make some girls hate P.E. Consideration needs to be given to fitness testing and whether the benefits outweigh the resentment engendered by the easily administered distance run.

3. Girls in their late teens encounter many barriers to physical activity and stronger links could be forged between P.E. experiences and

various sporting and health clubs and recreation centres to help break down some of the barriers e.g. bring members of the sporting community into the school for their expertise and to establish a familiar face for the students to contact; take the students into the community to use the facilities; arrange low cost deals for students in off peak times (4 p.m. - 6 p.m.) at health clubs or multisport facilities.

4. There is a place for both single sex and mixed classes within P.E. experiences and as long as there is the opportunity for both types of classes, the needs of the majority of students will be met in this area.

5. Fulfilling the needs of students with special problems must be carefully planned after consultation with the particular student/s, e.g. involving the long term sick or injured student in coaching, scoring or umpiring and clearly identifying them with a team; catering for the needs of the student from a different cultural background.

6. Formal or informal consultation with students throughout their secondary schooling would provide valuable feedback to enable the P.E. program to best cater for the interests of all students. Sections of the questionnaire (in Appendix 1) could be administered and class discussions on the students' likes and dislikes in each unit would be methods of gaining this information.

7. As girls get older, so their motives for being active change (Gould et al., 1982) and this must be considered when planning P.E. programs for girls aged 12-17. In particular, the program for the P.E. experiences of girls aged 16 and 17 at C.J.S.H.S. did not cater for the girls' needs as well as the P.E. experiences for the younger girls.

5.3 Recommendations

The findings from this study can be applied to similar schools and some of the findings can be applied to most Western Australian P.E. programs for girls aged 12-17. The value of conducting a longitudinal study in order to gain information on the change of perspective as schoolgirls become young adults is evident in the findings. A longitudinal study is recommended for similar research. Further work is also suggested in a number of areas.

1. Although this study was unable to investigate the responses of female Aboriginal students as a separate group, a comparison of the responses of Aboriginal students with the responses of non-Aboriginal students may provide insights as to how to present P.E. experiences for the best results from this minority group.

2. The respondents are largely from a low socio-economic background and it would be of some benefit to future students to conduct a similar survey and compare the results of students from a different background.

3. Strategies must be developed to improve the P.E. experiences of students with special cases, i.e. long term injured or ill and different cultural background. These strategies would be developed by consultation between these students and the teachers involved.

4. Methods for easily administered feedback for the P.E. teacher need to be developed to ensure that the P.E. experiences are appropriate for the students and to highlight the experiences the students feel positive about.

5. In a perfect P.E. program, all students would feel encouraged by their P.E. experiences to continue to be active after leaving school. It is a suggestion for further research to examine the reasons why some students do not feel encouraged by their P.E. experiences to continue to be active after leaving school.

The P.E. program must be dynamic in order to maximise the indirect influences of the students' P.E. experiences on a lifetime of physical activity.

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APPENDIX 1

Permission Form and Physical Activity Questionnaire

Researchers: Dr Sandy Gordon, Department of Human Movement, UWA.
Penny Morrison, Masters student

Contact Address: Department of Human Movement
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Project: Physical activity of women and girls

The researchers for the above project wish to invite you to participate in an investigation of the experiences in physical activity of young women and girls. Should you decide to accept this invitation please complete the enclosed questionnaire. For the purpose of our research we require that you sign and return this form, however your responses will be kept in our strictest confidence at all times. In other words, we guarantee that your responses will be completely anonymous. Please contact us if you have any concerns or further questions about this project.

Please sign where indicated below if you agree to participate.

I (the participant) have read the above information and any questions I have asked have been answered to my satisfaction. I agree to participate in this project.

Name: (please print) _____

Signature: _____
Participant or Authorised Representative

_____ Date

Researchers signature: _____
Researcher

_____ Date

Physical Activity Questionnaire

Year of birth _____

Which years were you at Cyril Jackson Senior High School? e.g. 1982-85 _____

Do you consider yourself to be an Aborigine or Torres Strait Islander? Tick one box

No Yes, Aborigine Yes, Torres Strait Islander

What grade would you have averaged in compulsory Physical Education?

Please circle A B C D F

To give an idea how you feel about the experiences offered by the Physical Education (P.E.) Department at Cyril Jackson Senior High School, please mark the scale. Tick one box.

		Very Negative	Negative	Unsure	Positive	Very Positive
e.g. I like chocolate						✓
The compulsory P.E. experiences	Did not participate					
	<input type="checkbox"/>					
Physical Recreation	Did not participate					
	<input type="checkbox"/>					
Outdoor Education	Did not participate					
	<input type="checkbox"/>					
Dance option	Did not participate					
	<input type="checkbox"/>					

Question 5 continued - How you felt about P.E. experiences.

e)	Dance performance e.g. concerts etc.	Did not participate <input type="checkbox"/>	Very Negative	Negative	Unsure	Positive	Very Positive
f)	Special netball	Did not participate <input type="checkbox"/>	Very Negative	Negative	Unsure	Positive	Very Positive
g)	Special gymnastics	Did not participate <input type="checkbox"/>	Very Negative	Negative	Unsure	Positive	Very Positive
h)	Special basketball	Did not participate <input type="checkbox"/>	Very Negative	Negative	Unsure	Positive	Very Positive
i)	Interschool sport	Did not participate <input type="checkbox"/>	Very Negative	Negative	Unsure	Positive	Very Positive
j)	Having to change clothes for physical activity	Did not participate <input type="checkbox"/>	Very Negative	Negative	Unsure	Positive	Very Positive
k)	P.E. Uniform		Very Negative	Negative	Unsure	Positive	Very Positive
l)	The change rooms		Very Negative	Negative	Unsure	Positive	Very Positive

Question 5 continued - How you felt about P.E. experiences

		Very Negative	Negative	Unsure	Positive	Very Positive	
m)	Showers						
		Very Negative	Negative	Unsure	Positive	Very Positive	
n)	Single sex classes for P.E.	<input type="checkbox"/>					
		Very Negative	Negative	Unsure	Positive	Very Positive	
o)	Mixed classes for P.E.	<input type="checkbox"/>					
		Very Negative	Negative	Unsure	Positive	Very Positive	

Would you like to comment on anything about your P.E. experiences?

P.E. Experiences at Cyril Jackson Senior High School, range from compulsory P.E. , through the options (Outdoor Education etc), interschool teams, dance performances and carnivals.

6. Please indicate your reaction to the following statements on your Physical Education experiences at Cyril Jackson Senior High School. Tick one box

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
a)	The P.E. staff placed too much emphasis on winning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	I improved my level of skill.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	I learned better in mixed classes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	I would have liked to have learned more sports in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	I would have liked to have covered the sports in greater depth, spending more time on each one.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Too little of the school curriculum was spent on physical activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	I did not learn to be part of a team when physically active at C.J.S.H.S.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 6 continued - Your reactions to P.E. experiences. Tick one box

- | | | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|----|--|-------------------|----------|--------|-------|----------------|
| h) | There was sexual harrassment in mixed physical activity classes | | | | | |
| i) | I enjoyed P.E. experiences at C.J.S.H.S. | | | | | |
| j) | The subjects offered by the P.E. department were structured mainly for boys. | | | | | |
| k) | P.E. experiences at C.J.S.H.S. improved my fitness level. | | | | | |
| l) | The P.E. experiences were a welcome alternative to school work. | | | | | |
| m) | Experiences in P.E. did not help me relax. | | | | | |
| n) | I learned new skills. | | | | | |
| o) | I was able to feel independent | | | | | |

Question 6 continued - Your reactions to P.E. experiences. Tick one box

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
p)	My abilities were not challenged.	----- ----- ----- ----- -----				

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
q)	P.E. experiences at C.J.S.H.S. allowed me to take risks.	----- ----- ----- ----- -----				

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
r)	My Physical Education experiences at Cyril Jackson SHS encouraged me to participate in physical activity outside school time.	----- ----- ----- ----- -----				

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
s)	My Physical Education experiences at Cyril Jackson SHS encouraged me to participate in physical activity since leaving school.	----- ----- ----- ----- -----				

Comments: Would you like to comment on anything about your P.E. experiences?

Physical activity in the following questions means to exercise for 20 minutes or longer at a level that is greater than normal walking pace eg. dancing at a night club, power walking, netball etc. Tick one box.

7. Currently how often are you physically active?

None Once or twice a month Once a week 2-3 per week More than 2-3 per week

8. How often would you like to be physically active?

Never Once or twice a month Once a week 2-3 per week More than 2-3 per week

If you have been active since leaving school, please answer the following questions on (9) your main physical activity since leaving school (10) your second most frequent activity since leaving school if you have one and (11) your third most frequent activity since leaving school, if you have one. e.g dancing at a nightclub, power walking, netball etc.

9. (a) Your main physical activity since leaving school is/was _____

(b) How often do you/did you usually participate in this activity?

Less than once
a month

Once or twice
a month

Once a
week

Two to three
times a week

More than three
times a week

(c) For how long do you/did you usually participate?

Less than 20 mins

20-50 mins

50-70 mins

More than
70 mins

(d) How were you first introduced to this activity? Tick one box

by self with family at primary school at secondary school with friends at a club other

(please state) _____

(e) What had the greatest influence on your skill level? Tick one box

self family primary school secondary school friends club other

(please state) _____

(f) What influenced your confidence in this activity most? Tick one box

self family primary school secondary school friends club other

(please state) _____

(g) Where did you find out you enjoyed the activity? Tick one box

by self with family at primary school at secondary school with friends at a club other

(please state) _____

10. (a) Your second most frequent physical activity since leaving school is/was _____

(b) How often do you/did you usually participate in this activity?

Less than once
a month

Once or twice
a month

Once a
week

Two to three
times a week

More than three
times a week

(c) For how long do you/did you usually participate in this activity?

Less than 20 mins

20-50 mins

50-70 mins

More than
70 mins

(d) How were you first introduced to this activity? Tick one box

by self with family at primary school at secondary school with friends at a club other

(please state) _____

(e) What had the greatest influence on your skill level? Tick one box

self family primary school secondary school friends club other

(please state) _____

(f) What influenced your confidence in this activity? Tick one box

self family primary school secondary school friends club other

(please state) _____

(g) Where did you find out you enjoyed this activity? Tick one box

by self with family at primary school at secondary school with friends at a club other

(please state) _____

11. (a) Your third most frequent activity/activities since leaving school is/was: _____

(b) How often do you/did you usually participate in this activity?

Less than once a month Once or twice a month Once a week Two to three times a week More than three times a week

(c) For how long do you/did you usually participate in this activity?

Less than 20 mins 20-50 mins 50-70 mins More than 70 mins

(d) How were you first introduced to this activity? Tick one box

self family primary school secondary school friends club other
(please state) _____

(e) What had the greatest influence on your skill level? Tick one box

self family primary school secondary school friends club other
(please state) _____

(f) What influenced your confidence in this activity the most? Tick one box

self family primary school secondary school friends club other
(please state) _____

(g) Where did you find out you enjoyed this activity? Tick one box

by self with family at primary school at secondary school with friends at a club other
(please state) _____

If you are NOT currently as physically active as you would like to be, please answer question 12. If you are happy with your current level of physical activity, please go to question 13.

12. I do not participate in as much physical activity as much as I would like to because: Tick one box.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
a) I can't get a team together.					
b) The venues are too far away.					
c) It costs too much.					
d) No time, due to work.					
e) No time, due to study.					
f) No time, due to family commitments					
g) No time, due to other (please state) _____ _____					
h) I don't know what is available					

Question 12 continued - I do not participate in as much physical activity as I would like to because:

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
i)	I can't get to a venue.	-----	-----	-----	-----	-----
j)	Injury/illness	-----	-----	-----	-----	-----
k)	The times the activities are available are not convenient.	-----	-----	-----	-----	-----
l)	I look funny in sportswear.	-----	-----	-----	-----	-----
m)	Physical activity takes too much time from my friends.	-----	-----	-----	-----	-----
n)	Physical activity is too tiring.	-----	-----	-----	-----	-----
o)	I have no support for physical activity from those close to me	-----	-----	-----	-----	-----
p)	Coaches turned me off.	-----	-----	-----	-----	-----
q)	Administration turned me off.	-----	-----	-----	-----	-----

Question 12 continued - I do not participate in as much physical activity as I would like to because:

- | | | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|----|---|-------------------|----------|--------|-------|----------------|
| r) | I haven't got the level of skill to feel comfortable participating. | | | | | |
| s) | Other (please state) _____ | | | | | |

Would you like to comment on any reasons you do not participate in physical activity as much as you would like to?

If you have participated in physical activity at some stage since leaving school please answer question 13. If you have NOT participated in physical activity since leaving school, please go to the section on FEEDBACK.

13. I am/have been physically active since leaving school: Tick one box.

- | | | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|----|---|-------------------|----------|--------|-------|----------------|
| a) | Because I have a reasonable level/skill | | | | | |
| b) | To reach the top in my sport | | | | | |
| c) | To meet new people | | | | | |
| d) | To participate with friends | | | | | |

Question 13 continued - I am/have been physically active since leaving school: Tick one box.

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
e)	To improve skills					
f)	To get in shape/stay in shape					
g)	To improve/maintain health					
h)	To relax with something apart from work/study					
i)	To get rid of aggression					
j)	To be challenged					
k)	To win					
l)	For enjoyment and fun					
m)	To feel better mentally					
n)	To feel better physically					

Question 13 continued - I am/have been physically active since leaving school: Tick one box.

- | | | Strongly
Disagree | Disagree | Unsure | Agree | Strongly
Agree |
|----|-------------------------|-------------------------------|----------|--------|-------|-------------------|
| o) | To get outdoors | ----- ----- ----- ----- ----- | | | | |
| p) | To take risks | ----- ----- ----- ----- ----- | | | | |
| q) | For something to do | ----- ----- ----- ----- ----- | | | | |
| r) | To get out of the house | ----- ----- ----- ----- ----- | | | | |
| s) | To be part of a team | ----- ----- ----- ----- ----- | | | | |
| t) | To compete | ----- ----- ----- ----- ----- | | | | |
| u) | Other (please state) | ----- ----- ----- ----- ----- | | | | |

Comments: Would you like to add anything about physical activity since leaving school?

FEEDBACK

The purpose of this study is to improve the P.E. experiences of students to promote continued physical activity as a way of life on leaving school. I have always wanted to find out how the Physical Education experiences were seen by the students both while at school and in the years after leaving, so I decided to survey it formally and write my findings as part of a Masters Degree so that other teachers and students might benefit from the results.

The questions are from a teacher's perspective and the whole idea is to see it from the students' and former students' views. Please feel free to add to any section and make comments throughout as your feedback may have a direct effect on the way Physical Education is taught in the future.

End of Physical Activity Questionnaire.

Please return your completed responses in the envelope provided immediately.

Thank you very much for your cooperation and assistance.

APPENDIX 2

Physical Activities Participated in since Leaving School

Appendix 2: Physical activities participated in since leaving school.

	Physical Activities	Frequency N	percentage (%)
1.	Netball	86	40.1
2.	Tennis	7	3.3
3.	Soccer (outdoor/indoor)	6	2.8
4.	Jogging	16	7.5
5.	Cycling	24	11.2
6.	Workout (home gym)	23	10.7
7.	Aerobics (and aquaerobics)	76	35.5
8.	Dance - national, nightclub, jazz ballet, ballroom	54	25.2
9.	Lacrosse	2	1
10.	Walking and power walking	63	29.4
11.	Basketball (and wheelchair)	16	7.5
12.	Yoga	2	1
13.	Softball	7	3.3
14.	Varied sports	2	1
15.	Modelling	1	0.5
16.	Trampoline	1	0.5
17.	Swimming/surfing	25	11.7
18.	Coaching	1	0.5
19.	Athletics	1	0.5
20.	Cricket	8	3.7
21.	Skating - roller skating and ice skating	3	1.4
22.	Cheerleading	1	0.5

	Physical Activities	Frequency N	percentage (%)
23.	Squash	17	7.9
24.	Horseriding	4	1.9
25.	Skipping	1	0.5
26.	Martial Arts	2	1
27.	Volleyball	3	1.4
28.	Ten Pin bowling	2	1
29.	Hockey	2	1
30.	Touch rugby	1	0.5
31.	Badminton	4	1.9
32.	Rowing	1	0.5
33.	Mixed sports	1	0.5
34.	Physical work	3	1.4
35.	Windsurfing	1	0.5

N = The number of people who consider this activity to be one of their three most frequent activities participated in since leaving school.

% = the percentage who have participated.

APPENDIX 3

Attitudes to P.E. Experiences

Appendix 3: Attitudes to P.E. experiences

N = 214	% Very Negative	% Negative	% Unsure	% Positive	% Very Positive
Dance performance	5.4	8.6	10.2	32.3	43.5
Interschool sport	2.3	4.0	12.3	46.5	35.9
Changing clothes for P.E.	1.0	8.6	7.7	45.5	37.3
P.E. Uniform	3.3	14.3	23.2	41.1	18.1
Change rooms	4.2	16.1	15.2	53.3	11.2
Showers	12.1	22.9	27.1	29.0	8.8
Single sex classes for P.E.	6.3	12.1	16.9	45.6	19.1
Mixed classes for P.E.	5.4	9.7	16.5	43.5	24.7
Staff emphasised winning too much	22.0	58.9	11.7	6.1	1.4
Improved skill	1.4	7.0	9.9	64.8	16.9
I learned better in mixed classes	5.1	36.0	35.5	19.0	4.2
I'd like to have learned more sports	2.4	36.3	18.9	32.1	10.4
Too little P.E. in timetable	4.7	42.8	20.8	23.7	8.0
I did not learn to be part of a team in P.E.	34.6	51.4	7.5	6.1	0.5
I enjoyed P.E. experiences	1.4	6.1	8.4	47.7	36.4
P.E. is structured mainly for boys	21.1	62.0	11.3	5.6	0.0
Improved fitness in P.E.	1.4	12.1	12.1	53.7	20.6
P.E. was a welcome alternative to school work	1.4	11.7	9.3	40.7	36.9
I learned new skills	0.9	1.9	6.5	67.3	23.4
I was able to feel independent	2.8	12.6	31.3	40.2	13.1
My abilities were not challenged	12.7	58.2	20.7	6.6	1.9
P.E. experiences allowed me to take risks	4.2	26.6	35.5	28.5	5.1
P.E. did not help me relax	20.7	47.9	16.9	11.2	3.3

APPENDIX 4

Barriers to Physical Activity

Appendix 4: Barriers to physical activity

Variable N=124	% Strongly Disagree	% Disagree	% Unsure	% Agree	% Strongly Agree
I can't get a team together	17.9	53.7	8.9	16.3	3.3
Venues too far away	21.0	54.8	4.8	15.3	4.0
Costs too much	13.6	35.2	12.8	31.2	7.2
No time due to work	4.8	15.1	4.8	42.1	33.3
No time due to study	20.7	37.2	1.7	21.5	19.0
No time, family commitments	11.4	35.8	5.7	32.5	14.6
I don't know what's available	28.1	39.7	13.2	17.4	1.7
I can't get to a venue	29.8	50.8	6.5	8.9	4.0
Injury/illness	29.3	44.7	7.3	9.8	8.9
Times available not convenient	10.4	24.8	11.2	44.0	9.6
I look funny in sports gear	21.0	50.8	11.3	15.3	1.6
Takes time from friends	28.0	55.2	7.2	8.8	0.8
Too tiring	25.0	57.3	4.8	10.5	2.4
No support from those close to me	29.8	50.0	8.1	8.9	3.2
Coaches turned me off	23.4	45.2	14.5	15.3	1.6
Administration turned me off	23.4	46.8	17.7	10.5	1.6
Not skilled enough to feel comfortable	20.8	45.6	13.6	16.8	3.2

APPENDIX 5

Motives to be Physically Active

Appendix 5: Motives to be physically active

Variable N=184	% Strongly Disagree	% Disagree	% Unsure	% Agree	% Strongly Agree
I am reasonably skilled	0.0	9.4	11.8	68.2	10.6
Reach the top	13.5	45.6	13.5	21.1	6.4
Meet people	1.2	12.9	7.0	63.7	15.2
Participate with friends	1.8	6.4	3.5	59.6	28.7
Improve skills	2.2	13.2	7.1	56.6	20.9
Get/stay in shape	0.0	1.6	0.5	40.5	57.3
Relax	0.0	0.5	2.7	48.6	48.1
Get rid of aggression	3.3	19.1	13.1	38.3	26.2
Challenge	1.6	15.9	11.0	53.3	18.1
Win	23.5	27.7	9.8	22.4	6.6
Fun & enjoyment	0.0	0.5	0.0	35.0	64.5
Feel better mentally	0.0	1.6	5.5	47.5	45.4
Feel better physically	0.0	0.5	1.6	47.0	50.8
Get outdoors	1.1	13.6	10.3	51.1	23.9
Take risks	14.2	33.3	23.5	23.0	6.0
Something to do	2.2	15.2	8.2	59.8	14.7
Get out of the house	2.7	16.3	6.5	53.8	20.7
Be part of a team	5.4	17.9	17.4	38.6	20.7
Compete	11.5	28.4	10.4	36.1	13.7