THE EFFECTS OF SPORT PARTICIPATION ON CHILDREN'S EMOTIONAL WELL-BEING

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ABSTRACT

Examined the relationship between level of children's sports participation and emotional well-being including self reported emotional and behavioral problems, self-concept, achievement motivation and participation motivation. Data was collected from 203 Form One and Two students from five schools using a multitrait- multimethod assessment methodology. Information was obtained concerning participation in and perceptions about sporting activities. Emotional well-being was assessed by the Youth Self-Report (Achenbach, 1991) and the Self-Perception Profile for Children (Harter, 1985). The study found that increased levels of sports participation had a positive relationship with aspects of emotional well-being particularly self-concept. Results also showed children with increased perceptions of sport related competencies reported significantly fewer emotional and behavior problems than children who were, by an external standard (i.e., teacher rating of athletic competence), actually competent at sport. The study replicated and extended research in this area. Caveats are discussed including issues relating to inferring a causal relationship between sports participation and emotional well-being. Future research and methods for studying the psychological effects of sport are recommended.

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CHAPTER ONE

INTRODUCTION

There has been a recent trend towards examining alternative treatment strategies in health which are both economically viable and accessible. Exercise and sport participation has well been established as an important factor in reducing the risk of many physical problems such as cardiovascular disease, blood pressure, and obesity (Schiffman, 1994). Current research now suggests sustained exercise may also enhance psychological or emotional well-being as it is often called, and therefore can be used as an additional therapy in the treatment of some psychological disorders (Pelham, Compagna, Ritro & Birnie, 1993). Research covers a vast array of content areas with not only sports psychologists investigating this area but also biomedical, physical education, health psychology and medicine professionals (Kremer & Scully, 1994).

In view of such findings, some psychologists, particularly in the United States, have begun incorporating exercise or sport participation as a standard part of therapy into their practices (Micheli, 1984; Weinberg & Gould, 1995). The idea behind such therapy is that exercise can improve mood, enhance physiological and psychological functioning and generally can help people feel better about themselves. Despite these potential benefits, some researchers are more sceptical. For example, critiques of past studies in this area have focused on methodological difficulties, including problems related to self-selection (as opposed to random assignment) or a lack of control groups (Leith & Taylor, 1990). However, despite such well-documented methodological short-comings , more controlled studies have appeared in more recent years and research evidence has been accumulating in favour of exercise and sport participation as an enhancer of emotional and psychological well-being. The most consistent message which has emerged from the adult literature is that, kept within healthy limits , a positive relationship often exists between exercise and

emotional well-being, generally confirming the "feel good" effect often reported by regular exercisers (Kremer & Scully, 1994).

Increasing costs for health services in New Zealand point to the need for health professionals to consider integrating effective and low cost alternative treatments within their practices. Exercise very simply can be a cost-effective treatment or prevention strategy; for instance, it often costs little to go for a run or a swim.

This paper examines the research literature that looks at the relationship between sport participation and psychological or emotional well-being in children. Initially this paper looks at the effects of exercise in adult populations, particularly the effects of exercise and sport on anxiety and depression. The reason for this is that research in this area has almost exclusively focused on adult populations. However, beyond that fact, it is still important to include adult literature as this research may apply to children in some respects. Far less evidence is available on the specific relationship between children's emotional well-being and sport and exercise. As examination of the literature will show, the majority of studies carried out with children have examined the effects of sport upon self-concept (McDonald & Howe; 1989.; Puckett & Ford, 1981) and have generally found a positive relationship between these two variables. However, the evidence even here is far from conclusive (Biddle, 1993; Cox, 1994). Research examining the link between sport and problem behaviour has been even less forth coming; however, a review of the available research in this area is also provided.

More specifically, the introduction looks at (a) research looking at the relationship between sport, exercise and psychological well-being in adults (b) research and theory focused on sport, exercise, and children's emotional well-being (c) New Zealand-based research relating to children's sports participation trends and emotional well-being. The final section of the introduction then describes (d) the current study and associated hypotheses.

EXERCISE, SPORT AND EMOTIONAL WELL-BEING IN ADULTS

The literature in the area of sport, exercise, and emotional well-being has focused primarily on the relationship between exercise and sport participation and anxiety, depression, self-esteem and more recently on psychosocial stress (Biddle, 1992). Since these are among the most common problems brought to the attention of mental health professionals, the idea is appealing that exercise and sport participation may alleviate anxiety, depression, and stress and improve self-esteem. This section reports findings from illustrative research and more comprehensive meta-analytic reviews.

DEPRESSION, EXERCISE AND SPORT IN ADULTS

Depression and anxiety are two of the most common psychological disorders that come to the attention of mental health professionals, often occurring together (Clayton, 1990). In a recent New Zealand epidemiological study, the prevalence rate of affective disorders was found to be 9.4% and anxiety disorders to be between 8-9% (Oakley-Brown, Joyce, Wells, Bushnell & Hornblow, 1989). These are compared to a general prevalence of 5-7% in the U.S.A., Great Britain and Australia (Clayton, 1990). Therefore, with at least equivalent or higher prevalence in New Zealand, low-cost, effective treatment for depression and anxiety are worth investigating. Exercise and sport participation represent potential alternatives.

Exercise has been found to improve mood including alleviating many forms of depression (Schiffman, 1994., Cox, 1994).Evidence for this claim has been indicated by many studies which generally have examined the effects of a particular exercise program. For example, Pelham et al., (1993) investigated the effects of exercise therapy in three separate studies. The studies were conducted in a multidisciplinary psychiatric rehabilitation program, where clients had been diagnosed with a major affective disorder or schizophrenia. In the first study 11 clients participated in 8 weeks of either aerobic (n = 5) or non-aerobic (n=6) exercise therapy and were then interviewed. Aerobic exercise is physical activity which

increases the activity of the cardiovascular and pulmonary systems. During aerobic exercise the body uses oxygen to the working muscles. Anaerobic exercise in contrast is generally of lower intensity and shorter duration than aerobic exercise and does not require as much transportation of oxygen (Weinberg & Gould, 1995). Examples of aerobic exercise are brisk walking, running, swimming or aerobics. Examples of anaerobic exercise are golf, bowling or table tennis. The authors do not provide details of how clients were assigned to groups. Findings indicated that 88% of participants (9 of the 11 clients) reported in these interviews that exercise sessions were associated with consistent antidepressant and/or anxiolytic feelings and higher levels of energy. Furthermore, participants were generally found to increase their participation at other rehabilitation treatment following the treatment. No group differences were mentioned here.

The second study did look at the differential effects of aerobic verses non-aerobic exercise. The five participants in the experimental aerobics fitness group showed significant decreases in depression as evidenced by their Beck Depression Inventory scores and increased aerobic fitness. The five participants in the non-aerobics group showed no such improvements. Finally, in the third study, fifteen clients who were not involved in formal exercise therapies at the time of assessment but who had been exercising for a period of twelve months or more were assessed. A strong negative correlation ($r = -0.731$) was found between aerobic fitness and level of depression. That is, the higher the level of aerobic fitness, the lower the level of self-reported depression in participants. Overall, this study found that exercise therapy can be effective during both short-term and long-term interventions for some chronic psychiatric clients. However, small sample sizes (and lack of random assignment) preclude definitive conclusions about generalisablity.

Hannaford, Harrell & Cox, (1988) found that exercise was particularly effective in the reduction of mild to moderate depression for participants with a psychiatric disorders who were randomly assigned to an aerobic exercise program or non-cardiovascular exercise control condition. Participants participated in aerobic exercise (running) at least three days a week. The control group also exercised at least three times a week. After eight weeks, the

running group show reductions in depression, improvements in cardiovascular conditioning, and were generally less tense compared to the non-cardiovascular group. Other similar research has documented the effectiveness of aerobic exercise in reducing levels of depression. For instance, Leith & Taylor (1990) reviewed literature that looked at the psychological aspects of exercise and found that 70% of the studies which examined the effect of exercise on depression reported significant improvements in depression in both normal and psychiatric samples.

META-ANALYTIC FINDINGS

Owing to an accumulation of research evidence in the last 10-15 years, meta-analytic reviews have afforded some tentative conclusions in this area. A meta-analysis is a quantitative analysis which provides an statistically based method for compiling the results of a number of studies in a related area. Despite some criticism, the results of meta-analytic studies can be valuable, providing for the identification of data-based trends and possibly more conclusive evidence than those drawn from narrative reviews, community surveys, or singular studies (Biddle, 1992).

North, McCullagh & Tran, (1990) conducted a meta-analysis of eighty studies on the effect of exercise on depression. The following provides a summary of findings.

- Both short-term and long-term exercise significantly decreases depression, with this effect continuing through follow-up sessions.
- Participants in most of the samples were found to evidence decreased levels of depression following exercise. Individuals requiring medical or psychiatric care showed the largest decrease
  in depression levels following exercise.
- All modes of exercise, including anaerobic, were effective in reducing depression.
- The longer the exercise programme and the greater the total number of sessions, the larger the decrease in depression.

- Exercise was found to be as effective as some psychotherapies in terms of effect size. But exercise in unison with psychotherapy was more effective than exercise alone.
- Exercise was found to be more effective as an antidepressant than relaxation.

ANXIETY, EXERCISE AND SPORT IN ADULTS

Generally, the research literature is supportive of a relationship between increased exercise and reduced anxiety. For example, King, Taylor, & Haskell (1993) implemented a 12 month exercise program with a population of healthy adults, evaluating the effects on psychologically based indices. Participants were randomly assigned to one of four groups- (1) assessment only (control group), (2) higher intensity exercise in a group, (3) higher intensity exercise at home on an individually basis or (4) lower intensity exercise at home on an individual basis. Those involved in exercise showed reductions in perceived stress, anxiety, body weight, and increased fitness compared to control participants, regardless of program assignment. In addition, no significant differences were found between any of the exercise groups on these dimensions. The authors concluded that neither a group format nor vigorous activity was essential in attaining psychological benefits from exercise training in healthy adults.

Another recent example is a study by Thayer (1987) who compared people's subjective reports of energy and tension in two randomly assigned conditions, a 10 minute brisk walk (moderate exercise) and a 45 minute workout (aerobic exercise). Results showed the main effect reported by the moderate exercise group was energy enhancement with a secondary effect of tension release. The aerobic group primarily reported tension release, and that while energy initially declined it then rebounded and overall was also enhanced.

META-ANALYTIC FINDINGS AND RECENT REVIEWS

Petruzzello, Landers, Hatfield, Kutitz & Salasar (1991) conducted a meta-analysis of 104 studies on the anxiety-reducing effects of acute and chronic exercise. The authors located

studies between 1960 and 1989 that examined the effects of exercise on state-anxiety, trait-anxiety, or psychophysiological correlates of anxiety. The main findings were:

- Exercise was associated with a moderate reduction in self-reported anxiety, which was unaffected by whether the exercise was short or long-term.
- Aerobic exercise produced better effects than nonaerobic exercise. This effect appeared to be independent of age and health status.
- Exercise was no better than other anxiety-reducing treatments for state-anxiety but for trait-anxiety compared favourably to other treatments.

While research and meta-analytic findings are generally supportive, the evidence from studies is not as strong as those examining the benefits of exercise and sport on depression. Commenting on these issues, Weinberg & Gould (1995) recently summarised findings on the short-term effects of exercise on anxiety. The authors concluded the following: (a) Aerobic exercisers show more consistent reductions in anxiety than anaerobic exercisers and (b) Short term exercise was found to be effective in reducing muscle tension. According to this review, maximum benefit is derived when one is working at 70% of ones heart rate. However, post-exercise reductions in state anxiety can often return to pre-exercise anxiety levels within 24 hours and at least part of the anxiety-reducing effect of physical activity may be from taking "time out" from daily stress rather than solely from exercise.

Research literature examining the effects of exercise, sport and emotional well-being in adults has thus far indicated largely a positive relationship. If this is the case, the next question highlighted is: What is it about exercise or sport that causes this association to occur? The following section examines hypotheses concerning the relationship between exercise, sport and emotional well-being in adults.

HOW DOES EXERCISE BOOST MENTAL HEALTH IN ADULTS?

Several hypotheses have been formulated to understand what it is that links exercise and sport with psychological benefits. At present, both psychological and physiological explanations have been offered in an effort to gain a clearer picture of the underlying mechanisms at work.

From a biological perspective, the "endorphin hypothesis" maintains that exercise and sport releases endorphins produced from the pituitary gland and other tissues in the brain, which can decrease pain and give the experience of a natural high or feeling of state of euphoria (Gould & Weinberg, 1995). For example, running has been associated with a "runner's high." This is a sensation runners may experience when running for periods usually longer than 30 minutes wherein the following occurs: a sense of mental awareness and alertness, a lift in the legs, exhilaration, and an enhanced appreciation of nature.

Another biologically based suggestion is the possibility that the norepinephrines and other amino acids linked to affective disorders are beneficially altered during and after exercise. (Hannaford, Harrell & Cox, 1988). Cardiovascular fitness is another hypothesised biological mediator of change in depression level although evidence suggests this is not likely to be the sole mediator (North, McCullagh & Tran, 1990).

Psychological hypotheses have been offered as underlying mediators. As introduced earlier, the distraction hypothesis suggests that exercise acts as a "time out", a break from stressful life events (Cox, 1994). The assumption here is that exercise provides an avenue to distract an individual from their daily worries or stress. Another hypothesis posits the social benefits of sport. Individuals may find social interactions between group members of a physical activity or sport to be a main reason for enhanced well-being. Socialising between people while they exercise may provide them with pleasure or personal attention which can act as a buffer to experiencing negative affect or as an enhancer of positive affect (North, McCullagh & Tran, 1990).

A cognitive-behavioural hypothesis suggests exercise "releases" positive thoughts and feelings or alternatively, reduces negative affect and self-talk. Many people report both short and long term self-talk and affect-related benefits associated with exercise. A variety of related components are hypothesised to mediate this release mechanism (North, McCullagh, & Tran, 1990). These include the following: (a) step-by-step mastery of a difficult task or skill, (b) increased self-efficacy, (c) a feeling of success and an enhanced sense of accomplishment or even simply (d) the joy of learning a new activity. These are all factors that are then thought to counteract aspects of depression (eg. low self-worth, low energy, negative affect; DeAngelis, 1996). Many of these aspects will be discussed in relation to Bandura's self efficacy theory and its association to sport in a later section looking more specifically at the effects of exercise and sport on children.

As discussed previously, recent studies have found that depression and anxiety will decrease across a variety of exercise regimes. Most research also suggests exercise needs to be of sufficient duration and intensity if the benefits are to be maximised (Cox, 1994). An exercise programme or sport should be undertaken regularly and generally be aerobic although beneficial effects have been found following anaerobic participation (Weinberg & Gould, 1995). Regular exercise is defined as exercise which is performed at least three times a week. This is also the recommendation set by the New Zealand Heart Foundation to maintain good physical health and prevent heart disease.

Whilst the specific mechanisms explaining the effect of exercise on emotional well-being in adults are as yet not fully clear, a corpus of empirically-based literature has shown that a relationship between the two does exist. It would appear that an integrated model, rather than a singular hypothesis may most likely explain the mediating influence of exercise on mental health. However, research is needed to assess various integrated models versus singular hypotheses.

Previous discussion has focused on research literature findings regarding the relationship between adult's exercise and sport involvement and their emotional well-being. The next section examines the psychological benefits of sport and exercise on children to consider whether the benefits that have been found with adult populations also apply to children. Both research and theory will be discussed during an examination of not only positive aspects, but also potentially negative aspects of children's sports participation.

SPORT AND CHILDREN'S EMOTIONAL WELL-BEING

In the last two decades, adults have begun to realise and put into practice the physical and mental benefits of exercising and playing sport. Literature has also looked at the beneficial effects of exercise and sport in childhood and adolescence.

Given the suggestion that this generation's children are more sedate than previous generations and psychologists are concerned about the potentially detrimental effect on children's psychological development (Hinkle, 1991), this section addresses the assumptions relating to the potential value of sport for children. Following this, actual research findings regarding the relationship of sport and children's emotional well-being will be presented. For the purposes of the present discussion, the term sport will be used when referring to children's physical activities, as children tend to "play sport" rather than exercise.

THE VALUE OF SPORT FOR CHILDREN

What is the justification for children to play sport? The research provides rationale for adults to participate in exercise programs, but is this rationale the same for children? Popular belief is that children reap physiological and psychological benefits similar to adults and, in fact, may obtain addition benefits. Simply stated, sport often plays an

important part in the physical, emotional and social development of children. As Roberts & Treasure (1992) suggest, sport is one the few areas in children's lives in which they can intensively participate in an activity that is meaningful for themselves, peers, family and the wider community. It has been suggested that playing sport can be the means for many youngsters to increase self-perceptions of competence, develop positive attitudes and an enhanced intrinsic motivation that can then prove valuable in other life pursuits (Weiss, 1995). Increased moral development and increased academic achievement have also been suggested as possible benefits related to participation in sport (Chambers, 1991). Through sport, children learn and improve their fine and gross motor capabilities and develop skills at specific activities (e.g. ball handling abilities). Sport provides a socially acceptable means to release excessive energy. This would appear to be of particular importance to individuals with hyperactivity or aggression problems. Besides these physical aspects of sport, a socialisation process also occurs during participation and interaction, therefore some specific socialisation needs of children may be met by participating in team sports in particular (LeVeau, 1984).

The sport environment provides these socialisation opportunities and places adaptive demands that are similar to those of other important life settings (Smith & Smoll, 1991). Through sport, children are brought into contact with the social order and underlying values of society and are provided with a criteria of rules within which to act and develop appropriate social skills (Roberts & Treasure, 1992) Organised sport is believed to influence the development of important behaviours such as cooperation, unselfishness, beneficial attitudes toward achievement, stress management, perseverance, appropriate risk-taking and the ability to tolerate frustration and delayed gratification (Smith & Smoll, 1991). Through mixing and playing with others, children can build cooperative relationships, the need to belong (affiliation) can also be met (Estrada, Geltand, & Hartmann, 1988). Similarly, children gain key cooperation skills as they learn to work together and perform specific roles in the team. This need to be accepted and successful in one's peer group can be very strong especially as children get older. One way a child can gain acceptance and a status among peers is to be good at activities valued by other

children. Sport provides an opportunity outside the classroom to do this, since having athletic ability is often considered by other children to be a strong social asset (Brustad, 1992).

Self-esteem has been identified as the construct with the greatest potential to reflect children's psychological gains from regular exercise (Sonstroem & Morgan, 1989). Self-esteem is regarded as the evaluative component of self-concept where self-concept is defined as "how people perceive themselves and how they assess their behaviour" (Porat, Lufi & Tenenbaum, 1989). Individuals with positive self-concept have a developed sense of confidence, independence and self-belief. Sport participation as a form of exercise can be a potential means of children building their self-concept (Sonstroem & Morgan, 1989). However, participation alone may not itself be enough. Rather, sporting ability may be a key additional factor. The question is then raised:: Does a child have to be 'good' at sport to capture the psychological benefits of participating or is there some benefit in a child simply playing and being involved in sport? Another hypothesis exists that it may not matter if a child's actual ability at sport is poorly or well-developed, instead the important factor is whether they perceive themselves to have ability at sport (Harter, 1978).

Sport not only has many hypothesised benefits for normal populations of children but also for children with special needs. With mainstreaming and equal education very much a part of New Zealand schools now, physical education is in no way different. Sport is being used with the goal of effecting physical, social and emotional gains for these children. The recommendation to New Zealand educators currently is that children with special needs should participate with other children on a regular team without modification of the game if at all possible. If necessary, however, rules, equipment and facilities of sports can be modified so that achieving success is within the capabilities of all team members. As ability increases, such modifications should be reduced to provide an on-going challenge (LeVeau, 1984). Kiwisport has been developed as one means to achieving these goals by providing the opportunity for students with special needs to (a) improve motor skills and

general physical functioning, (b) learn team and social skills outside of the classroom and, probably most importantly (c) gain a sense of fulfilment and belonging (Micheli, 1984). As this section has illustrated, there are many suggestions regarding the potential benefits of sport for children. Yet do these ideas have an empirical basis? In order to investigate this promise, research looking at the psychological benefits of children's sport participation needs to be examined.

RESEARCH FINDINGS REGARDING THE RELATIONSHIP BETWEEN SPORT AND CHILDREN'S EMOTIONAL WELL-BEING

The following section examines such research including findings concerning the relationship between sport and children's reduced emotional and behavioural problems and increased self-concept.

RESEARCH FINDINGS RESEARCH REGARDING SPORT AND CHILDREN'S BEHAVIOUR

Psychological problems such as depression, anxiety and stress are not restricted to the domain of adults (Cantwell, 1982). Children are similarly at risk for such problems. Therefore, some beneficial effects of exercise on these adult disorders may likewise apply to children (Blechman, McEnroe, Carella & Audette, 1986). Some research has examined the links between the sports children play and reduced emotional and behavioural problems.

The idea that children and youth who participate in sport have fewer behaviour problems has been supported by a few empirical studies. For example, in a large American study, Jeziorski (1994) found that participants in sport earned better grades, behaved better in the classroom, had fewer behaviour problems outside the classroom, dropped out less frequently and attended school on a more regular basis with fewer unexcused absences compared to non-participants, Furthermore, Jeziorski found non-participants were more

likely to drop out of school, more likely to use drugs, more likely to become teen parents, more likely to smoke cigarettes and more likely to have been arrested than sport participants. Segrave & Hastad (1982) also found a negative relationship between sport and delinquency in both early adolescents and college students. Increased sporting activity was associated with lower levels of delinquency. Other studies have reported similar findings and support the suggestion that sport and exercise are associated with reduced problem behaviours (Brown & Siegel, 1988).

The most recent evidence which supports a positive association between sports participation and emotional well-being is a British cohort study which assessed this association with over 4000 adolescents aged 16 years (Steptoe & Butler, 1996). Emotional well-being was assessed by the General Health Questionnaire (GHQ) and the Malaise Inventory. Information was obtained for team and individual sports and vigorous recreational activities. Findings showed that sport and vigorous recreational activity was positively associated with emotional well-being independently of sex, social class, or health status. By contrast, participation in non-vigorous activities (such as snooker) was positively associated with psychological and somatic symptoms.

The previous studies notwithstanding, data on children's sports participation and mental health are sparse. Very few studies have looked at the relationship between sport and specific emotional or behavioural problems such as anxiety, depression, and attention deficiencies. More research is needed in this area.

RESEARCH FINDINGS REGARDING SPORT AND CHILDREN'S SELF-CONCEPT

The most current hypothesis regarding the relationship between sports participation and self-concept is that a positive relationship exists between ability in physical activity and increased self-concept (Harter & Jackson, 1993). McDonald & Howe (1989) suggest that although 'treatments' in the form of sports programs have not always demonstrated positive outcomes, the most positive impact on self-concept have been following wilderness or

adventure programs which involve challenge and initiative activities. These programs tend to show the greatest rise in self-concept scores compared to other sports programs. New Zealand's own "Outward Bound" challenge course is founded upon these very assumptions (Marsh, Richards & Barnes, 1986).

Generally, findings have supported the hypothesis that a positive relationship exists between sport participation and self-concept, but it is an area not without its problems. One of the potential problems in this type of research concerns definition and measurement of self-concept. Typically, in the past, studies in this area have used a unitary concept of self-concept, where a person's self worth was measured as a single score. For instance, a study by Salokum (1994) examined the relationship between improvement in total self-concept and increases in sports skills after athletic training. Results showed the following: Trained participants showed higher self-concept scores and a positive relationship was found between gains in sport skill and increases in self-concept scores. However, the study used the Tennessee Self-Concept Scale (Fitts, 1964), a unitary measure of self-concept.

Current research suggests a multidimensional approach to self-concept provides a much more accurate picture of a child's self-worth because it differentiates between different areas in children's lives (Biddle, 1993., Sontroem & Morgan, 1989). The idea of a multidimensional view of self-concept is particularly important for studying sport because as Zaharopoulos & Hodge(1991) suggest sports participation is more likely to influence particular areas of self-concept such as perceived physical or sporting competence rather than global self-worth.

Anshel, Muller & Owens (1986) examined the effects of a sports camp experience on the multidimensional self-concept of 15 randomly selected boys. Camp counsellors were trained to use strategies in the sports program which were aimed at campers experiencing persistent success during a range of sports skills learning and performance. For example, positive feedback on performance and improvement, elimination of "winners" and "losers" and avoidance of comparative judgements were all used. Results showed the aspects of

self-concept which improved after the camp experience were those related to sport (e.g. sports-ability self- knowledge and sports-ability self-esteem). Global self- worth did not improve. The authors suggest these results indicate self-concept is situation-specific, such that sport is likely to only be related to aspects of self-concept directly related to sport.

Few studies have looked at the mediating effects of age, gender and socio-economic status on changes in self-concept following sport participation. Salokum (1994), found no gender differences in relation to changes in global self-concepts. Socio-economic status has been hypothesised to mediate the effect of sport on self-concept (Trowbridge, 1972). However, no specific sport -related research has addressed this issue on the effects of age.

META-ANALYTIC FINDINGS

Gruber (1986) conducted a meta-analysis of 27 studies, all of which examined the effects of children's physical activity on self-esteem. The analysis yielded 43 separate effect sizes and an overall average effect size of 0.41. This means that those participants in studies experiencing a physical activity intervention displayed self-esteem scores nearly one half of a standard deviation (0.41) higher than participants in control groups. Thus, physical activities were shown to have a positive influence on self-esteem in children. The greatest effects were found for children with disabilities compared to children without disabilities: that is, children with disabilities experienced greater benefits. Furthermore, participation in an array of sporting activities was shown to have a beneficial influence on self-esteem. However, fitness-based activities (e.g. running) showed the most beneficial impact compared with creative, skill, or sports based-activities. Another notable feature of the study was the suggestive finding that estimation of physical ability may have some moderating influence on the link between actual physical activity and self-esteem. Based on this initial finding, Gruber pointed to the importance of measuring individual self-perceptions of competence, ability and fitness in future studies.

PARTICIPATION MOTIVATION

Thus far, many potential benefits of sport have been suggested for children, yet these benefits may not be the reasons children themselves give for playing sport. The next section examines possible reasons children have for participating in sport. Research is also presented that looks at specific issues related to participation motivation.

In the past, research examining participation motivation of children in sport has tended to focus on older adolescents and adults, with little known about younger children's motivations. Whilst some of the motivations experienced by older people may apply to children, some may not. It is recognised that by identifying children's reasons for participating, valuable information can be gained about the opportunities and outcomes that children seek when they engage in sport (Passer, 1982).

Research literature findings indicate there are a variety of reasons given by children for participating in sport. Recently, a list of reasons children give for participation have begun to emerge from the literature. The following are common reasons given by children (Carmichael, 1990; Cox, 1994; Weiss, 1995; Gould, Feltz & Weiss, 1985; Hillary Commission for Sport and Recreation, 1990; Weinberg & Gould, 1995)

- to have fun
- to get fitter
- to improve skills
- to be with friends and make new friends
- to be successful
- to find excitement
- provides an energy release
- to gain recognition
- to be with family
- to compete against others

- to do something they are good at
- for stay healthy
- satisfaction of contributing to a team

Stern, Bradley, Prince & Stroh (1990) examined participation motivations in 6- to -10 year old children in a recreational program. Results showed "learn to do my best," "learn and improve skills," "have a coach to look up to," and "get healthier and stronger" were most highly rated whereas "win games" and "become popular" were rated least important.

The reasons for participation can be grouped into six main categories. These include reasons aimed at the following goals: competence (learning and improving skills); affiliation (being with and making friends); success and status (achieving and being resected); health and fitness (getting and staying in shape); competition (excitement and achievement); and fun (Weiss, 1995; Passer, 1982). Research has shown that most of the reasons children have for participating in sport are often intrinsic in nature with winning not necessarily being the predominant nor the universally common motive for playing. In fact, when children are asked to give reasons for feeling successful at sport, they will often give many other reasons besides winning. For instance, in one such study (Whitehead, 1993) children gave the following reasons: "feeling pride in performance", "surpassing own limits", "improving", "being needed by others", "achieving something independently", and "competing fairly" in addition to reasons related to superior ability or winning. This research suggests that some children may be "unhappy winners" if they didn't think they played well, or "happy losers" if they know they improved some skill.

Across all ages and genders, "having fun" appears to be an important motivational factor. What do children consider makes sport fun? Wankel & Sefton (1989) examined predictors of self- reported "fun" ratings. Post-game positive affect, how well one played, and feeling challenged were consistently the best predictors with game outcome (winning versus losing) slightly less important. The authors concluded youth's participation in sports is

based on an achievement context in which fun depends largely on a perception that the individual has performed skilfully and demonstrated some ability.

Gender also appears to play a mediating role in participation motivations. Gould, Feltz & Weiss (1985) found boys generally value achievement and status more and girls generally value fun and friendship more. Meeks & Mauldin (1990) found that by adolescence boys had significantly more encouragement than girls to participate and that boys preferred active or team sports whilst girls preferred individual or social activities. Finally, boys were more interested both in active participation and passive spectating than girls. Perhaps such findings reflect the socialisation process, wherein females may be more encouraged by society to be less competitive and physical than males.

Whilst sport may be of potential value to many children as reflected in much of the research covered in this section, not all aspects of sport may be positive for children. Other research and theory has addressed potentially detrimental aspects of sport participation and is now examined.

THE NEGATIVE ASPECTS OF SPORT FOR CHILDREN

While playing sport for some children may have benefits, some children may suffer ill effects from participating. This section focuses on that potential by first reviewing theoretical speculation followed by available research literature.

The critics of children's sports programs tend to direct their concern towards highly competitive sport (Passer, 1986; Carmichael, 1990). The term competition is a term which children quickly learn in their first few years at school. Whilst participating in school or club sports may provide psychological benefits, more competitive sport has potentially more risks according to the critics. The reasons for this are that competitive sport can often place excessive physical and psychological demands on athletes, there is a primary emphasis on winning, and often children are competing to satisfy the needs and goals of

parents and coaches- such that children are playing an 'adults game in an adult oriented environment" (Carmichael, 1990). In such cases where exercise and competition are being undertaken in excess, children may be at risk of endangering their emotional and physical development.

STRESS

The demands of organised competitive sport focuses on the demonstration, comparison and evaluation of competence (Passer, 1992). Not being able to demonstrate competence may be a very anxiety-provoking situation for some children. This may apply to less competent sports people and also to more competitive athletes who feel under pressure to perform. Stress from sport may become more of a problem as children get older and the use of social comparison increases. Similarly, research has shown that individual sports which maximise the social comparison process appears to elicit higher levels of pre-event stress than team sports (Carmichael, 1990).

In addition, those who lose in a competitive sport have been found to show an increase in stress levels while most winners experience a decrease in stress regardless of initial self-esteem level, anxiety level, or performance expectancies. Notably, the only individual factor that had a mediating impact on this outcome was the amount of fun experienced during the game: if children reported sport to be more fun, they were less affected after losing (Carmichael, 1990). If sport is more fun, it follows that less stress may be involved. This provides some concrete evidence that the winning/losing side of children's sport may be over-emphasised particularly in terms of the social and emotional development of children who are less physically able.

PEER RELATIONS

For children with less developed physical skills, life on the sporting ground is thought to be related to a number of social problems. For instance, during informal activities these

children may be frequently the last to be chosen for a team by peers, they may be assigned minor roles, and they may often be prevented from playing at all. In the latter cases, these children may then lose opportunities for interacting with peers and forming peer relationships, lose the chance to increase their physical skills, and suffer detrimental effects to their self-esteem. Research has indicated that while some children (usually those with higher self-perceptions of competence) are more resilient to this rejection, others can become unhappy, and either withdraw and play alone or forcibly "butt in" to games (Roberts & Treasure, 1992). It appears then that children with above average competence at physical activities may be more likely to have increased status, social success and higher self-esteem compared to youngsters with less competence. These less competent youngsters may experience increased rather than reduced problems.

Poor sports performance appears to be related to poor self-confidence and reduced levels of popularity and respect. Armstrong & Drabman (1994) outlined an adjunctive treatment program for boys described by their teachers as unpopular or actively rejected by classmates. A common characteristic of such children was that they were not successful in sporting events with their peers. Typically, these boys were the last ones to be picked for team events. When they did participate they were relegated to positions reserved for unskilled players. These children also reported low levels of self-efficacy in physical and athletic domains.

Providing these initially unskilled children with skills valued by their peers may afford the child increased opportunities to take part in activities. The research is suggestive that improving sports performance may relate to increased self-confidence and acceptance from peers. For example, in the Armstrong & Drabman (1994) study, the boys were taught relevant skills by high school or college sports tutors. Following this, teachers or coaches ensured that each of the boys was placed in an important team position the next time the game was played. Children, teachers, and parents all reported positive results from this type of sports tutoring, with treated children being described as more self-confident, happier and less disruptive in class.

BEHAVIOUR

In contrast to earlier findings, some research has found sport to be related to increased behaviour problems. For example, Segrave & Hastad (1982) in their study of sports activity and delinquency discussed earlier, suggest that although overall the study found a negative relationship between sports participation and delinquency, some detrimental associations were also found. Type of sport was of particular relevance with some types of sports being positively related to delinquency. For example, students who played more "highly publicised, physically aggressive team sports" were involved in more seriously antisocial delinquent acts than those who participated in less publicised and aggressive sports.

BURNOUT AND WHY CHILDREN DROP OUT OF SPORT?

"Burn-out" is a term which refers to a state of emotional exhaustion which results from pressures on the athlete which have built up over an extended period of time (Martin, 1995). Children who are competing at an elite level of competition are usually subjected to rigorous training schedules. As a consequence, some athletes may suffer loss of energy and drive. This is particularly likely if an athlete is not achieving the goals or expectations that may have been expected of them, such that they see little reward for their effort (Weinberg & Gould, 1995). Further, at this level of competition, the emphasis for these children is placed on outcome, winning is generally more reinforced than effort, both socially and tangibly.

Related to burnout is the issue of participation motivation. Earlier, the reasons children give for participating were considered. The remaining part of this section examines why some children do not want to participate in sport.

In the U.S., the average age for children dropping out of organised sport is 12 years (Cox, 1994). In New Zealand, less information is currently available on such statistics, but one might expect a roughly similar figure. Why does this sudden drop off in participation numbers occur? As children get older, sport can become more competitive with an increased emphasis on winning, and fun perhaps becoming less of a priority. As reported earlier, fun has been found to be a major reason for wanting to participate. Some other potential reasons may have to do with various conflicts of interest youngsters encounter as they reach adolescence (Burton & Martens, 1986). It is speculated that children leave sports for reasons such as: participation becomes more competitive, academic demands increase, parents stop signing then up for lessons and camps, and children's growing interest in other activities (e.g. peer-related, computer games, television) (Murray, 1996). Drop-out may also be linked to issues relating to perceptions of decreased competence and ability, dissatisfaction with the environment or is no longer enjoyable (Weiss, 1995). Issues specifically related to perceptions of competence will be explored in a later section.

Frequently, children's motivation for sport may come from an external sources such as parents and coaches. Sometimes, important people involved with the child's sport may encourage participation by children for reasons which may actually turn the child away from sport. For instance, parents or coaches may place too much emphasis on the notion of winning. Success from some adult's viewpoint only occurs if a win results. Such extrinsic motivation may put pressure on the child to perform, taking away the enjoyment of participating. Extrinsic rewards such as prizes and trophies may in the long term cause intrinsic motivation to decline for less successful children that then result in eventual withdrawal from sport (Carmichael, 1991).

RESEARCH REGARDING CHILDREN DROPPING OUT OF SPORT

The following provides a summary of reasons given by children for withdrawing from sport (Whitehead, 1993; Cox, 1993; Weinberg & Gould, 1995).

- No longer fun
- having other things to do
- boredom
- lack of success
- too much pressure
- loss of interest
- friends leaving
- expense
- injury
- problems with facilities/support
- lack of playing time

In a study of why children dropped out of wrestling (Burton & Marten, 1986), results showed that those who continued participating demonstrated significantly higher perceived ability, had better won-loss records , had more adaptive attribution's with regards to learning based on failure, had more positive expectancies, and valued success more than drop outs. It follows then that children who perceive themselves to be less able at sport or who feel continued participation will threaten their perceived ability may be more likely to quit. Likewise, children who consistently do not succeed may also develop negative feelings towards themselves and related competencies. In fact, lack of success is a common reason given by children for no longer participating. For instance, in a study examining factors affecting student's participation in sports at school, students who had never played organised sport were found to have low achievement orientation or a fear of failure. A large proportion of these children wanted to play but never bothered to try out because they thought they were not good enough (Chambers, 1991).

Thus far, discussion has examined the reasons children provide for participating and dropping out of sport. These reasons may only represent a part of the big picture of children's involvement in sport. Other underlying factors may also be at work. Several theories provide additional explanation as to why sport may affect children's emotional well-being and participation motivation. The three underlying theoretical motives that have guided the current research include: (a) achievement motivation orientations (b) self efficacy theory and (c) perceived competence theory.

THEORY GUIDING THE CURRENT RESEARCH

This section addresses theories that have guided the current research and include an overview of the following: achievement motivation, self-efficacy, and perceived competence approaches.

ACHIEVEMENT MOTIVATION ORIENTATIONS

Conceptual attempts to understand participation in sport have come from motivation-related theoretical approaches. Achievement motivation theorists such as Nicholls (1978, 1984), Ames (1987, 1992), or Dweck (1986) suggest that for achievement behaviour to be understood the child's perceptions of ability, success, failure, and his or her achievement goal orientation must be identified. In the following section, these areas are discussed with a focus on the relationship between achievement motivation and sport participation.

CHILDREN'S ACHIEVEMENT GOALS

Children's achievement goals have been described in different ways by different theorists. Basically, there are two distinct orientations. The first is described as either intrinsic task, learning-oriented or mastery-oriented, depending on the theorist (Nicholls, 1984, 1992;

Dweck, 1986; Ames, 1987, 1992). For the purposes of this discussion, the term mastery will be generally used. A child with a mastery oriented perspective is thought to be concerned with actually doing the task and understanding it, such that they master the task for the sake of it. Learning is designed to achieve an intrinsic goal. Thus, perceptions of ability are self-referenced and depend on learning or improvement at a task. Children with mastery goals, regardless of whether they perceive themselves to be high or low in ability will engage in adaptive behaviours such as choosing moderately challenging tasks. They will then focus efforts on overcoming that challenge. When such a child encounters difficulty or failure, they may seek alternative solutions as well as persist at the task (Ames, 1992; Duda, 1989; Dweck, 1986).

Alternatively, children more oriented towards extrinsic learning have been described as having an ego, ability or performance-perspective (Nicholls, 1984, 1992; Ames, 1987, 1992; Dweck, 1986). The term performance motivation will be used for this orientation in the current research. Children with performance focused goals are thought to be more concerned with demonstrating ability compared to others and avoiding looking incompetent. They base their own perceptions of ability on comparisons of their performance with others or on external feedback, such as grades given by teachers. Those who have performance goals but also have high self perceptions would be thought to choose moderately difficult tasks in order to display competence. This confident group then is more likely to succeed when they encounter difficulty, because they have the resources available to engage in effective strategies (Roberts & Treasure, 1992). In this way, they are similar to mastery-oriented children. However, in the long run, because their aim is to look good, actual learning may be sacrificed. In this way, they differ from mastery-oriented children. Dweck (1986) argues performance-oriented children are more likely to develop maladaptive behaviour if their perceptions of ability weaken, resulting in a decrease in effort and persistence on tasks. Students with performance goals who also have low perceptions of competence are thought more likely to choose easy tasks to avoid looking incompetent or very difficult tasks where their personal incapacity can not be faulted. When this group encounters difficulty, they are thought either to engage in self defeating

strategies to avoid being seen as low in ability or give up because they don't believe they can demonstrate competence (Stipek, 1993).These children are thought to be more at risk for developing learned helplessness patterns in the face of failure compared to mastery-oriented children.

Papaioannou (1995) theorised that overall the adoption of high mastery-related and low performance-related learning is the most appropriate in order to maximise motivation and achievement for children of all levels of ability.

AGE AND ACHIEVEMENT

Children's perceptions of ability have been shown to change with age. Typically, younger children are eager and confident learners in all domains including sport. Young children tend to have confidence in their ability to succeed compared to older children (Nicholls, 1978). Even if a child performs quite poorly on a task, they will still usually rate themselves highly as they appear to compare their competence only against a self-referent standard. However, as children get older, they appear to include others as referents. At this point, they may begin to become self-conscious and lose some of their confidence, becoming more anxious about performance, and increasingly using peer versus self comparison to rate their effort and ability (Stipek, 1993).

In line with this trend, preschool age children typically rate their ability very highly on tasks, often rating themselves very favourably compared to more objective indices (Stipek, 1993). As they get older, around the age of eight, children's self-perceptions appear to become more accurate - or at least more in line with external indices such as teacher ratings (Nicholls, 1978). This decline in perceived competence can be explained somewhat by changes in conceptions of competence and the criteria used to judge competence that may be functions of cognitive and affective development. Younger children appear to see effort as the key and as cardinal to success. As children progress through primary school, however, they begin judging competence by other specific standards such as success at

individual school subjects. At this stage, they are more likely to be able to differentiate between effort and ability and understand that ability may put a limit on performance despite increased efforts (Whitehead, 1993).

Younger children do not appear to use group-based comparisons (i.e., comparing their own performances with that of their peers), relying instead on their own performances and mastery as indices of their competence (Nicholls, 1978; Stipek, 1993). Older children are more skilled at interpreting their performances in relation to other's performances. Consequently, their ability judgements may be subsequently affected. Older children begin to use normative-based information to explain their self-perceptions of ability by comparing themselves to "most kids."

Younger children typically cite mastery-related reasons as evidence for their competence; however, unlike older children, they often do not accept non-mastery as evidence of incompetence. This means younger children usually believe if you did well at something it is because you "tried really hard or practiced lots" (Stipek, 1993). In contrast, older children believe competence to be highly related to ability. In fact, in many cases older children believe that given equal outcomes, high effort reflects low ability whereas younger children believe high effort equals high ability (Nicholls & Miller, 1984). At a young age then, children tend to have mastery goals. Older children appear to have an increasing focus on performance goals.

SPORT PARTICIPATION AND ACHIEVEMENT GOALS

There is some evidence to suggest that both mastery-related and performance-related achievement goals are present in the context of sport (Roberts & Treasure, 1992). Performance goals in sport have been found to relate to sport being a means to an ends (e.g. sporting awards), a focus on winning, and a belief that extrinsic benefits were important. Mastery goals were more related to cooperation, personal learning, and increased satisfaction or fun in sport (Duda, 1989).

Age-related changes in goal orientations may apply within the sporting performance domain. In sport, some older children undoubtedly use social comparisons. For example, if a child believes that most of his or her peers are able to clear one metre at high jump whilst they can only clear less than a metre, their confidence in their high-jumping ability may decrease. When children are playing predominantly for fun, it follows that they may then rate themselves mainly on a self-referent standard, having to do with how much pleasure was experienced, effort applied, and mastery achieved. As competition gets more difficult, or children get older, they may increasingly begin to use others as referents, comparing themselves to team mates and other competitors. Eventually, if they are competing at a very high level, they may look to regionally or nationally-based referents (Stipek, 1993). Evidence suggests that as some children get older, sport begins to fail to meet their various needs (Cox, 1994; Carmichael, 1990). One possible reason is that as sport becomes more competitive with an emphasis on winning and social comparison, fun perhaps becomes less of a priority or more difficult to experience. The current research was designed to address issues related to these goal orientations.

SELF-EFFICACY THEORY

The literature examining children's achievement goals and changing perceptions of ability appears to help explain some of children's motivation to participate (or not) in sport. Another theory which is linked to children's motivation and participation patterns is self-efficacy theory (Bandura, 1977). Bandura began as an achievement motivation-based theorist and began focusing on perceptions of ability, eventually coining the term 'self-efficacy'. The definitions of ability by Dweck (1986) and Nicholls (1992) are relevant to Bandura's self-efficacy theory because explicitly integrated within this theory are the notions of both perceived and actual ability. Bandura (1977) brought together these concepts in formulating the theory of self-efficacy: the perception of one's ability to perform a task successfully makes actual behavioural competence more likely. Self-efficacy refers to one's beliefs that one has the capabilities to carry out a designated

performance (Bandura, 1982). In this respect, self-efficacy can be considered a situation-specific form of self-confidence. Bandura (1986) defines self-efficacy as follows :

> " people's judgement's of their capabilities to organise and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with the judgements of what one can do with whatever skills one possess." (P.391)

Individuals who master something they perceive as difficult, often experience a positive psychological reaction that then is thought to lead to increased self-efficacy and an increased ability to cope with future problems (North, McCullagh & Tran, 1990). Self-efficacy theory is also related to goal setting. Those people high in self-efficacy are thought be more likely to set challenging goals and persevere especially under adverse conditions (Weinberg & Gould, 1995; Cox, 1994).

Self-efficacy is related to beliefs that one possesses adequate coping responses particularly in situations in which initial failure is most likely. A strong belief in one's efficacy is thought to help an individual cope effectively with mistakes and errors and continue striving toward success or mastery (Weinberg & Gould, 1995).

SOURCES OF SELF-EFFICACY

Bandura suggests there are certain factors which influence or shape one's self-efficacy. There are four principle sources of information that influence self-efficacy. These are: past performance accomplishments, vicarious experience (modeling), verbal persuasion and emotional arousal.

Performance accomplishments infers that if one's experiences are generally successful, self-efficacy will be robust across a variety of domains. This is thought to be the most influential information source (McAuley, 1985). Vicarious experience is where one sees

others coping effectively while carrying out a task, and from this experience then gain increased confidence to eventually successfully perform that task. From observing others, one forms an idea of how behaviours are performed and, on later occasions, this encoded information can then serve as a guide for initiating and maintaining behaviour (Estrada, Geltand & Hartmann, 1988). Modeling has consistently been reported as positively influencing efficacy expectations (McAuley, 1985). Verbal persuasion refers to others employing persuasive techniques to influence and encourage certain behaviour. Finally, Emotional arousal suggests that if one interprets arousal as a positive facilitative experience, then self-efficacy may be enhanced as a result.

SELF-EFFICACY AND SPORT

The idea of self-efficacy has been recognised as an important component of performance in a wide range of task domains including sport (Kavanagh & Hausfeld, 1986). Perceived efficacy can affect how individuals behave and react to achievement situations such as those involving sporting activities. When completing or succeeding at a task, increased judgements of self-efficacy are also associated with positive emotional experiences. These positive feelings associated with an increased sense of efficacy then promote future mastery attempts (Stipek, 1993). Consider a first time rugby player, if he or she makes one big tackle and/or recovers a bad pass (i.e., experiences success), he or she may then be more likely is more likely to wish to play the following week as a result of an increased sense of efficacy. Therefore, an adequate coping or mastery-oriented response in the sporting domain would be thought to increase self-efficacy and increase the probability that one will continue to participate (Biddle, 1992). On the other hand, the reverse effect may also occur. If an individual does not demonstrate an adequate coping or mastery response, a decrease in self-efficacy and participation may then become more likely. For example, consider again the first time rugby player: if he or she repeatedly misses tackles and drops passes during the first game, he or she then might be more reluctant to play the following week as a result of reduced self-efficacy.

People often tend towards avoiding situations or tasks in which they believe they are not capable of achieving and instead committing to ones they feel they can manage more effectively. Exercise may be perceived as difficult by some people who are not regular exercisers. Becoming persuaded to become a more regular exerciser may lead to the mastering of a task perceived as difficult. This initial success might then lead to enhanced positive affect, increased self-efficacy, and increased chances of continued participation (North, McCullagh & Tran, 1990).

Self-efficacy theory may help explain some differences in sporting performances. For instance, it may provide a partial explanation as to why some athletes excel in sport whilst others who are equally skilled are able only to give mediocre performances. Similarly, it may answer the question of why a person may excel sometimes and yet not on other occasions. Individuals lacking in self-efficacy may tend to focus on their shortcoming rather than on their strengths, distracting them from the task at hand, whereas people with high self-efficacy may have the following attributes: A willingness to approach and persist on tasks; a focus on problem-solving strategies; reduced fear and anxiety and positive emotional experiences (Stipek, 1993). These hypothesised attributes parallel those of individuals who have mastery-oriented goals reviewed earlier.

It also follows that those individuals who have higher self-efficacy and can sustain their participation are likely to have a lower incidence of dropout from sports programs, whilst those individuals with lower self-efficacy may be at increased risk for drop out (Biddle, 1992).

If efficacy expectations are related to increased or continued sports participation, the sources for these expectations then need to be articulated and studied. Figure 1 shows these sources of self-efficacy influence subsequent efficacy expectations and eventual athletic performance. In support of Bandura's ideas on sources of self-efficacy, Orlick (1974) suggests the factors of role models, expectancies, and reinforcement influence attraction to or avoidance of sports. A child's desire to become involved in a sport may originate from

an identification with parents or significant others who either plays a sport or encourages the child's participation. Second regarding expectations, a child interpreting the sporting situation as having potentially positive emotional consequences for him or her is thought to be more likely to participate. Usually positive expectations are thought to involve ideas of fun, approval, praise, attention and so forth. Finally, playing sport has the potential to be either positive or negative depending on the reinforcement contingencies which operate in the various sporting environments. Children who are reinforced in some way for participating are more likely to view sport as positive and continue participation. For example, a cricket coach may say to a young player " You're a really valuable player of the team, keep up the good work." A mastery-oriented environment would encourage similar effort-based attributions designed to increase self-efficacy and continued participation.

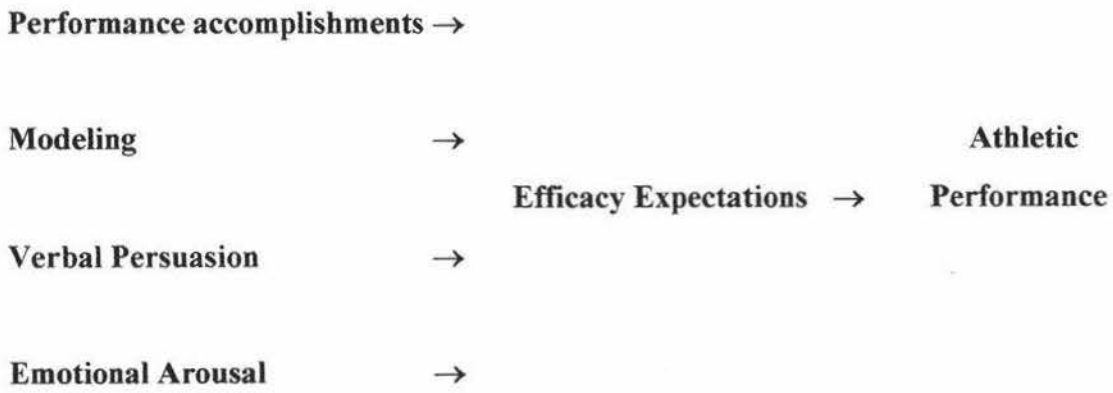

Figure 1: Sources of Information that Influence Sporting Efficacy and Performance.

Research suggests that adults (e.g. coaches) interactions with the children are primary determinants of the quality of the sporting experience (Stern, Prince, Bradley & Stroh, 1989). Children's early sporting experiences may well be important for future attitudes, perceived competence and continued participation. Thus, how adults behave is thought to be quite important, particularly during children's initial sporting attempts. As children get older, and with continued encouragement and mastery or success, they may then begin to develop more internalised sources and expectations of efficacy that are related to continued sport participation.

The next section considers the specific role of perceived competence, by examining Harter's model of perceived competence.

HARTER'S MODEL OF PERCEIVED COMPETENCE

Perception of one's own ability is an important part of achievement motivation and self-efficacy theory (Willimczik & Rethorst, 1995; Bandura, 1977). Linking these concepts, the construct of perceived competence is thought to be particularly relevant to studying aspects of children's sports participation motivation (Roberts and Treasure, 1992).

Harter's competence motivation theory (1978, 1984) links with achievement motivation and self-efficacy theory within the context of success and failure experiences. The basic idea is that if attempts at mastering a task are rewarding, the subsequent positive emotions which are aroused will then encourage future attempts. The notion of the positive relationship between effort, ability and eventual success is then fostered. This is similar to Bandura's basic premise that "success breeds success" (Kremer & Scully, 1994).

According to Harter, children are motivated to become competent in their social environment. Children first engage in attempts at mastery of a domain or behaviour. When these initial attempts are successful in the child's eyes, perceptions of competence are thought to increase. This in turn may then result in enhanced positive affect and continued efforts and increased motivation. With increased success, the child continues to be motivated toward seeking challenges that will result in increasing displays of competence (Weiss, 1995). An important implication of this model is that the individual's perceived ability does not have to correspond with actual ability. Success judged by the individual is the crucial element. Thus, if an individual believed they did well despite what others say, then they are more likely to have higher levels of perceived competence (Willimczik & Rethorst, 1995). However, as reviewed earlier, as children get older, their perceptions of their own sporting-related (or other) competence may increasingly be based on social

comparisons. At this point, perceptions of other's judgements may then enhance or damage perceptions of competence (Carmichael, 1990).

The concepts of self-concept and self-esteem used in past theory and research have presented problems because these constructs were vaguely defined with no clear operational definitions. Previous tests such as the Piers-Harris Self-Concept Scale (Piers & Harris, 1964) and the Coopersmith Self Esteem Inventory (Coopersmith, 1967), were designed to measure these constructs. These measures tap a diverse range of content; however, only a total score is used as an indicator of global self regard. The implicit assumption here is that inherent in this process children do not make distinctions about their differing competencies or worth (Kline, 1993; Harter, 1982).

Harter's model does not define self-concept or perceived competence as a unitary construct but instead defines it as having specific applicability in the following domains: scholastic, athletic, physical, social and behavioural abilities. The model does also address the more general domain of global self-worth (Harter, 1985). Since it may be quite likely that children will show variation in perceived competencies in these different domains, Harter's model provides a potentially distinct advantage over more global conceptions of self-concept or perceived competence.

Attributions of causality are influenced by one's perception of ability. People with high perceived ability are hypothesised to be more likely to attribute success to internal causes, whereas individuals with low perceived ability may instead attribute success to external causes. As previously discussed, there are extrinsic and intrinsic reasons for participating in particular tasks. Children with a higher internal locus may be more likely to use internally-based criteria, believing events or outcomes are contingent on one's own behavioural competencies (e.g. ability). Children with an external locus tend to believe events are caused by factors beyond the individual's control and based on factors such as luck, fate, or powerful others. These children tend to depend on an outcome to evaluate performance (Nicholls, 1984). Extrinsic reasons are related to motivation from external forces, where

the aim is to achieve some goal which is unrelated to the task at hand per se. For example, a child may want to win a sports championship because he or she has been promised a prize or reward. In contrast, more intrinsically-based reasons are those which come from within a person, where the aim is to complete a task for the enjoyment or to develop competence. For example, a child may wish to play touch rugby because it is sport in which they have fun and improve their ball skills. Ultimately, theory states that intrinsic, mastery-based reasons provide longer lasting participant motivation. Stipek, Roberts & Sanborn (1984) found when a reward was not offered children had significantly higher expectations for future performance. From these examples, one can recognise that children's motivation for playing may be related to their goal orientation and initial self-efficacy which, in turn, relates to perceptions of specific and generalised competencies which then relates to future participation-related motivation (Roberts & Treasure, 1992).

PERCEIVED COMPETENCE IN SPORT

Sport is an important domain of many children's lives. After all, sport frequently involves playing games -- an extension of playing. For children, and boys in particular, being competent and skilled at sport appears to be important (Hopper, Guthine & Kelly, 1991). Harter's model suggests the more experience a child has in a given activity , the more opportunity a child has to develop a sense of competence in that domain. For example, in a study of 217 8-13 year olds, Feltz & Brown (1984) found that a relationship existed between years of playing experience and perceived competence in soccer.

As discussed, Harter's competence model is related to achievement motivation and to participation motivation. The theory suggests that individuals who perceive themselves to be highly competent at a particular skill will persist longer at the skill and maintain continued interest in mastering the skill whereas individuals who perceive themselves as having lower levels of competence at a particular skill will likely withdraw from the activity after initial failures. A study by Klint & Weiss (1987) supports this suggestion. The study showed child gymnasts who perceived themselves as physically competent were

more motivated to compete by performance-related aspects whereas gymnasts who perceived themselves as socially competent were more motivated by the affiliation side of competing. The likely consequence of such perceptions is that if these motives are not met by a particular activity, then children may find other activities that do meet their respective needs.

This paper has thus far examined the theoretical frameworks related to perceived competence, achievement motivation, and self-efficacy and has examined overseas research. Having considered this overseas-based theory and research, attention is now turned to the New Zealand-based research literature that serves as a backdrop to a description of the current study.

NEW ZEALAND RESEARCH EXAMINING CHILDREN'S SPORTS PARTICIPATION

The following provides a summary of four New Zealand studies which have examined aspects of children's sports participation. Two studies involved research conducted by the Hillary Commission for Recreation and Sport, one investigated the programme "Kiwisport" and the other examined sport participation trends for New Zealand children. The remaining two studies examined the effects of sport on adolescent self-concept and delinquency,

The Hillary Commission for Recreation and Sport provides a great deal of the research available on New Zealander's sporting activities as well as being responsible for launching campaigns to promote for New Zealand children. One example is Kiwisport, launched by the Hillary Commission for Recreation and Sport in 1988. The Kiwisport programme was developed "to encourage participation by young New Zealanders in physical activity." (Hillary Commission for Recreation and Sport, 1992 p.3). The programme was targeted at 7-12 year olds in 2500 primary schools. The idea of Kiwisport is to offer children simple

versions of most major sports for which the rules and equipment are modified to ensure mastery. This is also designed to ensure maximum participation for all children, since the sports are targeted at their level. In a follow-up quantitative baseline study principals and teachers endorsed the following points, that as a result of playing Kiwisport children:

	frequency of endorsement
• enjoy playing sports more	74%
• boys and girls play equally together	74%
• develop teamwork skills	69%
• are active	60%
• have increased confidence	59%
• develop social skills	56%
• are more healthy	49%
• are well coordinated	40%
• are fit and strong	36%
• find it easier to concentrate in class	30%
• prefer Kiwisport to adult sport	30%

A further finding was that schools with a Maori population were more likely to agree that children have increased confidence, more developed social skills, were more healthy and better coordinated as a result of Kiwisport. Unfortunately, children were not polled nor was any controlled research undertaken (e.g. involving random assignment to appropriate comparison groups).

In a different study that examined New Zealanders leisure and recreation activities (Hillary Commission for Recreation and Sport, 1990), the following results were reported: Most sports, particularly traditional winter sports and non-structured sports such as skateboarding, peaked in participation rates between the ages of 11-13 years. Gender differences were evident in the amount and type of sports in which children participated. Up to 10 years of age, participation rates of boys and girls were similar, while from 11

years on boys showed a slight increase and girls a decrease. Dancing, horseriding and netball were dominated by girls whilst cricket, rugby, skateboarding and soccer were dominated by boys. Tennis was the sport which was found to have greatest participation rates across genders.

Zaharopoulos & Hodge(1991) examined sports participation on 113 Dunedin secondary school students. The study has an advantage over other sport-self-concept studies in that a multidimensional model of self-concept was used. Differences between athlete's and non-athlete's global self-concept and physical ability self-concept were investigated. To qualify as a sports participant (i.e., athlete), a student had to be currently representing a school or club in interschool/club competition. Students were also asked to supply information about their sporting involvement. The Self Description Questionnaire III (Marsh & O'Neill, 1984)--a multidimensional self-concept measure as well as a global self esteem scale, was used. Results indicated athletes differed from non-athletes in physical ability self-concept but not in global self-concept. Females did not differ from males in physical self-concept. Sport, at least at college level appeared to more closely related to physical ability-related self-concept.

The most recent New Zealand research in this area is also relevant to the current study. This study found evidence to refute the idea that sports participation is associated with positive emotional gains. Beggs, Langley, Moffitt & Marshall (1996) conducted a study which was part of the longitudinal Dunedin Multidisciplinary Health and Development Study (DMHDS). The aim of the study was to examine the hypothesis that involvement in sporting activity would later deter delinquent behaviour in later adolescence. The adolescents were interviewed at ages 15 years and again at 18 years during which times assessments of sports involvement and delinquency were undertaken. Results revealed that higher levels of involvement in sporting activity, with the notable exception of team sport, were in fact associated with a subsequent and significant increase, rather than decrease, in delinquent behaviours. However, the best predictor of delinquent behaviour at age 18 years was found to be delinquency at age 15 years, irrespective of involvement in sporting

activity. The authors suggest that the reason team sports did not show a positive relationship with delinquency may be because conventional team sports do not appeal to delinquent youth. These sports generally contain rules, regulations, and authority figures, and typically, it is these types of norms which the delinquent violates in broader society (Begg et al., 1996).

These findings give some indication of sports participation trends of New Zealand children; however, it is clear research in this area is in its infancy. These studies provided some guidelines and comparisons for the present study. The current study addressed some of issues noted in this section while incorporating theoretical and overseas-based questions as well.

THE CURRENT STUDY: JUSTIFICATION & RESEARCH QUESTIONS

The main aim of the present study was to examine if a positive relationship exists between sports participation and children's emotional well-being. The major prediction or hypothesis of the present study was that children who play more sport, whether it be formal or leisure time sport would have fewer problem behaviours and feel better about themselves, as reflected in a pattern of scores on the Youth Self-Report (Achenbach, 1991) and the Self-Perception Profile for Children (Harter, 1985) compared to children who play less sport. For the purpose of the present study, the definition of emotional well-being is based on Stephens (1988) work where emotional well-being was defined as "positive mood and relatively infrequent symptoms of mental psychiatric problems such as anxiety and depression" (p41). In the present study, the definition of emotional well-being included increased self-concept as well as lower rates of problem behaviours. These areas were assessed in terms of scores on the Self-Perception Profile for Children and problem scale section of the Youth Self-Report, respectively. Both formal sport (organised sport by schools or clubs) and informal sport (leisure time sport) were examined as a limitation of

previous studies has been the exclusion of an examination of informal sport participation, typically being more focused on formal sport participation.

Although some New Zealand research is available on children's sporting activities there are still gaps in our empirically-based knowledge of children's sports participation and its effects in this country. Therefore, the first section of the study examined trends, participation rates, and participation motivation of the New Zealand sample of children. In calculating these rates, comparisons were made between boys and girls, younger and older children, ethnic groups and between participation rates of individual sports. Furthermore results can be compared with existing New Zealand and overseas-based findings. As a result of the previous discussion, the following hypotheses are made:

MAIN HYPOTHESIS

There would be a positive relationship between children's sport participation and emotional well-being. That is, children who played more sport would have fewer problem behaviours and have higher self-concept than children who played less sport.

HYPOTHESIS 1

Boys would have significantly higher rates of sports participation than girls.

HYPOTHESIS 2

Boys would play more team sports than girls, and girls would play more individual sports than boys.

Participation motivation is examined to gain an idea of the reasons young adolescent New Zealanders give for participating in sport, which can then be compared to overseas findings. Research literature reviewed earlier suggests the motivation girls have to participate in sport may be based on different reasons compared to boys. In addition, sparse research literature is available on the average age children stop participating (i.e., dropout)

in sport. Overseas data suggests 12 years is the average age to be dropping out. If this is the case for New Zealand, there is likely to be some differences between Form One and Two students. The following hypotheses were formulated:

HYPOTHESIS 3

Younger children (Form 1) would have higher rates of sports participation than older children (Form 2).

HYPOTHESIS 4.

Girls would rate reasons for participating that relate to affiliation and health more than boys such that there would be significant differences between boys and girls on the following reasons: (a) to make other people like me, (b) to be with my friends, (c) to do things with my family, (d) to get fit, (e) to stay healthy and (f) to control my weight.

The literature examining the relationship between sports participation and psychological behaviour problems have most often been conducted with adults and typically have been restricted to the areas of depression and anxiety. The present study--was conducted with a population of children--examined other problem behaviours such as withdrawn behaviour, somatic complaints, attention problems, social problems, thought problems, aggression and delinquency as well as anxiety and depression. Some speculation exists regarding the value of team versus individual sport. The assumption of much of the sports psychology research literature is that team sports are likely to be more beneficial to emotional well-being compared to individual sports. However, few studies have actually investigated whether this is the case. Therefore, the present study considered the following hypotheses:

HYPOTHESIS 5

Children's increased level of participation in sport would be associated with fewer behaviour problems. That is, there would be a negative correlation between sports participation and scores on the YSR problem scales.

HYPOTHESIS 6

There would be a greater association between (a) team sports and reduced behaviour problem scores than between (b) individual sports and reduced behaviour problem scores.

Past research examined children's sport and self-concept has frequently employed a global model of self-concept rather than using a multidimensional model. Consequently, the issue of the relationship between self-concept and sport participation needs clarification. An aim of the present study was to consider the effects of sports participation on different aspects of self-concept using Harter's perceived competence model. It has been suggested that sport may only affect certain aspects of self-concept--those which are thought to relate more to sport. In addition, the present study considers the question of whether children have to be competent at sport in order to gain any psychological benefits from playing or whether children's perceptions of their competence in sport are more influential.

HYPOTHESIS 7

Those children who have higher rates of sports participation in sport would have higher levels of Athletic Competence, Social Competence, Physical Competence and Global Self-Worth.

HYPOTHESIS 8

Children who have higher perceptions of Athletic Competence would have lower scores on the YSR problem scales compared to children who are rated as competent at sport by an independent rater (the classroom or physical education teacher). Thus, perceptions of ability would beneficially impact problem behaviours more than would objective ability. Finally, the present study considered the role of achievement motivation by examining children's goal orientations. These issues may be quite influential in children's participation in sport particularly if sport participation is found to be related to emotional well-being. The literature suggests that by the age of about 12 years children will have a differentiated view of ability and have more performance-related than mastery-related

goals. Therefore, relevant differences between Form One and Two students are expected to emerge (see Hypotheses 9 and 10). Furthermore, the literature suggests that those individuals with mastery goals are more likely to persist at tasks and activities and be happy with their own accomplishments and competence. This may then be reflected in their self-concept. The following hypotheses are proffered:

HYPOTHESIS 9

Older children (Form Two students) would report a significantly greater predominance of Performance Goals, (i.e., those emphasising ability rather than effort) compared to younger children (Form One students).

HYPOTHESIS 10

Children with higher Mastery Goals scores would have higher rates of overall sports participation and have higher self-concept scores on the SPPC subscales compared to children with Performance Goals.

CHAPTER TWO

METHOD

PARTICIPANTS

Participants in the present study were 203 New Zealand Form One and Two students. Initially, the sample consisted of 204 participants; however, one participant was later excluded due to fact that a large proportion of the questionnaire was incomplete. Schools in the region were approached to recruit a sample population. The Masterton region was chosen by the researcher because of the increased likelihood that this smaller area would be inclined to participate in such a study, particularly given that this region was well known by the researcher.

AGE AND GENDER OF TOTAL SAMPLE

The age of students in the entire sample ranged from 11 years, 1 month to 13 years, 10 months. The average age of the entire sample was 12 years, 4 months (SD = 7.23). In total, 93 boys and 109 girls participated in the study.

ETHNICITY

From the sample of 203 students the following information was given concerning ethnic origin. 152 students identified themselves as Pakeha, 17 as Maori, 6 as part Maori, part Pakeha, 7 Pacific Islander 1 as Asian and 10 identified as having "other" ethnic origins. 10 students did not report ethnicity.

SOCIO-ECONOMIC STATUS

Categorisation of socio-economic status of participants' parents was achieved using the revised Socio-Economic Indices for New Zealand (Johnson, 1983), developed by the New Zealand Council for Educational Research (1981). This is the most recent publication that is currently available (personal communication, NZCER, 1996). The scales are based on the Elley-Irving theoretical model of socio-economic status (Elley & Irving, 1976). The categories from the SES Indices for NZ were produced to relate to the International Standard Classification of Occupations--of which there are seven major categories. Although seven categories exist, SES is rated on 1-6 scale because the income and education variables of these occupations are also taken into account. This scale was obtained by combining standard scores of these variables, then ranking them hierarchically and dividing them into six classifications. Category 1 is the highest socio-economic rating. The following provides an estimate of the participants' parent's socio-economic rating.

	FATHER	MOTHER
Group 1	15	7
Group 2	27	29
Group 3	80	60
Group 4	28	33
Group 5	15	12
Group 6	3	-
Not employed	2	40
Deceased	1	-
Occupation not reported	32	22

Participants were asked to provide both parent's occupations. Each parent's occupation was classified separately, a combined rating was not given. There are two reasons for this. First, the SES Indices for New Zealand does not provide the criteria to derive a combined income rating. Second, it was difficult to ascertain in the present study the parents marital

status, an important factor influencing SES. Therefore, it would have been inaccurate to provide a combined rating if the child's parents were not living together.

DESCRIPTION OF THE SCHOOLS

Of the total number of intermediate schools, five were chosen as providing a representative sample of the general Wairarapa population as these schools included state and private schools, rural and urban schools, as well as a range socio-economic groups. School One was a rural primary school whose classes extended to Form One and Two. Fourteen students from School One participated, 9 of whom were boys and 5 of whom were girls. School Two was a private girls school, which caters for both day students and boarders. In total, 35 female students took part in the study. School Three was a private preparatory school, again with both day pupils and boarders. The intermediate classes were predominantly male with 27 boys and 2 girls participating, giving a total of 29. School Four and Five were larger public intermediate schools with 20 and 105 respectively who returned informed consent forms and actually participated in the study. School Four included 9 boys and 11 girls whilst School Five included 49 boys and 56 girls. Table One provides a summary of these demographics.

Table One: Characteristics of Participants and Schools in the Sample.

	BOYS (n=93)	GIRLS (n=109)	TOTAL (n=203)*
SCHOOL 1	9	5	14
SCHOOL 2	34	-	34
SCHOOL 3	27	2	29
SCHOOL 4	8	12	20
SCHOOL 5	49	56	105

* One subject did not record their gender.

MEASURES

Assessment was multitrait and multimethod. The self-report battery included three self-report instruments: the Youth Self-Report, the Self-Perception Profile for Children and a Sports Questionnaire. The study was primarily interested in children's self-ratings of their sports participation, behaviour and perceptions. A global teacher rating was also included to provide an independent rating of children's sporting ability.

THE CHILD BEHAVIOUR CHECKLIST: THE YOUTH SELF-REPORT

The Youth Self-Report (YRS) is a widely used assessment instrument that was designed to assess aspects related to the social-emotional development of children and youth. The YSR is " designed to obtain 11-18 year-olds' reports of their own competencies and problems in a standardised format" (Achenbach, 1991 p. 2). Derived from the parent and teacher revisions of the Child Behaviour Checklist/ 4-18 (CBLC: Achenbach, 1991b), the YSR is relatively brief consisting of 120 items with the estimated time of completion to be 15 minutes. Appendix A includes a complete version of the YSR.

The YSR consists of two major sections, the first contains scales which are designed to assess adolescents' competencies and involvement which relate to various activities, social relationships, and academic performance. The second section contains problem items consisting of 102 behavioural problems of clinical relevance which yield scores for the scales: Total Problems, Externalising Problems and Internalising Problems as well as the narrow-band syndromes of: Withdrawn Problems, Anxiety/Depression Problems, Social Problems, Somatic Complaints, Attention Problems, Thought Disorders, Delinquency Problems and Aggression (Achenbach, 1991). Respondents rate particular problem behaviours using a likert-type rating, 0 = NOT TRUE, 1 = SOMEWHAT or SOMETIMES TRUE, and 2 = VERY TRUE or OFTEN TRUE. For the purposes of the present study only the problem scales were included in the current analysis. The reasons are as follows: Children's competencies of interest to the current research were being assessed using the

Self-Perception Profile for Children (Harter, 1985). In addition, the present study was interested in sport-related activities which were assessed in more depth using the Sports Participation, Perceptions and Abilities Questionnaire for Children. The YSR was used to provide assessment of specific behaviour problems areas. Finally, time limitations were imposed by school schedules. Thus, for these reasons (other assessments used, unnecessary overlap with these measures, time restrictions), the first section of the YSR was not included for this study.

The YSR requires a reading level of at least fifth grade (Standard 4). However, the authors do state the YSR can be administered orally to those with poorer reading levels (Achenbach, 1991). This was done with four students who had expressed reading difficulties. Other participants were able to read items and ask questions if there were any difficulties (see Procedure).

The YSR has two broad-band problem behaviour categories: Internalising and Externalising. Internalising behaviours are those problems that include anxiety, depression or withdrawn behaviours, whilst externalising problems are those which relate more to acting out behaviours such as hyperactivity, aggression, and delinquency. Scoring for these two scales involves the following procedure:- the Internalising Problems score are calculated by summing the raw scores on the Internalising scales of Withdrawn Problems, Somatic Complaints and Anxiety-Depression Problems. The Externalising Problem score is calculated by summing the raw scores on the Externalising scales of Aggression and Delinquency. Both of these scores can then be converted to *T* scores. The Total Problem Score is obtained by summing all the clinical subscales.

The YSR has been shown to be a reliable and valid self-report used extensively in research and in clinical practice with children and adolescents (Gould, Bird & Jaramillo, 1993; Rey & Morris-Yates 1992; Elliot, 1992; Christenson, 1992). Achenbach (1991) provides summary of the extensive reliability and validity studies as well as norms, including separate norms for boys and girls. An overview of these areas is now provided.

RELIABILITY

Syndrome, or problem, scales were derived from principal components analyses of the correlations among items, with composition of the scales based on internal consistency among certain subsets of items. Therefore, measures of the internal consistency of these scales are redundant. Nevertheless, Cronbach's alpha coefficients are provided by Achenbach (1991) and obviously satisfactory.

Achenbach (1991) assessed test-retest reliability by asking 50 youths in a general population sample to complete the YSR twice at intervals averaging 7 days. The mean test-retest reliability on competence scales was $r = .68$ for 11-14 year olds and $r = .76$ for 15-18 year olds with total competence, $r = .76$. For problem scales, the mean retest stability coefficient's were .65 for 11-14 year olds and .83 for 15-18 year olds. On the Total Problems score, the test-retest reliability was .70 for 11-14 year olds and .91 for 15-18 year olds. Stabilities were moderate over four to seven month intervals for total problems (.56), total competence (.62), and problem scales (.49).

VALIDITY

Criterion-related validity is supported by the ability of YSR problem subscales to discriminate significantly between clinically referred and non-referred youths. Referred youths scored themselves significantly higher on 95 of the 102 problem items at $p < .01$.

The YSR possesses relatively high diagnostic reliability and has been found to correspond to DSM-III diagnoses and to psychiatric diagnoses derived from versions of the Diagnostic Interview Schedule for Children - DISC (Gould, Bird, Jaramillo, 1993; Weinstein, Noam et al, 1990). For example, Depressed scale scores were significantly correlated with dysthymia (.30) and Delinquency scale scores were significantly correlated with conduct disorder (.32), $p<.001$. Despite these correlations, it must be emphasised that the YSR was

not used as a diagnostic measure to classify specific disorders in the present study. The study was interested in children's level of problem behaviours rather than a specific clinical diagnosis.

NORMS

The norms for the YSR are particularly comprehensive. The norming procedure involved 1719 participants drawn from an American sample of 48 representative states who were 11-18 years of age and who had not received mental health services or remedial school classes within the preceding 12 months as reported by their parents. This was done to provide a normative sample of youths who were considered "healthy" in the sense that they had not received professional help for behavioural or emotional problems (Achenbach, 1991). Norms based on scores from this sample are available for separate age groups by sex.

SELF-PERCEPTION PROFILE FOR CHILDREN (HARTER, 1985)

The Self-Perception Profile for Children-SPPC (Harter, 1985) represents a revision of the Perceived Competence Scale for Children-PCSC (Harter, 1979, 1982). The original measure was developed "in order to tap children's specific judgements of their competence, as well as a global perception of their worth or esteem as a person." (Harter, 1985, p5). This measure of self-regard has been widely used by researchers in Ireland, China, America and Australia (Granleese & Joseph, 1993).

The SPPC incorporates separate measures of perceived competence in different domains as well as a global assessment of the child's self-concept (Harter & Pike, 1984). In doing this, Harter provides a potentially more enhanced and differentiated picture of self-concept than previous single-score measures. The actual questionnaire given to the child is entitled WHAT I AM LIKE (see Appendix B).

The present version of the SPPC targets children over the age of 8 years. The empirically-based rationale is that children of this age or older are better able to make discrete judgements about their competence in different domains as well as construct a view of their general self-worth whereas, children under eight years may not be able to do so consistently (Silon & Harter, 1985).

Figure 2: Domains of the Self-Perception Profile for Children.

CONTENT OF EACH DOMAIN

Each of the 6 subscales contains 6 items, giving a total of 36 items. Figure 2 show the different domains of self-perception.

1. *Scholastic Competence.*

   All of the items in this subscale are school-related, and tap the child's perception of his or her competence or ability within the area of scholastic performance.

2. *Social Acceptance.*

   The Social Acceptance subscale examines the degree to which the child is accepted by peers or feels popular.

3. *Athletic Competence.*

   Items in the Athletic Competence subscale tap physically related competencies by using content relevant to sports and outdoor games.

4. *Physical Appearance.*

   Items tap the degree to which a child is happy with the way she or he looks, likes their weight, height, body, hair, and feels that she or he is good-looking.

5. *Behavioural Conduct.*

   The Behavioural Conduct subscale taps the degree to which children like the way they behave, and the degree to which they are acting in accord with socially-based norms.

6. *Global Self-Worth.*

   This subscale taps the extent to which the child likes oneself as a person, is happy the way one is leading one's life, and is generally happy with one's self.

QUESTION FORMAT

The SPPC uses a "structured alternative," or forced choice, format (see example below). The rationale for this format is that the possibility of socially desirable responses is lessened, a major problem in previous self-concept measures (Harter, 1982). The items are counterbalanced, alternating sentences begin with a phrase that implies a high level of competence followed by a phrase indicating a low level of competence. Each subscale is also counterbalanced so that three items on the left contain the most adequate statement and three items on the right similarly have the most adequate statement. The following is an example of the type of question the children are presented with.

Really True for me	**Sort of True for me**				**Sort of True for me**	**Really True for me**
☐	☐	Some kids often forget what they learn	**BUT**	Other kids can remember things easily	☐	☐

First, the child is asked to decide what kind of kid is most like him or her and then asked whether this is only "sort of true" or "really true for him or her". This format therefore broadens the choice format and eliminates having to include false as a response--which can have negative connotations. This type of question is designed to legitimise either choice because the implication is that half the kids in the world / peer group view themselves in one way, whereas the other half view themselves in the opposite manner.

A scale of 1-4 is used to score items, where 1 indicates the lowest adequate self-judgement or competence and 4 represents the most adequate self-judgement. Scores are summed and averaged for each subscale and are then used to define a given child's profile.

MEANS AND STANDARD DEVIATIONS

The means of scores fluctuate around the 3.0, which is above the midpoint of the scale (also see results). The majority of standard deviations fall between .50-.80, indicating variation exists between individuals. There were differences associated with gender and grade level for some subscales. Boys tend to see themselves as more athletically competent than do girls. In contrast, girls see themselves as better behaved than do boys (Harter, 1985). Support for this also comes from Granleese, Trew & Turner (1988) who examined gender differences in perceived competence using the earlier PSCS. In terms of age differences, Sixth graders (Form 1) showed significantly higher scholastic competence and global self-worth scores than did seventh graders (Harter, 1985).

RELIABILITY

The reliabilities for internal consistency are based on Cronbach's alpha. Reliabilities are quite acceptable and have improved substantially since the earlier edition.. The following are the reliability's for all six subscales based on four different normative samples (Harter, 1985): Scholastic Competence .80-.85, Social Competence .75-.80, Athletic Competence

.80-.86, Physical Appearance .76-.82, Behaviour Conduct .71-.77, and Global Self-Worth .78-.84.

No test-retest data was provided. However, Nottelman (1987) examined changes in competence and self-efficacy during the transition from childhood to adolescence, using the PCSC. Overall, children's perceived competence was reported to be stable across a one year period.

VALIDITY

Factor analyses have provided factors that present a relatively clear pattern. Across three of the four separate normative samples, each of the five a priori subscales (excluding Global Self-Worth) were found to define unique factors (Harter, 1985). The factor loadings for each subscale are substantial with no cross loading greater than .18 and a range of average cross loadings across factors between .04 and .08, which is very sound. Granleese & Joseph (1993) examined the factor structure of the SPPC using Irish youths. The study replicated the factor structure obtained by Harter with U.S. youth.

Intercorrelations among scales showed Scholastic Competence tends to be related to Behavioural Competence (r = .29-.58) indicating that children who feel they are good at school work also tend to report they are better behaved (Harter, 1985). Conversely, those who feel they are not doing well at school tend to report more behaviour problems. There are also relationships between Social Acceptance, Athletic Competence and Physical Appearance, all three subscales are moderately correlated with one another (r's between .29 and .53). With regards to Global Self-Worth, Physical Appearance is the subscale which is most consistently correlated at r's between .62 and .73, whilst the remaining four subscales bear more moderate relationships to the Self-Worth scale (r's between .30 and .64).

Marsh & MacDonald Holmes (1990) tested the construct validity of Harter's scale, including factor analysis, multitrait - multimethod analysis and patterns of correlations with academic achievement. Results supported convergent, discriminant and criterion-related validities. For example factor analysis showed target loadings were consistently adequate (.17 to .80; median = .54), whereas nontarget loadings were much smaller (-.28 to 0.41; median = .09), supporting the factors that were designed to be measured. Monotrait-monomethod analysis revealed a mean reliability coefficient of .83, whilst monotrait-heteromethod coefficients had a mean of .61.

In summary, the Self-Perception Profile for Children appears to be a psychometrically sound instrument suited for the purposes of the present study.

THE SPORTS PARTICIPATION AND ATTITUDES QUESTIONNAIRE FOR CHILDREN (SPAQC, 1996)

Sport participation and attitudes surrounding participation was assessed by an endorsement questionnaire developed specifically for the purposes of the present study. The rationale for creating the questionnaire was simply that no other measure was available which could be employed to elicit the sporting information which was relevant to the study. The measure was developed by rational and theory bound means through a search of the relevant literature, and are now described.

Items in the SPAQC questionnaire related to types of sport and reasons for participation and some were adapted from the Hillary Commission's "Life in New Zealand" study (1990). A list of sports played by New Zealand children was derived based on this work. Several other new sports that have become popular in recent years, (e.g. roller-blading) were also included. Furthermore additional spaces were provided for participants to list up to three additional sports that weren't already listed. This section of the questionnaire elicited information on (a) type of sports played and (b) frequency of participation. Both formal as well as informal levels of participation were included for assessment. In fact, a

potential advantage of this sports questionnaire is the inclusion informal participation as past research has been lacking with regard to informal or leisure-based sports activities (Zaharopoulos & Hodge, 1991). The SPAQC is also intended as a measure of the extent of participants' involvement and attitudes in sporting activities both in school and during leisure time.

The questionnaire consisted of nine questions with participants responding to 61 items in total (see Appendix C). Reading level and response formats were developed for ease of comprehension. For instance, participants rated the importance of Questions 1, 5, 6 and 7 on a 3-point likert-type scale. The reason a 3-point scale was used because comprehension using a reduced range of ratings is easier for some children to understand (eg, Achenbach, 1991). Specific scales within the questionnaire were developed to measure certain types of sport participation. These scales are defined in the following description of the nine questions.

In the first question, children rated their sports participation on each sport listed. On the 3-point scale, 0 indicated little or no participation, 1 indicated some participation and 2 indicated regular participation. A Total Participation score (See Table 4) was calculated by summing the participation scores of each of the 24 sports in Question 1 to provide an estimation of involvement in all participation in sport, both informal and formal participation. Initially, the extra sports listed by children in the blank space at the end of question one were to be included in analyses; however, later these were left out of analyses because of the very few children who reported other sports.

For additional correlational analyses and group based comparisons, two groups were identified. High Total Participators (HTP's) were those participants whose Total Participation score was in the upper third percentile whilst Low Total Participators (LTP's) were those participators whose Total Participation score was in the bottom third percentile.

To calculate Team Sport scores and Individual Sport scores, sports from Question 1 were classified accordingly, summed and divided by each total to provide mean scores for both variables. Team sports were those sports which could not be played without other players and included the following sports: baseball/softball, basketball, cricket, hockey, netball, rugby, soccer, touch rugby, and volleyball. Individual sports included athletics/harriers, cross-country, cycling, dancing, gymnastics, horse-riding, marital arts, pool/snooker, roller-blading/skating, skateboarding, squash, and tennis. Although some individual sports such as tennis or squash can be played in pairs, such sports are not strictly team sports and therefore were classified to be individual sports.

Question 2 asked participants to indicate if they played any of the sports listed in Question 1 for their school or a club. This provided an indication of the number of formal sports children participated in. The Number of Formal Sports score indicated the number of sports children played for a school or club. The possible range for formal sports participation is 0-5 sports. For additional correlational analyses and group based comparisons, two groups were identified. High Formal Participators (HFP's) were those participants whose Number of Formal Sports score was in the upper third percentile whilst Low Formal Participators (LFP's) were those participators whose number of Formal Sports score was in the bottom third percentile.

Question 3 requested participants to state how long in years they had been playing each formal sport. The Total Years score is a sum of the length of time of participation in all formal sports. For example, a child may have played three sports for her school, basketball for two years, running for four years and cricket for a year. Therefore the Total Years of Formal Sport score would be 9 (2+4+1=9 years). Question 4 provided the opportunity to specify any sporting achievements participants had gained in formal sports, such as awards, prizes, been a team leader or captain, been a representative of a region, won a grade/tournament and so forth (See Appendix C). The Number of Achievements score indicates the number of sporting achievements a child has received to date. The range was between 0-5 achievements.

Question 5, 6 and 7 asked participants how much they enjoyed playing sport, how much they enjoyed competing against others and how good they considered themselves to be at most sports, respectively. The emphasis from these items was on issues related to participation motivation and perceived ability.

Participation motivation was also examined in Question 8. A list of 14 reasons for playing sport was provided to which children ticked the reasons which applied to them. A tick was scored as 1 and no tick as 0. To obtain a ranked order of these 14 reasons, the means of each reason were calculated and then ordered for the total sample. Regarding Question 8, most of the literature in this area has found a common set of reasons for why children play sport (Weinberg & Gould, 1995; Stern, Bradley, Prince & Stroh, 1990; Hillary Commission for Recreation and Sport, 1990; Cox, 1994). Question 8 was formulated from these findings. The reason "to control my weight was not typically included in past studies; however, this reason was included in the present study because recent suggestions (Fear, 1993) are that children, particularly girls are becoming weight conscience at a very young age and are undertaking methods to obtain the socially desirable (but not so healthy) body shapes that they may frequently view in the media.

Question 9 consisted of a number of items eliciting children's attitudes to sport; four of these items were included in the analysis. These items addressed two different types of achievement motivation in sport based on the work of Dweck (1986) and Nicholls (1978), that of either a mastery goal orientation or performance goal orientation. The other items in Question 9 were not included for analysis for the purposes of the current study as all relevant hypotheses were addressed by other items.

The Mastery Goal score combined the scores of two mastery-oriented statements from Question 9. These statements based on the literature were "If I do well at sport, next time I play I try even harder." And "If I try hard, it doesn't matter whether I win or lose." Each true answer was scored as a 2, each false as a 0 and responses of don't know were scored as 1. A higher combined score indicated a trend towards a mastery orientation.

Similarly, the Performance Goal score was a sum of the scores of the following statements from Question 9 with the same scoring procedure: " Other people think I'm good at sport" and "It's important to win."

The alpha reliability for the SPAQC was found to be .86.

THE TEACHER GLOBAL RATING SCALE

A global rating provides a general evaluation of behaviour whilst using a standardised format (Kazdin, 1980).The Teacher Global Rating Scale was a simple scale designed as an independent rating of students sporting abilities. Using a global rating gave a summary indication of each student's general sporting ability. Teachers were instructed to provide an estimate of each student's overall ability at sporting activities on a 5 point likert scale (see Appendix D).

With the exception of School Three, the classroom teacher (that is, the teacher who instructs the students for the majority of their subjects including physical education) rated the students. At School Three, the physical education teacher completed the ratings as the classroom teachers at this school did not take students for physical education. A potential problem of global rating can be observer drift and bias, due to lack of operational definitions of observed behaviour (Kazdin, 1980). To lessen this possibility, all teachers were provided with a definition of the behaviour (i.e, sporting ability) at the time of rating (see Appendix D).

PROCEDURE

The first stage involved approaching the schools to seek consent and approval of schools to participate. School principals and/or school administrators were visited personally by the researcher to inform them of the nature and procedure of the study. The researcher

approached five schools all of whom wished to participate. Following administrative approval, an information sheet and consent form were sent home to all parents of Form 1 and 2 students. Typically, students were requested to take home the forms to be read and completed if agreeable. The response rate from parents was 50-60%.

The actual administration of the questionnaires took place at each school. The researcher visited each class at each school to personally administer the questionnaires to those children who had parental consent. The children were given a verbal description of the study as well as being provided with a written information sheet. This sheet together with a child consent form was read aloud so as to ensure children understood the nature of the study and their rights as voluntary participants. Following this, children were asked for consent to participate by signing the consent form. If they choose not to participate, an alternative classroom activity was available. However, nearly all children who had received parental consent similarly gave their consent.

To enhance the validity of the study and ensure the well-being of the children , the following points were presented and emphasised in the briefing of the study:

1. Participating in the study is completely voluntary. Even if your parents consented, you don't have to take part--it is your choice.
2. The information given to the researcher is confidential and only the researcher will see what you write. Also your name will be converted to an identification number.
3. The researcher is interested in your individual thoughts, feelings and behaviour. (Students were encouraged to complete the questionnaire on their own and that there was no right or wrong answers).
4. Try to answer as much of the questionnaire as you can.
5. The questionnaires are the same for everyone and have been used with many other children--there is no need to get concerned about any one question. Although please ask any questions at any time if you are unsure or concerned about anything.

Following the introduction and explanation of the study, participants who had consented to participate were given the questionnaire package containing (a) the Youth Self-Report, (b) the Self-Perception Profile for Children and (c) the Sports Participation and Attitudes Questionnaire for Children to complete. Following this, instructions were given regarding each of the three questionnaires. Throughout the assessment period, children were given the opportunity to ask any questions if they did not understand any particular section or question. Participants completed the questionnaires in the following order: (1) The Sports Participation and Attitudes Questionnaire for Children (2) The Self-Perception Profile for Children (3) The Youth Self-Report. No counterbalancing of the questionnaires was undertaken as the information from the SPAQC was deemed to be of the highest priority and was thus the first questionnaire children completed. The SPPC was deemed the next most important scale and as such was ordered second. The author also did not want YSR problem scales to bias answers to SPPC competency items. Furthermore, large group administrations required children to have the same format for ease of comprehension and question-answering. In total, the questionnaire took 30-45 minutes to complete depending on the individual's reading speed. The classroom teacher was given the Teacher Global Rating Scale to complete at the same time children were filling out self-reports. Children's questionnaires and teacher forms were collected immediately upon completion.

Throughout the period of questionnaire completion, the researcher was available to answer any queries or concerns. At the completion, the researcher gave a debriefing of the study and provided an opportunity for participant feedback and any further questions.

DESIGN AND PLAN OF ANALYSIS

The present study was correlational in nature. Such a study does not directly manipulate or test variables, rather it looks at the relationship between variables. In the present study, several relationships were being examined. Responses on the Sport Participation and

Attitudes Questionnaire for Children (SPAQC) were compared to responses on the Youth Self-Report (YSR) and Self-Perception Profile for Children (SPPC).

A correlational analysis was also carried out between demographic variables, sport participation responses and scores on the SPPC and YSR. When the relationships between variables were calculated, the Pearson Product Moment correlation coefficient was derived unless otherwise stated. Demographic variables that correlated significantly with predictor or criterion variables were followed up with appropriate analyses to assess differences between relevant groups (ie., either *t*-tests or oneway analysis of variance).

Sports participation variables that correlated significantly with criterion variables (e.g. YSR) were followed up with analyses by using the upper third quartile and lower third quartile of sport participants as previously described. That is, high and low scorers on the predictor variable (sports participation) were compared on the criterion variables via *t*-tests.

When *t* tests and ANOVA's were used to compare differences between group means, an initial check was made to ensure homogeneity of the sample variances for each analysis. The confidence level was set at $p < .05$. The term "significant" refers to analyses which indicate statistical significance. Findings which were still important (between .05 and .10) but not statistically significant were referred to as trends. For multiple comparison procedures (e.g. differences between SES groups, Ethnic groups and School groups) the Bronferonni correction was used to adjust the observed significant level, based on the number of comparisons being made following a significant ANOVA. For example when comparing differences between schools the significance level would be divided by 10 because there are 10 possible comparisons between the schools (.05/10). Therefore a difference between schools would only be significant if $p < .005$.

Finally, to increase the validity of the study, a 10% data check was carried out. This check meant that data entry errors were systematically assessed and corrected if required to

CHAPTER THREE

RESULTS

This chapter provides the results of the current study in written and table format. First the preliminary analysis address the YSR and SPPC, comparing the respective norm group means with the current samples in terms of gender, and total sample. Following this, analyses address Hypotheses 1 through 10.

PRELIMINARY ANALYSIS

The 203 participant's responses on the three questionnaires together with the teacher ratings were used to conduct the preliminary and main analyses. The mean raw scores and standard deviations of the YSR subscale for the total sport sample (N=203), together with the normative sample provided by Achenbach (1991) are shown in Table 2.

Student's raw scores were used when analysing the problem scales section of the Youth Self-Report. The rationale for this is because frequently raw scores can reflect greater variability than T scores. Achenbach (1991) recommends that for statistical analysis of the syndrome scales "...it is usually preferable to use the raw scores rather than the *t* scores in order to take into account the full range of variation in these scales"(p. 166).

Comparisons of the two groups as shown in Table 2 indicated that the two samples scores are similar on the majority of the YSR subscales, with some differences apparent on Externalising Problems and Somatic Complaints. *t*- tests revealed girls in the sport group had significantly higher Externalising Problem mean scores ($M = 11.6$, $SD = 8.2$) than girls in the norm group ($M = 10.3$, $SD = 6.3$), [$t(779) = 2.68$, $p < .001$]. For Somatic Complaints,

means for girls in the sport group were ($M = 4.1$, $SD = 3.2$) and for the norm group ($M = 2.9$, $SD = 2.9$), [$t(779) = 3.85$, $p < .01$]. Boys from the sport group also scored higher on Somatic Complaints ($M = 3.2$, $SD = 3.3$) than the norm group ($M = 2.2$, $SD = 2.3$).A t-test showed a significant difference [$t(728) = 3.67$, $p < .01$]. All other comparisons were nonsignificant.

Table 2: Scale Scores on the Youth Self-Report the Sports Study Sample and the YSR Normative Sample.

	BOYS				**GIRLS**			
	Sport Group (n=93)		Norm Group (n=637)		Sport Group (n=103)		Norm Group (n=678)	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Withdrawn	3.4	2.6	3.4	2.2	4.5	3.0	4.0	2.4
Somatic Comp	3.2	3.3	2.2	2.3	4.1	3.2	2.9	2.9
Anx/Depressed	4.4	4.9	5.1	4.2	6.7	5.8	6.4	5.1
Social Probs	3.1	2.4	2.6	2.0	3.1	2.7	2.5	2.1
Thought Probs	2.0	2.3	2.3	2.1	2.4	3.1	2.4	2.3
Attention Probs	4.4	3.0	4.8	3.0	4.5	3.4	4.6	3.0
Delinq Probs	3.8	3.1	3.2	2.5	2.7	2.4	2.5	2.2
Aggress Probs	8.8	6.2	8.5	5.2	8.9	6.3	7.9	4.9
Internalising	10.7	9.2	10.5	7.0	13.7	9.6	12.9	8.5
Externalising	12.5	8.6	11.6	7.0	11.6	8.2	10.3	6.3
Total Probs	36.4	24.6	37.3	19.1	33.3	19.8	38.9	21.3

Comparisons between boys and girls in the sports sample indicated there were some gender differences on the YSR scales. Achenbach and colleagues found girls tend to score higher on the internalising scales and boys will typically score higher on the externalising scales. The sport data shows some similar differences on these scales. Girls scored significantly higher means for the internalising scales of Withdrawn Problems ($M = .4.5$, $SD = 3.0$),

compared to boys ($M = 3.4$, $SD = 2.6$), [$t(193) = 1.91$, $p < .05$] and Anxiety/Depressed Problems where the mean for girls was ($M = 6.7$, $SD = 5.8$) and for boys ($M = 4.4$, $SD = 4.9$), [$t(193) = 2.85$, $p < .01$]. There was also a trend for girls to score higher on Somatic Complaints ($M = 4.1$, $SD = 3.2$) compared to boys (M = 3.2, SD = 3.3), [$t(193) = 1.70$, $p < .10$]. For the externalising scales. Boys showed higher means for Delinquency Problems ($M = 3.8$, $SD = 3.1$) compared to girls ($M = 2.7$, $SD = 2.4$). A t-test showed a significant difference [$t(193) = 2.34$, $p < .01$]. No significant differences between gender groups was found on the Aggression Problem scale. The mean for boys was ($M = 8.9$, $SD = 6.3$) and for girls ($M = 8.8$, $SD = 6.2$), [$t(193) = .79$, $p > .10$].

Table 3 presents scores on the six subscales of the SPPC for the sport sample and the SPPC normative group. The means and standard deviations for the sport sample are well within the range of scores of the normative groups with one exception. A difference was found between girls on Behavioural Competence. Girls in the sport group had significantly lower mean Behaviour Competence scores (*Mean* = 17.79, $SD = 3.15$) than the norm group (*M*ean = 18.36, $SD = 3.36$), [$t(327) = 6.43$, $p < .01$].

Examination of the sport sample scores showed some gender differences. Boys mean self-perception scores ranged from 17.15 to 18.83 and for girls the range was from 16.54 to 18.36. For boys in the sport group Athletic Competence was the domain with the highest mean score (*Mean* = 18.83, $SD = 3.48$) which was significantly higher than girls (*Mean* = 17.24, $SD = 3.80$) as indicated by a t-test, [$t(174) = 2.91$, $p < .05$]. All other gender differences for the sport group were nonsignificant.

No significant age effects were found on the YSR subscales, Internalising, Externalising or Total scores on the SPPC subscales for the sport sample (all F's < 1).

Table 3: Scale Scores on the Self-Perception Profile for Children Between the SPPC Normative Sample and the Sport Sample.

	BOYS				**GIRLS**			
	Sport Group (n=93)		Norm Group (n=206)		Sport Group (n=103)		Norm Group (n=226)	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Scholastic	17.21	3.73	17.64	3.72	17.28	3.71	17.64	3.84
Social	17.66	4.12	18.36	3.78	17.69	3.70	17.88	4.14
Athletic	18.83	3.49	18.90	3.66	17.24	3.80	16.80	4.14
Physical	17.49	3.36	17.88	4.08	16.54	3.60	16.08	4.50
Behaviour	17.15	3.31	17.52	3.60	17.79	3.15	18.36	3.36
Global	18.41	3.01	19.20	3.66	18.36	3.30	18.60	3.90

PARTICIPATION RATES OF CHILDREN IN SPORTS

This section presents some descriptive data followed by more analytical findings. Table 4 shows the sample mean participation rates for twenty four sports commonly played by New Zealand children. The sports are ranked in order of highest mean participation rate to lowest mean participation rate for the total sample. From inspection of the total participation rates, the most frequently played sports by the entire sample were a mixture of team and individual sports. Swimming had a mean participation rate of 1.00 out of a

possible 2.00 (SD = .73) and was the sport with the highest rate of participation followed by running (M = .94, SD = .76), then rugby (M = .93, SD = .85), hockey (M = .92, SD = .88) and cycling (M = .90, SD = .69).

Table 4: Mean Participation Scores and Standard Deviations for Boys and Girls for New Zealand Sports.

	MALE Mean	MALE S.D	FEMALE Mean	FEMALE S.D	TOTAL Mean	TOTAL S.D
1. Swimming	.92	.73	1.00	.73	1.00	.73
2. Running	1.05	.80	.84	.72	.94	.76
3. Rugby	1.41	.75	.51	.72	.93	.85
4. Hockey	.88	.87	.95	.90	.92	.88
5. Cycling	.87	.78	.91	.78	.90	.69
6. Cricket	1.10	.78	.62	.70	.84	.77
7. Netball	.13	.34	1.30	.90	.76	.90
8. Tennis	.70	.77	.76	.80	.74	.78
9. Volleyball	.87	.74	.64	.73	.74	.74
10. Cross Country	.81	.71	.66	.66	.73	.69
11. Athletics	.63	.64	.71	.66	.67	.65
12. Soccer	.93	.76	.43	.66	.66	.75
13. Roller- Blading	.58	.79	.67	.82	.64	.81
14. Basketball	.51	.62	.35	.57	.42	.75
15. Touch- Rugby	.81	.79	.39	.65	.59	.74
16. Horse-Riding	.18	.46	.61	.82	.42	.72
17.. Pool/Snooker	.66	.67	.22	.48	.42	.61
18. Baseball	.51	.62	.35	.57	.42	.60
19. Dancing	.20	.45	.59	.81	.41	.70
20. Skiing	.34	.64	.34	.68	.35	.70
21. Skate-Boarding	.41	.67	.06	.25	.22	.51
22. Gymnastics	.05	.27	.33	.64	.21	.54
23. Squash	.23	.54	.15	.45	.18	.50
24. Marital Arts	.15	.47	.08	.34	.11	.40

The sports listed which showed the lowest rates of participation were typically individual sports. Martial arts ($M = 0.11$; $SD = .40$) showing the lowest participation rates followed by squash ($M = 0.18$; $SD = .50$), gymnastics ($M = 0.21$; $SD = .54$), skateboarding ($M = 0.22$; $SD = .51$) and skiing ($M = 0.35$; $SD = .70$).

GENDER DIFFERENCES

The most frequently played sports of boys and girls are presented in Table 4. The top five sports played by boys were in order, rugby, cricket, running, soccer and swimming. For girls, the five most played sports were, netball, swimming, hockey, cycling and running. Thus boys tend to play rugby, cricket and soccer; girls netball and hockey. In terms of rank order, boys and girls have swimming, running and cycling in common.

Hypothesis 1 predicted that boys would have significantly higher rates of sports participation than girls, in both formal and informal sports participation. Table 5 shows differences in mean and standard deviations of boys and girls on the different sports participation scales. *t*-test procedures were employed to test for differences in means between boys and girls. There was a trend (meaning $p < .10$) for boys have to have higher rates of total participation, the mean Total Participation score for boys being 15.40 ($SD = 6.2$) whilst for girls it was 13.69 ($SD = 5.88$), [$t(190) = 1.9, p < .10$]. Boys and girls showed similar participation rates at formal sports, boys playing on average 2.77 ($SD = 1.45$) sports for a school or club whilst girls played an equivalent rate of sport for their school or club, with a mean of 3.05 ($SD = 4.36$), [$t(200) = -1.31, p > .10$]. Both boys and girls also reported playing varying sports for nearly the same amount of time, with no differences indicated in terms of length. Boys had a mean Total Years of Formal Sport score of 7.40 ($SD = 4.00$) and girls a mean of 7.84 ($SD = 4.36$) years, [$t(200) = -.75, p > .10$]. Thus, results from *t*-tests showed no significant differences in means for any of the sport participation variables for boys and girls. Therefore, there was no evidence to support the prediction that overall boys played more sport than girls. Hypothesis 1 was not supported.

Table 5: Mean Sports Participation Scores and Standard Deviations for Boys and Girls

	BOYS		GIRLS		TOTAL		
	Mean	*S.D*	*Mean*	*S.D*	*Mean*	*S.D*	*Range*
Total Participation	15.40	6.18	13.69	5.87	14.48	6.01	0-34
Number of Formal Sports	2.77	1.45	3.05	1.48	2.93	1.47	0-5
Total Years of Formal Sport	7.40	3.40	7.84	4.36	7.65	4.18	0-16
Individual Sports	7.45	4.06	7.64	3.73	7.56	3.87	0-19
Team Sports	7.59	2.58	5.64	3.01	6.50	2.99	0-15

Hypothesis 2 predicted boys would play more team sports than girls and girls would play more individual sports than boys. Boys had a mean Team Score of 7.59 ($SD = 2.58$) and girls had a mean score of 5.64 ($SD = 3.01$).*t*-test analysis revealed a significant difference, [$t(190) = 4.75$, $p < .001$]. In terms of individual sports, results showed boys and girls played a similar amount of these sports as seen on Table 5, [$t(198) = -.35$, $p > .05$]. These results provided evidence that partially, supported Hypothesis 2.

AGE DIFFERENCES IN PARTICIPATION

Hypothesis 3 predicted younger children (Form 1) would have higher rates of sports participation than older children (Form 2). In this case, younger children were classified as those in Form One and older children as those in Form Two. *t*-tests showed Form One students had higher Total Participation scores with a mean of 15.64 ($SD = 6.05$) than Form Two students who had a mean of 13.31 ($SD = 5.89$), [$t(191) = 2.71, p < .05$]. Table 6 presents these scores as well as other sports participation scale scores. Form One students played significantly more of team sports (Form One $M = 7.02$; $SD = 3.06$), (Form Two $M = 5.98$; $SD = 2.88$), [$t(191) = 2.46, p < .05$] and individual sports (Form One $M = 8.14$; $SD = 3.91$), (Form Two $M = 7.00$; $SD = 3.78$), [$t(199) = 2.10, p < .05$]. On the other hand, Form One and Two students played a similar number of formal sports, which was reflected in Number of Formal Sport scores (Form One $M = 2.88$; SD = 1.47), (Form Two $M = 3.00$; $SD = 2.98$), [$t(201) = -.51, p > .10$] and for a similar amount of time, reflected in Total Years of Formal Sport scores (Form One $M = 7.24$ years; $SD = 4.00$), (Form Two $M = 8.08$ years; $SD = 4.38$), [$t(201) = -1.44, p > .05$]. Results here provided evidence that generally supported Hypothesis 3: younger children had greater rates of overall participation, in terms of total participation, team sport participation and individual sport participation. The exception to this support was reflected in similar rates and length of formal sport participation.

ETHNIC DIFFERENCES

The great majority of the participants in the current study were of Pakeha ethnicity. The samples of other ethnic groups were too small in number to justify analyses to test for differences between groups or make substantive conclusions regarding ethnic differences.

Table 6: Mean Sports Participation Rates and Standard Deviations for Form One and Two Students

	FORM ONE		FORM TWO	
	Mean	*S.D*	*Mean*	*S.D*
Total Participation	15.64	6.05	13.31	5.87
Number of Formal Sport	2.88	1.47	3.00	1.46
Total Years of Formal Sport	7.24	3.96	8.08	4.38
Individual Sports	8.14	3.91	7.00	3.78
Team Sports	7.02	3.00	5.98	2.88

SOCIO-ECONOMIC STATUS DIFFERENCES

The analyses involving socio-economic status were performed separately for each of the parents for reasons described earlier. Analysis of variance (ANOVA) were carried out to see if observed differences in the sample means of the SES groups were attributed to natural variability among sample means from the same population or whether the SES groups came from populations that had different means. Results from one-way ANOVA's indicated no significant differences between any of the means of the sports participation scales as a function of parental SES level such that no relationship between socio-economic

status and sports participation scale was found (all F's < 1). Due to these findings, and for the purposes of the present study, it was not necessary to pursue analyses between socio-economic groups and criterion variables (YSR and SPPC).

DIFFERENCES BETWEEN SCHOOLS IN THE SAMPLE

Differences in sports participation rates between schools were assessed. The most consistent finding was that School Two and School Three participated significantly more in both formal and informal sports (see Table 7). Oneway ANOVA's were performed and if significant, were followed up with Bonferronni-adjusted posthoc comparisons (.05/10 = .005). For Total Participation. Oneway ANOVA's were significant, [$F(4, 188) = 5.65, p < .001$]. Posthoc comparisons indicated mean participation rates on this scale for School Three ($M = 18.22$, $SD = 5.12$) were significantly different to School One ($M = 11.00$, $SD = 4.02$), [$t(36) = 4.17, p < .005$]; School Four ($M = 11.47$, $SD = 5.19$), [$t(44) = 4.38, p < .005$]; and School Five ($M = 14.01$, $SD = 6.26$), [$t(127) = 3.21, p < .005$].

For Number of Formal Sports ANOVA's were significant, [$F(4,198) = 4.1643, p < .05$]. Posthoc comparisons indicated mean participation rates on Number of Formal Sports for School Two ($M = 3.69$, $SD = 1.30$) were significantly greater than the means of School One ($M = 2.43$, $SD = 1.28$), [$t(47) = 3.07, p < .005$]; School Four ($M = 2.55$, $SD = 1.43$), [$t(53) = 3.0, p < .005$]; and Schools Five ($M = 2.72$, $SD = 1.46$), [$t(138) = 3.64, p < .005$].

Furthermore, School Two Total Years of Formal Sport scores indicated that students at this school had played formal sports for longer than the other sports. Oneway ANOVA was significant, [$F(4,198) = 6.09, p < .0001$], whilst posthoc comparisons showed the mean Total Years score for School Two ($M = 10.34$, $SD = 4.10$) was significantly greater than the means of Schools Four ($M = 6.10$, $SD = 3.71$), [$t(53) = 3.82, p < .005$] and School Five ($M = 6.85$, $SD = 3.95$), [$t(138) = 4.51, p < .005$].

Table 7: Mean School Sports Participation Scores for Schools.

	SCHOOL 1	SCHOOL 2	SCHOOL 3	SCHOOL 4	SCHOOL 5
	Mean	*Mean*	*Mean*	*Mean*	*Mean*
Total Participation	11.00	15.71	18.22	11.47	14.01
Number of Formal Sports	2.43	3.69	3.24	2.55	2.72
Total Years of Formal Sport	7.7	10.34	8.41	6.10	6.85

PARTICIPATION MOTIVATION

Reasons for participating are first described by simple rank ordering , followed by more formal analyses to address Hypothesis 4: Girls would rate reasons for participating that relate to affiliation and health as more important compared to boys such that there would be significant differences between boys and girls means on the following reasons: (a) to make other people like me, (b) to be with my friends, (c) to do things with my family, (d) to get fit, (e) to stay healthy and (f) to control my weight. As seen in Table 8, rankings of means show the main reasons given by children for participating in sport are "to have fun," "to improve my skills" and "to get fit" for both boys and girls. In terms of frequency of endorsement, boys ranked competition as a more important reason than girls, rated by boys as their fourth ranked reason for participating. Girls fourth, fifth and sixth reasons were, similar to the first three reasons, aimed at self-improvement or enjoyment - competition was in terms of frequency of endorsement rated seventh for girls. "Because other people make me" and "to make other people like me" were the reasons infrequently endorsed for participating in sport by both boys and girls.

Table 8: Student's Reasons for Participation in Sport

BOYS	GIRLS
1. So I can have fun	1. So I can have fun
2. To improve my skills	2. To improve my skills
3. To get fit	3. To get fit
4. I like to compete against others	4. To challenge myself
5. To challenge myself	5. To make me feel good
6. To make me feel good	6. To stay healthy
7. I'm good at sport	7.I like to compete against others
8. To be with my friends	8. I'm good at sport
9. To stay healthy	9. To be with my friends
10. Only if I have to	10. To do things with my family
11. To do things with my family	11. To control my weight
12. To make other people like me	12. Only if I have to
13. To control my weight	13. To make other people like me
14. Because other people make me	14. Because other people make me

Hypothesis 4 predicted girls would rate reasons for participating that related to affiliation and health as more important reasons compared to boys (specifically affiliation reasons are ranked 9, 10, 13 and health reasons are ranked 3, 6 and 11 for girls). Table 9 and 10 show the means and standard deviations of boys and girls for these affiliation and health reasons. *t*-tests revealed that boys significantly rated the reasons - "to make other people like me" (ranked 12 for boys) and - "to be with my friends" (ranked 8 for boys), as more important than girls, [$t(152.04) = .2.36$, $p < 0.05$] and [$t(198) = 2.20$, $p < .05$], respectively. There was no significant difference on the reason - "to do things with my family" ($p > .10$). Therefore, the first part of Hypothesis 4 relating to affiliation reasons was not supported. Regarding health reasons, no significant differences were found for the reason - "to get fit" and - "to control my weight," (p's $> .10$). For the reason - "to stay healthy," a significant difference between groups was found, with girls being more likely to rate this as a reason to

participate than boys, [$t(198) = -2.28$, $p < .05$.] From these findings, the second part of this hypothesis was only weakly supported. Overall, Hypothesis 4 was not supported.

Table 9: Means of Affiliation-Related Reasons for Participating in Sport for Boys and Girls

	BOYS		**GIRLS**	
	X	S.D	X	S.D
To make other people like me	.19	.39	.07	.26
To be with my friends	.69	.46	.54	.50
To do things with my family	.36	.48	.41	.50

Table 10: Means of Health-Related Reasons for Participating in sport for Boys and Girls

	BOYS		**GIRLS**	
	X	S.D	X	S.D
To get fit	.86	.35	.85	.36
To control my weight	.16	.37	.18	.39
To stay healthy	.58	.50	.73	.44

THE RELATIONSHIP BETWEEN SPORTS PARTICIPATION AND PROBLEM BEHAVIOURS.

Hypothesis 5 predicted that children's increased level of participation in sport would be associated with fewer behaviour problems. That is, there would be a negative correlation between scores on sports participation scales and scores on the YSR problem scales.

Pearson product coefficients (r) were calculated between scores on the sports participation scales; Total Participation, Number of Formal Sports and Total Years of Formal Sport with the YSR subscales. No significant correlations were found for Total Participation, but moderate and significant negative correlations were consistently found for Formal Sports and Total Years of Formal Sport with YSR problem subscales of Externalising Problems, Social Problems, Aggression Problems and Delinquency Problems (see Table 11). All other correlations were nonsignificant. Correlations were also calculated for Number of Achievements and YSR scales. All correlations were nonsignificant.

These correlations were followed up by conducting t-tests between scores for High Total Participators (HTP's) and Low Total Participators (LTP's) (defined earlier) and the YSR scales. Children classified as HTP's had lower scores ($M = 3.69$, $SD = 312$) on the Somatic Complaints subscale compared to children classified as LTP's ($M = 4.11$, $SD = 3.63$), [$t(152) = 2.49, p < .05$]. All other comparisons were nonsignificant.

Similar analyses were conducted for High Formal Participators (HFP's) and Low Formal Participators (LFP's). Results showed there were several significant differences between these two groups on the YSR scales. HFP's had significantly lower means compared to LFP's on the following problem scales: Anxious/Depressed Problems, Externalising Problems, Social Problems, Aggression Problems and Delinquency Problems. For Anxious/Depressed Problems the mean for HFP's ($M = 4.84$, $SD = 4.26$) was significantly less than that for LFP's ($M = 7.66$, $SD = 6.87$), [$t(38) = 2.03, p < .05$]. For Externalising

Problems the mean for HFP's ($M = 10.56$, $SD = 6.55$) was significantly less than LFP's ($M = 16.43$, $SD = 12.14$), [$t(35) = 2.40$, $p < .05$]. For Social Problems, HFP's ($M = 2.46$, $SD = 2.16$) was significantly less than LFP's ($M = 4.19$, $SD = 3.00$), [$t(47) = 2.91$, $p < .01$]. For Aggression Problems, the mean for HFP's ($M = 7.85$, $SD = 4.87$) was significantly less than LFP's ($M = 11.75$, $SD = 9.10$), [$t(34) = 2.13$, $p < .05$]. Finally, Delinquency HFP's had a significantly lower mean ($M = 2.65$, $SD = 2.49$) compared to LFP's ($M = 4.53$, $SD = 3.47$), [$t(46) = 2.75$, $p < .01$]. All other comparisons were nonsignificant.

Table 11: The Associations Between Number of Formal Sports, Years of Formal Sport and Problem Behaviours.

	Total Participation	**Number of Formal Sports**	**Total Years of Formal Sport**
Withdrawn	.09	-.03	-.03
Somatic Comp	-.03	-.12	-.11
Anxious/Depressed	.07	-.12	-.08
Social Probs	.06	-.24**	-.20*
Thought Probs	.05	-.14	-.14
Attention Probs	.07	-.10	-.10
Delinquency Probs	-.13	-.25**	-.25**
Aggression Probs	.04	-.20*	-.19*
Internalising	.05	-.09	-.07
Externalising	.07	-.24*	-.24*
Total Probs	-.09	-.13	-.11

* $p < 0.01$ ** $p < 0.001$

The above findings provide some evidence to support Hypothesis 5. In particular a consistent, negative relationship was found between number of formal sports, length of participation in formal sports and reduced social and externalising problems.. However,

results regarding sport participation and internalising behaviours were generally found to be nonsignificant. The exception here was that participants high in formal participation had significantly lower levels of self-reported Anxiety/Depression compared to low participators.

Following up from Hypothesis 5, Pearson correlation coefficients were calculated for participation rates of each of the 24 sports with each of the YSR subscales. Some interesting results emerged for these more exploratory analyses, with both negative and positive correlations found. Negative correlations are first reported. Athletics/Harriers showed moderate negative correlations with the following YSR subscales; Total Problems (r = -.33), Social Problems (r = -.20), Externalising Problems (r = -.25) and Delinquency Problems (r = -.24). Cross-country was also found to have a negative correlation with Delinquency Problems (r = -20). These results indicated that these sports were associated with lower levels of particular problem behaviours. All other negative correlations were nonsignificant.

Several sports were also found to be positively and significantly correlated with some of the YSR problem subscales. These sports were; horse-riding, martial arts, pool/snooker, squash, cycling, skiing, netball and rugby. The following positive associations with YSR subscales were found: Horse-riding with Thought Problems (r = .24, p < .01), Anxiety Problems (r = .20, p < .01) and Attention Problems (r = .19, p < .01); martial arts with Externalising Problems (r = .22, p < .01) and Social Problems (r = .19, p < .01); pool/snooker Externalising Problems (r = .30, p , .001) and Delinquency Problems (r = .19, p < .01); squash with Thought Problems (r = .19, p < .01); cycling with Internalising Problems (r = .27, p < .01), Netball with Withdrawn Problems (r = .19, p < .01) and rugby with Delinquency Problems (r = .21, p < .21). These positive correlations indicate that increased participation in these sports were associated with higher levels of problem behaviours.

Hypothesis 6 predicted that there would be a greater association between (a) team sports and reduced behaviour problem scores than between (b) individual sports and reduced behaviour problem scores. Pearson correlation were used to test this hypothesis. Analyses showed neither Team Sport scores or Individual Sport scores were significantly correlated with any of the YSR problem subscales such that Hypothesis 6 was not supported.

THE RELATIONSHIP BETWEEN SPORTS PARTICIPATION AND SELF-CONCEPT.

Hypothesis 7 predicted children who had higher rates of sports participation would have higher levels of Athletic Competence, Social Competence, Physical Competence and Global Self-Worth. Correlational analyses and group comparisons were performed between the sports participation scales and the SPPC scales as shown in Table 12. Preliminary analyses using Pearson products moment correlations indicated a positive relationship between Total Participation scores and Athletic Competence ($r = .19, p .< 01$). All other correlations were nonsignificant (see Table 12). In addition, correlations between Number of Achievements and SPPC scales were nonsignificant.

The second part of the analyses involved performing *t*-tests between means of Low and High Total Participators on the self-concept subscales. The means for these groups are shown in Table 13. HTP's had significantly higher means than LTP's on Athletic Competence [$t(112) = -2.98, p < .001$]., Social Competence [$t(108) = -3.57, p < .001$] and Global Self-Worth [$t(126) = -2.41, p < .05$]. There was also a trend for higher total participators to have higher levels of Physical Competence [$t(114) = -1.89, p < .10$]. All other comparisons were nonsignificant.

Table 12: The Associations Between Number of Formal Sports, Years of Formal Sport and Self-Concept.

	Total Participation	**Number of Formal Sports**	**Total Years of Formal Sport**
Scholastic	-.07	.02	.06
Athletic	.19*	.17	.16
Physical	.07	.06	.05
Social	.06	.09	.03
Behaviour	-.05	.13	.11
Global Self-Worth	.12	.11	.10

* $p < 0.01$ ** $p < 0.001$

Table 13: Mean scores of Low and High Total Sports Participators on SPPC Scales.

	LOW TOTAL PARTICIPATORS *Mean*	HIGH TOTAL PARTICIPATORS *Mean*
SCHOLASTIC COMP	17.15	16.85
ATHLETIC COMP	17.05	19.00
SOCIAL COMP	16.51	18.90
PHYSICAL COMP	16.39	17.58
BEHAVIOUR COMP	17.26	17.49
GLOBAL SELF-WORTH	17.75	19.05

Analyses were also conducted using *t*-tests between means of Low and High Formal Participators on the self-concept subscales. The means for these groups are shown in Table 14. Higher formal participators had significantly higher means on Athletic Competence

[$t(136) = -2.11, p < .05$] and Behaviour Competence [$t(134) = -1.97, p < .05$]. All other comparisons were nonsignificant. Taken together, these findings provide moderate support for Hypothesis 7 largely in terms of expected differences emerging between high versus low total sports participants. Other analyses provided mixed support.

Table 14: Mean scores of Low and High Formal Sports Participators on SPPC scales

	LOW FORMAL PARTICIPATORS *Mean*	HIGH FORMAL PARTICIPATORS *Mean*
SCHOLASTIC COMP	17.25	17.24
ATHLETIC COMP	17.29	18.59
SOCIAL COMP	17.38	18.11
PHYSICAL COMP	16.86	17.26
BEHAVIOUR COMP	17.11	18.14
GLOBAL SELF-WORTH	18.14	19.02

Hypothesis 8 predicted children who had higher perceptions of Athletic Competence would have lower scores on the YSR problem scales compared to children who were rated as competent at sport by an independent rater (the classroom teacher or physical education teacher). Pearson correlations were performed between the teacher rating and YSR scores and between Athletic Competence and YSR scores to test this suggestion. Moderate significant negative correlations were found between Athletic Competence and Total Problems ($r = -.32, p < .01$)., Internalising Problems ($r = -.42, p < .001$)., Withdrawn ($r = -.39, p < .001$)., Somatic Complaints ($r = -.28, p < .001$)., Anxious/Depressed ($r = -.46, p < .001$)., Social Problems ($r = -.39, p < .001$) and Attention Problems ($r = -.30, p < .001$). All other correlations were nonsignificant. For independent ratings, only one significant negative correlation was found, with Attention Problems ($r = -.22, p < .01$). Posthoc comparisons using Fisher's Z Transformation indicated there was a significant difference

between this correlation and the correlation between Attention Problems and perceived Athletic Competence, [$z = .69 > 1.96, p < .05$].

These results indicate perceived Athletic Competence had a significant negative relationship with the majority of the YSR subscales, whereas independent ratings generally did not show a significant relationship with YSR subscales with the one exception reported. However, even in this case, the negative correlation between Athletic Competence and Attention Problems was found to be significantly greater than that between teacher ratings and Attention Problems. Hypothesis 8 was moderately supported. It was more strongly supported in terms of the consistent relationship found between increased levels of perceived Athletic Competence and reduced internalising problems compared to no relationship found between independent ratings of athletic competence and internalising problems.

ACHIEVEMENT MOTIVATION

Hypothesis 9 predicted older children (Form 2 students) would report a significantly greater predominance of Performance Goals, (i.e., those comparing ability rather than effort) compared to younger children (Form One students). This hypothesis was tested by performing *t*-tests to see if a significant difference in means of the two groups was found for the variables for mastery orientations and performance orientations. The mean for Mastery Goals was $M = 1.83$ ($SD = .60$) for Form One students and $M = 1.93$ ($SD = .50$) for Form Two students. The mean for Performance Goals was $M = 2.71$ ($SD = 1.12$) for Form One students and $M = 2.72$ ($SD = 1.11$) for Form Two students. *t*-tests indicated these pairs of means were not significantly different for Mastery Goals, [$t(199) = -1.23, p > .05$] or Performance Goals, [$t(196) = -.06$, $p > .05$]. In fact, further *t*-test comparisons showed that both classes had significantly higher scores for Performance Goals than Mastery Goals, Form One [$t(199) = 2.67, p < .01$] and Form Two [$t(196) = 2.32, p < .01$]. These results indicate that age differences in achievement orientations were not apparent, that there was

more indication of performance goals for both age groups. Therefore Hypothesis 9 was not supported.

Hypothesis 10 predicted those children with higher Mastery Goals scores would overall have higher rates of sports participation and higher self-concept as measured by the subscales of the SPPC compared to children with Performance Goals Orientations. Pearson correlation coefficients indicated that Mastery Goals was only significantly and positively correlated with Physical Competence ($r = 0.24, p < .01$). On the other hand, Performance Goals were correlated positively with sport scale Total Participation ($r = .31, p < .001$), and the following SPPC scales: Athletic Competence, ($r = ..47, p < .001$); Physical Competence ($r = .27, p < .01$); and Global Self-Worth ($r = .23, p < .01$). Hypothesis 10 was not supported as a consequence of these findings.

CHAPTER FOUR

DISCUSSION

SUMMARY OF MAJOR FINDINGS

The main aim of the present study was to examine whether a positive relationship existed between sports participation and children's emotional well-being. The major prediction or hypothesis of the present study was that children who played more sport, whether it be formal or leisure time sport, would report fewer problem behaviours and increased perceptions of competencies compared with children who had lower levels of sport participation.

The results of the present study found that children who played more sport showed some indications that increased sport participation is related to enhanced emotional well-being. Children who participated in a greater number of formal sports reported significantly lower levels of externalising and social problems compared to children engaged in fewer numbers of formal sports. Children who participated in more total sport (i.e., a combination of informal and formal sport) reported significantly higher perceived competence in some domains compared to low total sport participators. These domains were: perceived athletic competence, perceived social competence, and global self-worth. A trend indicated the same pattern for physical perceived competence.

With more specific regard to the relationship between children's sporting involvement and self-concept, the following results were found: As indicated, there was positive relationship for higher total sports participators (children who participated in higher levels of both informal and formal sport) and perceived competence. That is, those who had higher levels of total sport participation also had higher levels of perceived athletic, social, and physical (trend only) competence and global self-worth compared with those children who had low

levels of total sports participation. These findings are similar to other New Zealand research which found high school athletes reported higher levels of self-concept than non-athletes (Zaharopoulos & Hodge, 1991). The current study was also consistent with Anshel, Muller & Owens (1986; see also Gruber, 1986) who found that the areas of self-concept most positively impacted by sport participation were also those hypothesised within the literature (i.e., athletic, physical and social). That is, present findings showed athletic and social competence and, to a lesser extent, physical competence to be positively related to total sport participation (i.e., a combination of informal and formal sports) . However, the current study also found global self-worth to be positively related to total sport participation. While this finding confirmed the current study's hypothesis, it is contrary to the studies cited above that found sport was not related to global self-concept or other nonsport-related domains of self-concept. With regards to formal sport participation, a positive relationship was found with perceived athletic competence as well as perceived behavioural competence. Combined, these findings are consistent with other research which has depicted that sport can positively impact not only specific domains, but also overall self-concept (e.g. Salokum, 1994). Overall, the current study supported the idea that sport participation is associated with self-concept- related benefits.

Results regarding hypothesised reductions in problem behaviours were mixed, although stronger evidence was found showing a consistent relationship between increased numbers and length of time in formal sports and reduced externalising and socially-related behaviour problems. Children who played more formal sports and for a greater length of time reported significantly lower levels of delinquent behaviour, aggression, and peer-related problems. Children who were participators in formal sport also reported significantly lower levels of anxiety and depression-related problems compared to non-participators. These findings are consistent with some studies that have found a negative relationship between sport participation and problem behaviours (Steptoe & Butler, 1996; Jeziorski, 1994). The specific finding that increased formal sport participation was negatively related to externalising problems is consistent with findings by Segrave & Hastard (1982).

One of the current study's specific findings was that formal sport participation was negatively associated with delinquency, meaning children who play a higher number of sports for a school or club reported lower levels of delinquent-related problems. This is contrary to another New Zealand study that found adolescents who participated in higher levels of sport at age 15 years were more likely to be delinquent at age 18 years (Begg, Langley, Moffitt & Marshall, 1996). The Begg et al., study reported a mediating effect on this relationship to be team sport. That is, adolescents who played team sports were less likely to be involved with delinquency-related behaviours. In the current study, no differences were found between team and individual sports on level of behaviour problems. This indicated that in the present study that playing either team or individual sport was not a factor which mediated or influenced the relationship between sport participation and level of behaviour problems. That is, team sports were no more beneficial to emotional well-being than individual sports.

However, as stated, formal sport participation was negatively associated with lower levels of externalising and social problems. The possibility exists that children who have higher levels of emotional or behavioural problems are less likely to participate in formal or more organised sport as a function of their problems. That is, formal sport requires a higher standard of behavioural conduct which may not appeal to these children. Team sport may also require a higher standard of behavioural deportment (e.g. increased need for cooperation) that may make this finding in some ways compatible with Begg et al., (1996).

Related to the current findings is the implication that children may not necessarily have to be competent at sport at sport in order to gain psychological benefits from sport participation. Results showed children who perceived themselves to be more competent at sport (i.e., reported higher levels of perceived athletic competence) reported fewer emotional and behavioural problems, particularly related to internalising and social problems, compared to children rated by an external observer (teacher) as athletically competent. Other potential objective indicators of actual competence are number of sporting achievements and formal sports participation. Similar to teacher ratings, the

number of sporting achievements showed no relationship with level of behaviour problems. On the other hand, and as previously discussed, high formal sport participators reported fewer problem behaviours. From these findings it appears that while perceived athletic competence was clearly negatively related to reduced emotional and behavioural problems, the findings for children who are actually competent at sport are more mixed. Taken together, the present results relating to self-concept and problem behaviours indicate that playing sport may help children gain confidence and learn various competent behaviours (e.g. social skills). This efficacy-based learning may in turn help make these children feel better about themselves. Playing sport may also provide a socially accepted way to release energy, and aggression rather than through more negatively valenced acting out behaviours. Another implication of these findings is that sport may be used to help children achieve a sense of competence in not only the sporting domain but also other domains of their lives which are important to their psychological and social development. These include feeling confident about their physical appearance, feeling they have adequate social skills and relations with peers and, overall simply feeling good about themselves. Furthermore, rather than focussing solely on increasing children's actual competence at sport, efforts should also be directed at enhancing children's perceptions of athletic competence. Current findings suggest increased perceptions of athletic competence may help the child not only feel more competent but also act more competently.

Other findings from the current study suggested boys and girls participated in a similar number of sports for a similar amount of time. Younger children (Form One students) participated in significantly more levels of total sport compared to older children (Form Two students), perhaps confirming other research that has found that children begin to drop out of sport in larger numbers beginning about age twelve (Cox, 1994). In terms of participation motivation , results showed that children's reasons for participating in sport were similar to overseas research, with "having fun" and "improving one's skills" the main reasons children endorsed for participating in sport (Carmichael, 1990; Weinberg & Gould, 1995; Weiss, 1995). Success in terms of "winning" was not the main participation motivation children endorsed. Instead, children endorsed an increased number of intrinsic

reasons for participating. Boys reported significantly higher levels of affiliation-related reasons for sport involvement. In general, no differences in health-related reasons for sport involvement were found as a function of gender. These findings contradict suggestions that girls would endorse these reasons more than boys (Gould, Feltz & Weiss, 1985; Meeks and Mauldin, 1990). Results regarding the relationship between achievement motivation and sports involvement were contrary to those expected. Children in the sport sample predominantly endorsed higher levels of a performance orientation compared to a mastery goal orientation. This may perhaps reflect that children from this sample have an age-related focus on a performance (versus mastery) goal orientation. At this age, success as judged by social comparisons may be more important than as judged by more internal standards. However, this finding (i.e., children having a predominantly performance goal orientation) may also be a reflection of the validity of the constructs. This idea will be elaborated more specifically as attention is now turned to more comprehensive discussion of the specific findings.

THE RELATIONSHIP BETWEEN SPORTS PARTICIPATION AND SELF-CONCEPT

As hypothesised, a positive relationship was found between sports participation and some domains of self-concept. Children who were classified as high participators of total sport had significantly higher levels of perceived athletic competence, social competence, and global self-worth compared to low total participators. A trend indicated a similar difference between these groups on physical competence. Children classified as high participators of formal sport had significantly higher levels of perceived athletic competence and behavioural competence.

Self-concept has been cited by some researchers as the variable with the most potential to reflect positive psychological gains (Sonstroem & Morgan, 1988). The findings in the present study provided evidence to support this potential. This is also consistent with adult literature suggesting exercise helps people feel better about themselves (Weinberg &

Gould, 1995). Sport is often seen as a valuable activity for children to affiliate with others and learn social skills. The present study indicates that children who played more total sport (includes informal and formal sport) also perceived themselves to have more socially-based competence than children who did not play as much sport.

A strength of the current study was the inclusion of a multidimensional measure of self-concept: the SPPC portrays a potentially more comprehensive picture of children's perceptions of specific competencies compared to the more global measures of self-concept used in previous studies. The findings here provided support for this potential. One of the reasons some studies may have failed to find a relationship between sport participation and self-concept is because of the use of global conceptualisation and measurement of the construct.

The results of the current study found evidence in support of the idea that sport participation is more likely to influence particular domains of self-concept. The present study found perceived athletic, social, and to a lesser extent, perceived physical competence were significantly and positively to total sport participation. Children who participated in higher levels of formal sport also had significantly higher levels of perceived athletic competence. All three of these domains (athletic, social and physical) are thought to be affected by sports participation (Anshel et., 1986). Furthermore, a relationship was not found between any type of sport and perceived scholastic competence, which is probably the domain of self-concept thought to be least related to sport. These findings provide support for a situation-specific view of self-concept as it relates to sport involvement.

Other findings from the current study, however, indicated that sport participation was also related to domains of self-concept thought not to be so closely related to sport. Children who were higher participators of total sport showed higher levels of global self-worth supporting the idea that sport may have the potential to help a child feel generally better about themselves (Salokum, 1994). If children have higher perceived competence in a

number of specific domains, their overall self-worth may also be higher. A related explanation is that in playing sport, children have the opportunity to gain increased confidence and independence as well as succeed on their own merits. These abilities are thought to form the core of a positive self-concept (Porat, Lufi & Tenenbaum, 1989). Finally, children's global self-concept may be affected because they are participating in an activity which is valued by not only peers and family but also by society in general. This may be particularly true for New Zealand society where sport can at times have a dominant influence (e.g. All-Black rugby test matches).

High participators in formal sport were found to have higher perceived behavioural competence. This is not typically a domain past research has found to be associated with sport participation. For instance, Zaharopoulos & Hodge (1991) in their New Zealand-based study found that sport only affected physical ability self-concept. This finding is likely to be linked to other findings (discussed in more detail in the up coming section) that formal sport is associated with fewer emotional and behavioural problem, particularly externalising and social problems. Taken together, these two findings may suggest that children who participate in higher levels of organised sport through a school or club may perceive themselves to act both competently and appropriately.

Another implication of the current study was that children may not necessarily have to be competent at sport in order to gain psychological benefits from sport participation. Results showed children who perceived themselves to be more competent at sport (i.e.,. had higher athletic competence) also reported fewer emotional and behavioural problems as shown by significantly lower scores on the YSR problem scales compared to children objectively rated by an independent rater as competent. Here, perceptions of ability were found to be more important to emotional well-being than actual ability. Results showed perceived athletic competence to be significantly and negatively related to Total Problems, Internalising Problems, Withdrawn Problems, Somatic Complaints, Anxiety/Depression Problems, Social Problems and Attention Problems. In contrast, the teacher rating was only negatively correlated with Attention Problems. One caution to note here, the accuracy of

teacher's ratings must be considered since this form of measurement does not represent a comprehensive indication of children's abilities at sport.

This study did include potential indices of objective ability: number of sporting achievements and formal sports participation. Similar to the teacher ratings, number of achievements was not found to be associated with any problem behaviours. For formal sport, the assumption here is that children who play more formal sports probably tend to be more competent at sport than those who play fewer formal sports or participate in informal sport. Results showed that unlike the group of children rated by an independent rater as competent, the group of formal participators did report significantly fewer problem behaviours. In this study, perceived athletic competence was clearly and negatively related to emotional and behavioural problems whereas findings for children who are actually competent at sport were mixed, with higher formal sports participators showing some relationship and those with higher teacher ratings or more sporting achievements showing very little or no relationship. As a result of the current findings, research in this area is needed to distinguish the influence of sport on four groups (1) children high in perceived athletic competence and high in actual competence, (2) children high in perceived competence and low in actual competence (3) children low in perceived competence and high in actual competence, and (4) children low in perceived athletic competence and low in actual competence. In order to do this, these studies would need to also include more objective indices of ability (e.g. comparisons of national age-graded standards at different sports or skills).

An alternative interpretation of the just reported findings should be considered. The possibility exists that children with higher self-concept or perceived competence choose to participate in higher levels of total sport and more formal sport. However, even here, this interpretation supports the idea that sport is a positive option for children with higher levels of self-concept.

Based on past and present findings, sport may indeed be one avenue for improving some children's self-concept. The suggestion that children do not necessarily have to be skilled or competent at sport to report psychological benefits was supported in the present study. However, it is also likely that children with lower levels of perceived competence may not receive these benefits. Given that one of the reasons for children dropping out of sport may be low perceived competence, this is an issue educators should be aware of when working with children in the sporting domain. Increasing children's sporting-related perceptions of competence may be preventative. Such a focus may result in the enhanced well-being of the children as well as reduced future problems for the adults who look after them.

THE RELATIONSHIP BETWEEN SPORTS PARTICIPATION AND PROBLEM BEHAVIOURS

Results provided some evidence in favour of Hypothesis 5 which predicted that children's level of participation would be associated with fewer behaviour problems. Results showed the more formal sports children played and the longer they had been playing them, the lower their scores on Externalising Problems, Social Problems, Aggression Problems and Delinquency Problems. This is in contrast to a recent New Zealand study (Begg, et al, 1996) where adolescents who had higher sports participation rates were more likely to be delinquent. This finding is consistent with a large British study (Steptoe & Butler, 1996) which examined the same research question with older adolescents, with the authors concluding that emotional well-being was positively associated with extent of participation in sport among adolescents. The present study is able to replicate aspects of this study and extend it by using a New Zealand sample. The implication here is that playing more organised sport may act as a deterrent to some behavioural or emotional problems and enhance children's social and other life skills. Alternatively, some lesser behaved children may be "gated" at early stages and prevented from participating in more organised sports. Results showed that participants who participated in team sports did not have fewer problem behaviours than those participants who played individual sports. Similarly, both team and individual sports were positively correlated with Athletic Competence. That is,

children who play more of either team sports or individual sports had higher levels of perceived competence. No other relationship was found between these factors and any of the other self-concept domains. From these results, it appears type of sport, team or individual, does not have a mediating influence on the relationship between sports participation and emotional well-being. Therefore, the current study's hypothesis that team sport would be related to increased benefits was not supported. The present findings do not support the assumption that team sports typically provide more opportunities for children to increase the following social behaviours: cooperation , unselfishness, and learn to work as a team member or leader (Smith & Smoll; 1991; LeVeau, 1984).

More exploratory analyses showed a mixture of positive and negative relationships between particular sports and problem behaviours as measured on the YSR. First, athletics/harriers quite clearly showed a negative relationship with problem behaviours. That is, children with higher participation rates at athletics/harriers had significantly fewer Total Problems, Social Problems, Externalising Problems and Delinquency Problems. Similarly, cross-country (running) was negatively correlated with Delinquency Problems. These findings are consistent with adult literature on the positive psychological benefits of running (Weinberg & Gould, 1995). Past literature has also suggested that fitness-based sports may be associated with more gains than non-fitness sports (Pelham, et al., 1993). This may explain why these aerobic activities showed a stronger relationship to reduced problems compared to some other non-aerobic sports. However, this finding does not explain why other aerobic or fitness sports such as rugby or netball did not show a similar beneficial relationship with reduced problems.

In contrast, other findings show some sports were positively correlated with problem behaviours. One explanation for these findings may be that children with higher levels of some problems may actually choose particular sports. For instance, children with higher internalising problems may choose more individual sports. Results show that children who participated in horse-riding to be more likely to have higher scores on the Anxiety/Depression Problems subscale, Thought Problems subscale, and Attention

Problems subscale. Similarly, children who play squash had higher scores on the Thought Problems subscale. Children who cycle had higher total Internalising Problems. Children who participated in skiing had higher scores on the Attention Problems subscale. This evidence supports that idea.

Some of the correlations between particular sports and problem behaviours may have been mediated by gender. Achenbach (1991) and the current study have found that means between males and females differ on some of the YSR subscales. Females in general tend to have higher internalising scores than males, whilst males have higher externalising scores. This implies that higher scores on these domains as a function of gender is normative. Therefore, for some sports whose participation rates are dominated by one gender, a relationship between some of the YSR subscales was more likely. For instance, horse-riding and netball tend to be dominated by girls. Not surprisingly, a positive relationship between these sports and internalising problems was found. Similarly, rugby and pool/snooker tend to be played by boys, and they were also positively correlated with externalising problems.

But why might children with more problem behaviours engage in higher levels of some specific sports? Begg, Langley, Moffitt & Marshall (1996) suggest problem behaviour such as delinquency may be learned within particular venues which expose children to the influence of older children with problem behaviour. Another possibility is that sport is a domain that can be participated in outside of the classroom and outside the family. Children with problem behaviours like delinquency may be more motivated in particular to participate in this type of sport. Irrespective of emotional or behavioural problems, sport is one way for children to gain acceptance and status among peers outside the classroom (Brustad, 1992). For example, in the present study children who participated in more martial arts had higher scores on Externalising Problems. Martial arts may be a sport which provides an opportunity for children to vent their aggression and "fight" in a controlled, socially accepted manner. However, with regard to the findings concerning the relationship between specific sports and problem behaviours, the reader is cautioned. Most sports did

not show any relationships with specific problem behaviour. In addition, these analyses were more exploratory and because of the number of correlations inflating the potential for Type I errors, these results must be taken with some caution.

THE POTENTIAL OF TOTAL SPORT VERSUS FORMAL SPORT INFLUENCING EMOTIONAL WELL-BEING IN CHILDREN

Results generally indicated that sport participation may benefit children's emotional well-being. However, differential effects were found as a function of formal sports versus total sport participation. Formal sport participation showed a stronger relationship with reduced externalising problems and other problems as well as a positive relationship with perceived athletic and behavioural competence. Evidence regarding total participation was stronger in the area of perceived competence and weaker in the area of reduced problems. Results indicated while total participation may be associated with higher perceived competence in a number of areas, this type of participation is not necessarily associated with fewer behaviour problems. The reasons for this pattern of findings is not immediately clear. These finding may indicate that like adults, sport for children may need to be of a certain duration and intensity in order for certain psychological benefits to be achieved (Weinberg & Gould, 1995). Formal sport is likely to involve longer duration, more intensity and require more frequent participation and discipline than informal activities (e.g. kicking a ball around after school). Literature has suggested that formal sport is also more likely to influence important behaviours such as cooperation, tolerance, learning to be a team member, unselfishness, stress management, perseverance and risk taking (Smith & Smoll, 1991; Estrada, Geltand & Hartmann, 1988). The present findings provide some evidence in support of these suggestions.

Another suggestion relates to the requirements of children who participate in formal sport as compared to informal sport. Coaches and sports educators usually expect children's behaviour to be of a standard which will allow for team cohesion and participation without too many disruptions due to the behaviour of individual participators. Therefore, in formal

sports children generally have to be better behaved when participating than during informal participation where rules and requirements may not so important. The implication of this suggestion is that children with higher levels of emotional and behavioural problems may either be discouraged to participate or choose not to be involved with formal sports where they have to conform to a certain level of 'good behaviour". For instance, as Begg et al. (1996) suggest, conventional sports which incorporate many aspects of the broader society (e.g. rules, authority figures) may appeal to non-delinquent children. However, for the delinquent child, who by definition "violates the rules and norms of society," these activities may offer little appeal.

PARTICIPATION MOTIVATION

To gain a better insight into why children play sport, one of the aims of the study was to investigate participation motivation. Past research has found that across all ages and genders having fun tends to be the most common reason cited by children for participating in sport (Gould, Feltz & Weiss; Weinberg & Gould, 1995). The present study was no exception: both boys and girls rated fun as the top reason for playing sport, followed by to improve skills and fitness. The order of preference presents few surprises with the ranking of reasons for the sample being very similar to the reasons presented by Weinberg & Gould(1995), with one notable exception.

Despite the young age of participants in the study (11-13 years), "to get fit" ranked third and was a very popular reason to participate for both boys and girls. In other studies of participation motivation (Weiss, 1995; Gould, Feltz & Weiss, 1985), fitness was not found to be such a priority, at least not at this young age. This finding may reflect the growing societal awareness of a healthy lifestyle where fitness is often emphasised as a core component. This knowledge may be filtering down to the younger generation and be influencing participation motivation. Should this be true the likelihood is increased that the younger generation are more aware of living a more healthy lifestyle than previous generations. Future research should explore this issue more fully.

GENDER DIFFERENCES IN PARTICIPATION MOTIVATION

Table Four showed that competing was ranked fourth for boys in the sample and seventh for girls. This finding is consistent with the finding that boys tend to value sport-related achievement and status more than girls (Gould, Feltz & Weiss, 1985). The prediction that girls would have more affiliation-based reasons for participating was not supported. In fact, the opposite was found, significantly more boys included affiliation reasons than girls. That is, boys reported being more concerned with the social benefits of sport compared to girls. If boys tend to value status more than girls as has been suggested, reasons related to affiliation may be more of a motivation to participate. That is, it may be more important to be involved in activities that their peers are involved with to maintain status within the peer group. Generally , no differences were found between boys and girls on a variety of health-related reasons except girls did rate the reason "to stay healthy" as a significantly more important reason for participating in sport compared to boys. This finding reflects that girls may be somewhat more health conscious at this age. However, on the whole, few differences between the genders were found on this dimension.

AGE DIFFERENCES IN PARTICIPATION MOTIVATION

Overseas research has found that the average age for children to drop out of sport is around twelve years (Cox, 1994). Very little previous research-based information is available on New Zealand drop out rates. The Life in New Zealand Survey (Hillary Commission for Recreation and Sport, 1990) found that participation rates of most sports particularly winter and non-structured sports peaked between the ages of 11-13 years. However, this finding was unclear regarding the issue of drop-out. Does this finding infer children drop-out during or after this age? Due to this lack of clarity and based on findings in overseas research, the hypothesis that Form One students (typically 11-12 years) would have higher rates of participation than Form Two students (typically 12-13 years) was formulated. Results showed that apart from the number of formal sports children played for a club or school, this prediction was supported. Form One students played significantly greater

numbers of total sports compared to Form Two students. This finding provides some evidence to support previous overseas findings that children on average begin to drop out of sport at around 12 years (Cox, 1994). As the literature has suggested, as children get older, sport becomes more competitive. Therefore, those children who have persisted at sport and still play more sport may have experienced more success in the sporting domain. As Bandura (1977) suggests, such success is then associated with enhanced self-efficacy and, as Harter (1978) suggests, with enhanced self-perceptions.

Typically, drop-out refers more to withdrawing from formal or organised sport. The expectation of this study was that then Form Two children would also have played fewer formal sports than those students in Form One. The reason for this expectation was that as formal sport becomes more competitive, potentially less fun and probably begins to involve more normative comparison than does informal or leisure time sport (Weiss, 1995). However, Form One and Two students played a similar number of formal sports. There at least are two possible explanations for this finding. First, the drop-out age from formal sports for New Zealand children may be later than overseas drop-out rates (e.g. the U.S.). This may be possible given that the New Zealand culture can be sport-oriented and, as such, is likely to encourage and support children to continue participation in sport. The second explanation is that as children get older they may become less active in terms of participating in leisure time sport and specialise or maintain participation in a few formal sports in which they may be more competent. Future New Zealand-based research would help clarify the current findings.

ACHIEVEMENT MOTIVATION

According to theory, by the age of 12 years, children generally have more differentiated views of ability whereby competence is seen more in terms of ability (versus effort). As a result, these children may be more likely to have performance goals where they compare themselves to others and judge their success accordingly (Stipek, 1993). However, results showed there was no differences between Form One and Two students on performance

goal versus mastery goal orientations. The main finding was that both age groups had significantly higher levels of performance goal orientations. Children in the sample indicated they had less of a focus on mastery goals. In addition a mastery orientation was not found to be related to higher sports participation rates, higher levels of perceived competence or self-concept compared to children with a performance goal orientation. In fact, the performance-oriented group showed higher levels of total sports participation as well as significantly higher levels of athletic and physical competence and global self-worth. There are several possible interpretations of this finding. The items that were used to provide indicators of mastery and performance goals may not have been representative enough of these motivation orientations. Alternatively, children with performance goals simply have higher self-perceptions. A third interpretation is that even by Form One children had developed a differentiated view of ability. Whatever the reason, these findings suggest that having performance goals may not be as negative to self-concept as has been suggested in the literature. Nevertheless, children with performance goals may in the long term run into difficulties as their learning of sports skills becomes superseded by increased attempts to look good or win. Future research might include a more comprehensive assessment as well as different aged participants to clarify these issues.

PARTICIPATION RATES

Table 4 showed that the sports most played by participants were a mixture of individual and team sports. Swimming was the sport with the highest participation rate reported by both genders followed by running, rugby, hockey and cycling. This is in contrast to earlier findings by the Hillary Commission for Recreation and Sport (1990) where tennis was the main sport played by both boys and girls. In the present study, tennis was only ranked eighth. This could indicate a trend away from tennis and toward swimming by today's children. However, it must be remembered that these total scores of participation include informal participation. Therefore, children are likely to have included swimming at home

in a private pool or at the river as well as school swimming or private training. But the question remains, why might more children be involved in swimming? Schools may have increased the time allocated for children to participate in swimming. This explanation seems unlikely given that bulk funding for schools has meant cut backs, such that some schools can no longer afford their own swimming pools. Another reason may be that more children can actually swim than has been possible in the past. Recent public awareness about the necessity of being able to swim and subsidised campaigns such as Lotto's "Take the Plunge" have meant more young New Zealanders may currently have increased opportunities to learn to swim.

Running incorporates many facets of physical activity such as sprinting, jogging, and even games such as tag. Therefore there is little surprise that many children participate in this activity. An unexpected sport to show such high participation rates by both genders was rugby. Clearly this shows the changing trends in New Zealand sport. Even a decade ago, this sport most certainly would been almost solely the domain of males. Currently, it appears to have become more accepted that girls will give more sports "a go" including more physical contact sports such as rugby. Whilst much of this participation may be at an informal level, girls are now being allowed to be part of junior school or club teams, have their own grade in many areas at secondary school level and go on to play in women's grades. Likewise, more boys reported playing hockey as this sport no longer appears to be the sole domain of girls. Cycling was another sport with high levels of participation. Considering that at intermediate age bicycles are often a main mode of transport could partly explain this finding.

At the other end of the scale, martial arts, squash, gymnastics, skateboarding and skiing were the sports with the lowest rates of participation. Some of the reasons for this could be that some of these sports such as squash and marital arts may be more the domain of older adolescents whilst sports such as skiing are quite expensive or hard to access restricting the amount of families who are able to participate.

GENDER DIFFERENCES

Despite the findings just reported, gender differences were still apparent in some sports. Boys still have the dominant participation rates at cricket and soccer while netball is still played almost solely by girls. Socialisation patterns may mean some activities are classified as "male activities" and others are deemed to be "female activities." However, in New Zealand, these patterns may be changing with the area of sport reflecting this flux.

Past research has suggested that by the time children reach early adolescence, boys played more sport because they are encouraged to do so (Meeks & Mauldin, 1990). In the present study, boys did not have significantly higher Total Participation scores than girls. Moreover, girls actually played a similar number of sports for their school or club and for a similar period of time. As a result, these findings were not consistent with these earlier suggestions. Since much of literature in this area was overseas-based, this finding could perhaps reflect differences in sports attitudes by different cultures. As mentioned, New Zealand is often suggested to be a "pro-sport" nation. Such a cultural zeitgeist might then be reflected in similar gender-based participation rates. One other explanation of why more girls are participating in sport may be due to increased exposure to female sports role models. As Bandura (1979) suggests role models are an all important influence on self-development. It would be interesting for this sample to be followed up in several years to compare participation rates again to see if any gender differences had become apparent.

Gender-based differences were found based on the category of sport played. Results showed that boys played significantly more team sports than girls. This supported the hypothesis that predicted boys would play more team sports than girls. This finding is also consistent with previous research by Meeks & Mauldin (1990) who found that boys tended to prefer active or team sports compared to girls.

SOCIO-ECONOMIC STATUS

No differences emerged as a function of SES level. Unfortunately, it was difficult to obtain an accurate indication of participant's parent's SES level. First, the New Zealand Socio-Economic Status Index was outdated, the last edition being published in 1983. In recent years, pay rates, education level and types of occupations have changed, and these differences would likely effect the rating some occupations receive. Second ,a combined SES for participant's parents was not able to be calculated as the index did not make provision for combining male and female ratings and also because information was not obtained on family status: that is, whether a child came from a one or two parent family. Finally, many children were only able to give vague descriptions of their parent's occupations making classification more difficult yet.

ETHNIC GROUP DIFFERENCES

Analyses regarding ethnic group differences in sports participation rates and levels of emotional well-being are were not carried out since the vast majority of the current sample were Pakeha. Any differences found using low numbers for comparison may been illusory.

DIFFERENCES BETWEEN SCHOOLS

The most clear finding from analyses of participation rates of schools was that children from School Two and School Three had higher rates of participation than the other schools. School One was a country school which may have contributed to lower participation rates because of the difficulty of rural schools providing a variety of sports. Distance from competitions might also make it difficult for children from rural families to play formal sport. Both School Two and School Three are private schools which may have been an additional contributing factor to these findings. Often the philosophy of private schools is to encourage or reinforce increased participation in extra-curricular activities such as sport. In fact, in many cases, it is compulsory to participate in a sport or play for a team. That

said, there were few differences between schools on emotional well-being measures (YSR and SPPC). Therefore, there was no evidence to support the idea that higher levels of sports participation and improved emotional well-being was unduly influenced by specific schools.

COMPARISON OF SPORTS SAMPLE TO NORMATIVE GROUPS ON THE YSR AND SPPC.

A strength of the present study was the size of the . Over 200 Form One and Two students participated. Furthermore, the students came from a range of public and private schools and various family backgrounds. Comparisons between this sample and Achenbach's (1991) non-referred normative group were carried out. These comparisons show that the sport study sample obtained very similar scores as the normative group for all of the YSR problem subscales except Somatic Complaints. Both boys and girls in the current sample scored significantly higher on this problem scale compared to the norm group. The reasons for this are not immediately apparent. A possible explanation is that children misinterpreted the section asking about physical problems without known medical cause (see appendix C for question 56a-56h) and answered as though the questions were for any physical problem rather just for those without a medical cause. However, apart from this one difference, the two groups were very similar on the YSR. Likewise, the sport sample SPPC means and standard deviations are similar to the four samples provided by Harter (1985) and showed the same gender effects. That is, boys tended to see themselves as more athletically and physically competent, and have higher global self-concept compared to girls who saw themselves as better behaved. Therefore, the scores on these measures from the sport study appear to indicate the sport sample to be quite representative of children this age. This finding increases the external validity of the study.

CONSIDERATIONS AND LIMITATIONS OF THE STUDY

When drawing conclusions from the findings of the present study, it is important to consider several factors which may have placed limitations on the study. First, the Sports Questionnaire was devised by the researcher and was not an apriori empirically tested psychometric instrument. Therefore, the validity of the measure was previously untested, though internal reliability was found to be quite adequate.

Given that no other children's sporting questionnaire was available to elicit the type of information required for the study, it was necessary to design a questionnaire for these purposes. The only similar study (Steptoe & Butler, 1996) in which a sports questionnaire was employed was published after the present study was under way. Furthermore, this British study likewise produced their own similar sports questionnaire. Finally, much of the questionnaire used in the present study was objective in nature, simply asking for descriptive sporting information and many of the questions were based on past literature. Therefore, whilst the Sports Perceptions and Attitudes Questionnaire for Children was not empirically supported prior to this study, it nevertheless provided adequately reliable information to assess sports participation and give some indication of motivation patterns.

The three children's questionnaires used were self-report measures, meaning the measures relied on the children's own judgements of their behaviour and emotions. As previously mentioned, using self-reports does present some problems. For instance, Achenbach (1991) makes reference to the fact that parent, teachers and children will differ on ratings of the severity of emotional and behaviour problems. This is also likely to be true for ratings of sporting ability and self-concept. However, since one of the aims of the study was to assess the relationship between perceived ability and actual ability, this argument is not particularly relevant: self-ratings are obviously essential to assess self-concept.

To enhance the validity of the data obtained from the YSR, and the study in general, the researcher would have preferred to obtain information from parents and teachers using the

equivalent Teachers Report Form (TRF) and the Child Behaviour Check-List (CBCL). Unfortunately, due to time constraints, the schools participating, and the nature of the study, this was not possible. Such information would have provided a more comprehensive picture of participants and might be included in future studies.

A global rating by teachers was used as an indicator of actual sporting ability. The limitation of this rating is that it was only a general indication of ability. This meant that it may not have reliably differentiated between children who, for instance, excelled only at a particular sport versus children who may have some abilities in many sports. It was also a possibility that physical education teacher's ratings may been more indicative of children's sports ability than classroom teachers due to physical education teachers having more of a focus on the sporting domain. However, New Zealand classroom teachers are often involved in coaching and other sporting commitments. In terms of the rationale for this rating, it was decided that to ask teachers to do more than a simple global rating for each student would have been potentially inconvenient and resulted in reduced return rates. The advantage of the global rating was that the response rate from teachers was very good (with all but one teacher providing ratings of their students). Such a response rate would probably not have been likely if teachers were requested to undertake further ratings or use checklists such as the Teacher's CBCL.

The predominant reason a cross-sectional and correlational study was utilised for the present study was because of the constraints of conducting research at thesis level. Ideally, the researcher would have conducted prospective and experimental research in this area because pre-experimental or correlational studies have been criticised because as experimental control it is more difficult to infer causality (Leith & Taylor, 1990). However, this type of research does allow for feasibility, relevance of area studied, a potential absence of demand characteristic and potentially better adherence of participants to protocols. Having considered the researcher's resources and the demands on school's time, a single multitrait-multimethod assessment of students was found to be the best means of

obtaining data that struck a balance between comprehensiveness and (thesis-related) parsimony.

FUTURE DIRECTIONS

The present study provided evidence to support the psychological potential of sports participation for children. More research is needed to examine the relationship of children's participation in sport with particular emotional or behavioural disorders. In the future, sport may be a useful alternative therapy for improving children's self-concept and may help prevent problem behaviours. Fostering sports involvement and a healthy lifestyle in youngsters may help establish positive habits. That is, by encouraging children to become more involved in sport and educating them about the effects on physical and mental health, the implication is that by time they are teenagers they will take responsibility for their own fitness, adopting lifelong exercise habits that have lifelong benefits.

Whilst many New Zealand children are involved in some kind of sports participation, others either are reluctant to become involved, perhaps because of low self-perceptions of ability or because they haven't been given the opportunity to try the many sports that are available. More effort needs to be put into encouraging youngsters into become involved in some type of sport. As with any activity, exercise or sport may not represent "everyone's cup of tea." However, with so many different sports available, it may be a matter of some people finding a sport or exercise that suits them as an individual. Educators should be aware of individual preferences: being pressured to participate in certain sports may do more harm than good for some children.

"Look Sharp" is a New Zealand children's holiday sport programme where children get a chance to try a variety of physical activities (Kid & Handcock, 1995). The goal is to have

children adopt exercise habits as core life skills. Children get a chance to try sports in small groups in a safe, non-threatening environment where they are grouped together with peers of similar ability. So far, the programme has been met with enthusiasm and has been informally reported as being successful. Other programmes such as Kiwisport which adapt adult sports to children's skill and ability levels also provide increased opportunities for children to succeed at many types of sporting activities. However, systematic research that assesses the potential surrounding anecdotal reports of success is needed.

Sports educators need to be made aware of the importance of self-perceptions. The assumption from the present study is that if children's self perceptions of athletic competence can be enhanced, then not only will more children participate in sport and for a longer period, but they may be more likely to have improved emotional well-being. To achieve this, the emphasis on participating in sport for competitive purposes might be de-emphasised, with educators encouraging a cooperative learning environment, while promoting autonomy. Success defined in terms of mastery-based and personal-based goals rather than simply on winning may have long-term psychological benefits for children. A mastery perspective has the following potential benefits: mistakes or failures can be reattributed to controllable factors and used as guidelines for further learning, thus turning failure into an opportunity. From this perspective learning is enhanced as feedback is based on the individual's performance and progress and is quite specific in nature. Additionally, educators are important role models who are likely to influence children's self-perceptions of their sporting ability. As coaches, teachers, and parents begin to focus on individual progress and de-emphasise the notion of winning and losing, children very likely will do the same.

The current findings that greater participation in sport is positively associated with emotional well-being in a New Zealand sample contributes to the expanding evidence that links exercise and sport across the ages with psychological health. Recommendations for future research would include conducting another study using New Zealand children from an early age which would involve an experimental or longitudinal design. Such a study

could provide more conclusive evidence of the psychological effects on children from sports participation, particularly the connection between sport and problem behaviours (see also Beggs et al., 1996). The present study demonstrated many significant correlations between sports participation and emotional well-being. A fairly representative sample of 11-13 year olds was obtained, as was evidenced by the comparison with other norm groups of this age. However, to extend research in this area, future studies might also include higher proportions of New Zealand ethnic and cultural minority groups to examine the role of cultural influence.

The nature of conducting a correlational cross-sectional study meant it was not possible to conclude definitely that sports participation reduces the risk of mental-health problems and improves self-concept in children. In fact, the possibility exists that children who have higher levels of problem behaviours more often simply choose not to play sport or do exercise. Longitudinal studies would be particularly valuable to clarify whether sport "causes" enhanced emotional well-being or whether children with more enhanced emotional well-being play more sport, or whether it is a non-linear combination of these factors that underlies the current findings.

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APPENDIXA

YOUTH SELF-REPORT FOR AGES 11-18

For office use only
ID #

YOUR NAME

YOUR SEX ☐ Boy ☐ Girl

YOUR AGE

ETHNIC GROUP OR RACE

TODAY'S DATE
Mo. _____ Date _____ Yr. _____

YOUR BIRTHDATE
Mo. _____ Date _____ Yr. _____

GRADE IN SCHOOL _____

NOT ATTENDING SCHOOL ☐

IF YOU ARE WORKING, STATE TYPE OF WORK

PARENTS' USUAL TYPE OF WORK, even if not working now (Please be specific—for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.):

FATHER'S TYPE OF WORK: _____

MOTHER'S TYPE OF WORK: _____

Please fill out this form to reflect *your* views, even if other people might not agree. Feel free to write additional comments beside each item and in the spaces provided on pages 2 and 4.

I. Please list the sports you most like to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

a. _____
b. _____
c. _____

Compared to others of your age, about how much time do you spend in each?

	Less Than Average	Average	More Than Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

Compared to others of your age, how well do you do each one?

	Below Average	Average	Above Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

II. Please list your favorite hobbies, activities, and games, other than sports. For example: cards, books, piano, autos, crafts, etc. (Do not include listening to radio or TV.)

☐ None

a. _____
b. _____
c. _____

Compared to others of your age, about how much time do you spend in each?

	Less Than Average	Average	More Than Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

Compared to others of your age, how well do you do each one?

	Below Average	Average	Above Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

III. Please list any organizations, clubs, teams or groups you belong to.

☐ None

a. _____
b. _____
c. _____

Compared to others of your age, how active are you in each?

	Less Active	Average	More Active
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

IV. Please list any jobs or chores you have. For example: Paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

☐ None

a. _____
b. _____
c. _____

Compared to others of your age, how well do you carry them out?

	Below Average	Average	Above Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

V. 1. About how many close friends do you have? (Do not include brothers & sisters) ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week do you do things with any friends outside of regular school hours? (Do not include brothers & sisters) ☐ less than 1 ☐ 1 or 2 ☐ 3 or more

VI. Compared to others of your age, how well do you:

	Worse	About the same	Better	
a. Get along with your brothers & sisters?	☐	☐	☐	☐ I have no brothers or sisters
b. Get along with other kids?	☐	☐	☐	
c. Get along with your parents?	☐	☐	☐	
d. Do things by yourself?	☐	☐	☐	

VII. Performance in academic subjects. ☐ I do not go to school because _____

	Failing	Below Average	Average	Above Average
a. English or Language Arts	☐	☐	☐	☐
b. History or Social Studies	☐	☐	☐	☐
c. Arithmetic or Math	☐	☐	☐	☐
d. Science	☐	☐	☐	☐
Other academic subjects – for example: computer courses, foreign language, business. Do not include gym, shop, driver's ed., etc. e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

Do you have any illness, physical disability, or handicap? ☐ No ☐ Yes – please describe

Please describe any concerns or problems you have about school:

Please describe any other concerns you have:

Please describe the best things about yourself:

Below is a list of items that describe kids. For each item that describes you now or within the past 6 months, please circle the 2 if the item is very true or often true of you. Circle the 1 if the item is somewhat or sometimes true of you. If the item is not true of you, circle the 0.

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 1. I act too young for my age
0 1 2 2. I have an allergy (describe): _____
_____
_____
0 1 2 3. I argue a lot
0 1 2 4. I have asthma
0 1 2 5. I act like the opposite sex
0 1 2 6. I like animals
0 1 2 7. I brag
0 1 2 8. I have trouble concentrating or paying attention
0 1 2 9. I can't get my mind off certain thoughts (describe): _____
_____
_____
0 1 2 10. I have trouble sitting still
0 1 2 11. I'm too dependent on adults
0 1 2 12. I feel lonely
0 1 2 13. I feel confused or in a fog
0 1 2 14. I cry a lot
0 1 2 15. I am pretty honest
0 1 2 16. I am mean to others
0 1 2 17. I daydream a lot
0 1 2 18. I deliberately try to hurt or kill myself
0 1 2 19. I try to get a lot of attention
0 1 2 20. I destroy my own things
0 1 2 21. I destroy things belonging to others
0 1 2 22. I disobey my parents
0 1 2 23. I disobey at school
0 1 2 24. I don't eat as well as I should
0 1 2 25. I don't get along with other kids
0 1 2 26. I don't feel guilty after doing something I shouldn't
0 1 2 27. I am jealous of others
0 1 2 28. I am willing to help others when they need help
0 1 2 29. I am afraid of certain animals, situations, or places, other than school (describe): _____
_____
_____
0 1 2 30. I am afraid of going to school
0 1 2 31. I am afraid I might think or do something bad
0 1 2 32. I feel that I have to be perfect
0 1 2 33. I feel that no one loves me
0 1 2 34. I feel that others are out to get me
0 1 2 35. I feel worthless or inferior
0 1 2 36. I accidentally get hurt a lot
0 1 2 37. I get in many fights
0 1 2 38. I get teased a lot
0 1 2 39. I hang around with kids who get in trouble
0 1 2 40. I hear sounds or voices that other people think aren't there (describe): _____
_____
_____
0 1 2 41. I act without stopping to think
0 1 2 42. I would rather be alone than with others
0 1 2 43. I lie or cheat
0 1 2 44. I bite my fingernails
0 1 2 45. I am nervous or tense
0 1 2 46. Parts of my body twitch or make nervous movements (describe):
_____
_____
0 1 2 47. I have nightmares
0 1 2 48. I am not liked by other kids
0 1 2 49. I can do certain things better than most kids
0 1 2 50. I am too fearful or anxious
0 1 2 51. I feel dizzy
0 1 2 52. I feel too guilty
0 1 2 53. I eat too much
0 1 2 54. I feel overtired
0 1 2 55. I am overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains (*not* headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feel sick
0 1 2 d. Problems with eyes (describe):
_____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____
_____
0 1 2 57. I physically attack people
0 1 2 58. I pick my skin or other parts of my body (describe): _____
_____
_____
0 1 2 59. I can be pretty friendly
0 1 2 60 I like to try new things
0 1 2 61. My school work is poor
0 1 2 62. I am poorly coordinated or clumsy
0 1 2 63. I would rather be with older kids than with kids my own age

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	1	2	64.	I would rather be with younger kids than with kids my own age
0	1	2	65.	I refuse to talk
0	1	2	66.	I repeat certain actions over and over (describe): _____
0	1	2	67.	I run away from home
0	1	2	68.	I scream a lot
0	1	2	69.	I am secretive or keep things to myself
0	1	2	70.	I see things that other people think aren't there (describe): _____
0	1	2	71.	I am self-conscious or easily embarrassed
0	1	2	72.	I set fires
0	1	2	73.	I can work well with my hands
0	1	2	74.	I show off or clown
0	1	2	75.	I am shy
0	1	2	76.	I sleep less than most kids
0	1	2	77.	I sleep more than most kids during day and/or night (describe): _____
0	1	2	78.	I have a good imagination
0	1	2	79.	I have a speech problem (describe): _____
0	1	2	80.	I stand up for my rights
0	1	2	81.	I steal at home
0	1	2	82.	I steal from places other than home
0	1	2	83.	I store up things I don't need (describe): _____
0	1	2	84.	I do things other people think are strange (describe): _____
0	1	2	85.	I have thoughts that other people would think are strange (describe): _____
0	1	2	86.	I am stubborn
0	1	2	87.	My moods or feelings change suddenly
0	1	2	88.	I enjoy being with other people
0	1	2	89.	I am suspicious
0	1	2	90.	I swear or use dirty language
0	1	2	91.	I think about killing myself
0	1	2	92.	I like to make others laugh
0	1	2	93.	I talk too much
0	1	2	94.	I tease others a lot
0	1	2	95.	I have a hot temper
0	1	2	96.	I think about sex too much
0	1	2	97.	I threaten to hurt people
0	1	2	98.	I like to help others
0	1	2	99.	I am too concerned about being neat or clean
0	1	2	100.	I have trouble sleeping (describe): _____
0	1	2	101.	I cut classes or skip school
0	1	2	102.	I don't have much energy
0	1	2	103.	I am unhappy, sad, or depressed
0	1	2	104.	I am louder than other kids
0	1	2	105.	I use alcohol or drugs for nonmedical purposes (describe): _____
0	1	2	106.	I try to be fair to others
0	1	2	107.	I enjoy a good joke
0	1	2	108.	I like to take life easy
0	1	2	109.	I try to help other people when I can
0	1	2	110.	I wish I were of the opposite sex
0	1	2	111.	I keep from getting involved with others
0	1	2	112.	I worry a lot

Please write down anything else that describes your feelings, behavior, or interests

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS

APPENDIX B

What I Am Like

SAMPLE SENTENCE

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
(a)	☐	☐	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	☐	☐
1.	☐	☐	Some kids feel that they are very *good* at their school work	BUT	Other kids *worry* about whether they can do the school work assigned to them.	☐	☐
2.	☐	☐	Some kids find it *hard* to make friends	BUT	Other kids find it's pretty *easy* to make friends.	☐	☐
3.	☐	☐	Some kids do very *well* at all kinds of sports	BUT	Other kids *don't* feel that they are very good when it comes to sports.	☐	☐
4.	☐	☐	Some kids are *happy* with the way they look	BUT	Other kids are *not* happy with the way they look.	☐	☐
5.	☐	☐	Some kids often do *not* like the way they *behave*	BUT	Other kids usually *like* the way they behave.	☐	☐
6.	☐	☐	Some kids are often *unhappy* with themselves	BUT	Other kids are pretty *pleased* with themselves.	☐	☐
7.	☐	☐	Some kids feel like they are *just as smart* as as other kids their age	BUT	Other kids aren't so sure and *wonder* if they are as smart.	☐	☐
8.	☐	☐	Some kids have *alot* of friends	BUT	Other kids *don't* have very many friends.	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
9.	☐	☐	Some kids wish they could be alot better at sports	BUT	Other kids feel they are good enough at sports.	☐	☐
10.	☐	☐	Some kids are *happy* with their height and weight	BUT	Other kids wish their height or weight were *different.*	☐	☐
11.	☐	☐	Some kids usually do the *right* thing	BUT	Other kids often *don't* do the right thing.	☐	☐
12.	☐	☐	Some kids *don't* like the way they are leading their life	BUT	Other kids *do* like the way they are leading their life.	☐	☐
13.	☐	☐	Some kids are pretty *slow* in finishing their school work	BUT	Other kids can do their school work *quickly.*	☐	☐
14.	☐	☐	Some kids would like to have alot more friends	BUT	Other kids have as many friends as they want.	☐	☐
15.	☐	☐	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might *not* do well at sports they haven't ever tried.	☐	☐
16.	☐	☐	Some kids wish their body was *different*	BUT	Other kids *like* their body the way it is.	☐	☐
17.	☐	☐	Some kids usually *act* the way they know they are *supposed* to	BUT	Other kids often *don't* act the way they are supposed to.	☐	☐
18.	☐	☐	Some kids are *happy* with themselves as a person	BUT	Other kids are often *not* happy with themselves.	☐	☐
19.	☐	☐	Some kids often *forget* what they learn	BUT	Other kids can remember things *easily.*	☐	☐
20.	☐	☐	Some kids are always doing things with *alot* of kids	BUT	Other kids usually do things *by themselves.*	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
21.	☐	☐	Some kids feel that they are *better* than others their age at sports	BUT	Other kids *don't* feel they can play as well.	☐	☐
22.	☐	☐	Some kids wish their physical appearance (how they look) was *different*	BUT	Other kids *like* their physical appearance the way it is.	☐	☐
23.	☐	☐	Some kids usually get in *trouble* because of things they do	BUT	Other kids usually *don't* do things that get them in trouble.	☐	☐
24.	☐	☐	Some kids *like* the kind of *person* they are	BUT	Other kids often wish they were someone else.	☐	☐
25.	☐	☐	Some kids do *very well* at their classwork	BUT	Other kids *don't* do very well at their classwork.	☐	☐
26.	☐	☐	Some kids wish that more people their age liked them	BUT	Other kids feel that most people their age *do* like them.	☐	☐
27.	☐	☐	In games and sports some kids usually *watch* instead of play	BUT	Other kids usually *play* rather than just watch.	☐	☐
28.	☐	☐	Some kids wish something about their face or hair looked *different*	BUT	Other kids *like* their face and hair the way they are.	☐	☐
29.	☐	☐	Some kids do things they know they *shouldn't* do	BUT	Other kids *hardly ever* do things they know they shouldn't do.	☐	☐
30.	☐	☐	Some kids are very *happy* being the way they are	BUT	Other kids wish they were *different.*	☐	☐
31.	☐	☐	Some kids have *trouble* figuring out the answers in school	BUT	Other kids almost *always* can figure out the answers.	☐	☐
32.	☐	☐	Some kids are *popular* with others their age	BUT	Other kids are *not* very popular.	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
33.	☐	☐	Some kids *don't* do well at new outdoor games	BUT	Other kids are *good* at new games right away.	☐	☐
34.	☐	☐	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.	☐	☐
35.	☐	☐	Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves.	☐	☐
36.	☐	☐	Some kids *are* not very happy with the way they do alot of things	BUT	Other kids think the way they do things is *fine*.	☐	☐

APPENDIX C

SPORT QUESTIONNAIRE

A number of questions which boys and girls use to describe their sporting activities are given below. Read each question carefully and tick under the word that best describes you. There are no right or wrong answers.

1. HOW OFTEN DO YOU PLAY THE FOLLOWING SPORTS?

	Hardly-Ever	Sometimes	Often
Athletics/Harriers	____	____	____
Baseball/Softball	____	____	____
Basketball	____	____	____
Cricket	____	____	____
Cross-country	____	____	____
Cycling	____	____	____
Dancing	____	____	____
Gymnastics	____	____	____
Hockey	____	____	____
Horseriding	____	____	____
Marital Arts (e.g. karate, judo)	____	____	____
Netball	____	____	____
Rollerblading/In-line skating	____	____	____
Rugby	____	____	____
Running	____	____	____
Skateboarding	____	____	____

	Hardly-Ever	Sometimes	Often
Snooker/Pool	_____	_____	_____
Snow/Water Skiing	_____	_____	_____
Soccer	_____	_____	_____
Squash	_____	_____	_____
Swimming	_____	_____	_____
Tennis	_____	_____	_____
Touch Rugby	_____	_____	_____
Volleyball	_____	_____	_____
Other (please name):			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2) HAVE YOU EVER PLAYED ANY OF THE ABOVE SPORTS FOR SCHOOL OR A CLUB?

No _____

Yes _____ (please list)... _____

_____

_____

_____

_____

3) HOW LONG IN TOTAL HAVE YOU REPRESENTED YOUR SCHOOL(S) OR CLUB(S)?

Sports(from qu 2)	0-1year	1-2years	2-3years	4years +
_____	____	____	____	____
_____	____	____	____	____
_____	____	____	____	____
_____	____	____	____	____
_____	____	____	____	____

4) HAVE YOU EVER ACHIEVED ANY OF THE FOLLOWING IN THE SPORTS YOU PLAY?

Awards/Prizes ____
Been a team captain/leader ____
Represented your region (e.g. Wairarapa) _____
Won a tournament/grade/etc _____
Other _____

5) HOW MUCH DO YOU ENJOY PLAYING SPORT?

Not at all	Some	A Lot
_____	_____	_____

6) WHEN DO YOU ENJOY COMPETING AGAINST OTHER PEOPLE?

Hardly-Ever	Sometimes	Often
_____	_____	_____

7) COMPARED WITH MOST OTHER CHILDREN OF YOUR AGE HOW GOOD DO YOU THINK YOU ARE AT MOST SPORTS?

Not Good	Average	Very Good
_____	_____	_____

8) WHAT ARE YOUR MAIN REASONS FOR PLAYING SPORT? TICK AS MANY AS APPLY TO YOU.

To make me feel good... _____
To make other people like me... _____
I'm good at sport... _____
To be with my friends... _____
Only if I have to.... _____
So I can have fun... _____
I like to compete against others... _____
To get fit... _____
To do things with my family... _____
Because other people make me... _____
To control my weight... _____
To stay healthy... _____
To improve my skills _____
To challenge myself _____

9) PLEASE READ EACH SENTENCE CAREFULLY AND ANSWER: TRUE, FALSE OR DON'T KNOW.

	TRUE	FALSE	DON'T KNOW
I have good skills and ability in sport and physical activities.			
I'm poor at most sports and physical activities.			
I would like to play more sport than I already do.			
If I do well at sport I feel good about myself.			
If I do well at sport next time I play I try even harder.			
I avoid sport and physical activities if I can.			
Playing sport is fun and enjoyable.			
I have lots of energy when I play sport.			
Other people think I'm good at sport.			
If I do well at sport I usually think it was luck.			
If I try hard it doesn't matter whether I win or lose.			
If I'm feeling down sport helps me feel better.			
It's important to win.			

APPENDIX D

GLOBAL RATING SCALE OF STUDENTS' SPORTING ABILITIES

In the list provided below please write those students names who are participating in the sport study. Beside each name please provide an estimate of each student's overall ability at sporting activities on a scale of 1-5.

1 2 3 4 5

not good very good

NAME OF STUDENT	RATING
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	