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**GENDER DIFFERENCES IN ADOLESCENT
SELF-EFFICACY IN SPORT**

**A Thesis Presented
to the
Department of Kinesiology
Lakehead University**

**In Partial Fulfillment
of the Requirements for the
Degree of Master of Science
in
Applied Sport Science and Coaching**

**by
Scott R. Manktelow
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Abstract

The purpose of this study was to examine the effect of gender on sport self-efficacy in adolescents. The effect of age and sport participation on sport self-efficacy were also examined. Self-efficacy was assessed with two measures: self-efficacy to succeed in sport, and self-efficacy to initiate participation in sports. The sample was enlisted from three Thunder Bay, Ontario, high schools ($n = 292$) from two age groups: grade 9 and grade 12. Sport participation levels were assessed with a self-report measure of average weekly participation in sports. Self-efficacy to succeed was measured with a 9-point Likert scale using a modified Trait Sport-Confidence Inventory (Vealey, 1986), and a self-efficacy to initiate participation in sport tool. Written responses to several questions were also requested from sport nonparticipants for qualitative analysis. Quantitative results were analyzed using MANOVA. Findings identified a gender effect on self-efficacy to succeed in sport with males ($\bar{x} = 7.17$) demonstrating higher levels than females ($\bar{x} = 6.75$). Participation level had a main effect on both measures of self-efficacy. Age group was found to have no effect on any variables. The role of sport participation in the development of self-efficacy is discussed, including the influence of gender. Results are described in terms of self-efficacy theory as conceptualized by Bandura (1977).

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Introduction

The development of self-efficacy, during the formative and turbulent years of adolescence, may have a long-lasting influence on the manner in which individuals choose to live their lives. Those who are more efficacious with respect to their physical capabilities are more likely to adopt and maintain an exercise lifestyle (McAuley, 1992a). McAuley (1991) noted that highly efficacious individuals make more personally controllable attributions, which lead to a positive affect. Kleiber (1981) theorized that enhancing one's sense of competence in an activity and therefore increasing self-efficacy was a major source of enjoyment.

Actual performance in sports has been linked to self-efficacy by a number of studies involving children and youths (Feltz & Brown, 1984; and Weiss, Wiese, & Klint, 1989). In young (aged 8 to 13 years) soccer players, perceived soccer competence was found to be closely related to actual soccer competence (Feltz & Brown). As well, perceived soccer competence was more predictive of skill level than the less specific measures of physical and general competence.

During the years of adolescence, participation in sport declines (Brown, 1985) due to social, physiological, situational, and/or psychological reasons. Duquin (1978) found lower sport participation rates for adolescent females than for males. Whether individuals enter into physical activity and sports may depend on their confidence in themselves. During these years, perceived gender roles and differences may become more pronounced as social pressures guide behaviour. Self-efficacy research in the adolescent years, especially dealing with gender differences, has been quite limited. The majority of studies

deal with child and adult populations. This study aims to fill in some of the gaps in the self-efficacy and sport research.

Purpose

The purpose of this study was to examine the effect of gender on sport self-efficacy in adolescents. As well, there were a number of sub-purposes which were addressed relative to the main purpose:

- 1) to examine the effect of age and sport participation on sport self-efficacy in adolescents, and how these variables interact with gender;
- 2) to identify reasons for low levels of sport self-efficacy and sport participation in adolescents; and
- 3) to add to the existing literature in the operationalization of sport participation and self-efficacy.

Definitions

Self-Efficacy

Self-efficacy was defined by McAuley (1992b, p.107) as "the convictions or beliefs that one can successfully execute a course of action to produce a certain behaviour". More simply, self-efficacy represents a "situation-specific self-confidence" (McAuley, p.107).

Therefore, in the area of sport, it represents the beliefs which one has about her/his ability to execute a given skill, achieve a specific performance standard, or improve with hard work and effort. Self-efficacy may be indicative of one's actual actions while participating. As well, it may determine whether individuals enter into a sport in the first place, or maintain interest in it once they are involved. For the purpose of this study, sport self-efficacy will

include two facets, the individual's beliefs about her/his ability to: 1) enter into sports, and 2) to perform competently and/or successfully once engaged.

Sport

Edwards (1973, p.57-58) defined sport as: "...involving activities having formally recorded histories and traditions, stressing physical exertion through competition within limits set in explicit and formal rules governing role and position relationships". Without delving too deeply into the nature of sports, the concept of competition should also be explained. Martens (1971, p.8) conceptualized the objective competitive situation as: "a situation in which the comparison of an individual's performance is made with some standard in the presence of at least one other person who is aware of the criterion for comparison and can evaluate the comparison process". For the purposes of this study, a simply worded definition of sport was required to prevent confusion when respondents were completing their questionnaires. The main concepts from the two definitions described above were summarized to produce the following definition: any physical activity which has a set of rules which you play by, in which you compete against others or against standards.

Adolescent

Adolescence refers to the period of life between childhood and maturity (MacDonald, 1972, p.21). For the purposes of this paper, "adolescent" will refer to those in high-school, aged 13 to 19 years.

Theoretical Background

Self-Efficacy

The concept of self-efficacy was proposed by Bandura (1977) as a means of explaining behavioural change. In the realm of physical activity, it can apply to an individual's belief in her/his ability to initiate an activity, maintain an exercise program, perform at a certain level, win a game, or attempt difficult skills or actions. Highly efficacious individuals seek out new and challenging tasks, intensify their efforts when their performance falls short of their desired goals, and persevere despite repeated failure.

Self-efficacy can be gained from four major sources: performance accomplishments, vicarious experience, verbal persuasion (and other social influences), and emotional arousal (Bandura, 1977, 1986). Performance accomplishments are the most influential and enduring, as they involve actual mastery experiences. Perceived successes increase self-efficacy, while failures result in a decrease. However, repeated successes can strengthen positive efficacy appraisals, causing occasional failures to have little effect. For this reason, sport participation patterns are critical to the development of sport self-efficacy.

Vicarious experiences, through seeing or visualizing others perform successfully, can raise efficacy expectations by encouraging the observer to believe that he/she also has the ability to perform comparably. Observing perceived failures can result in lowered personal efficacy. Verbal and/or social persuasion can provide a means of influencing self-efficacy, although the results tend to be less enduring. Lastly, emotional arousal may indicate perceived stress or inadequacies to an individual, resulting in decreased efficacy.

Vealey (1986) divided sport-confidence into trait and state components, and developed separate instruments to measure each component. The Trait Sport-Confidence Inventory (TSCI) was developed and validated to measure how confident the individual was in participating in sport. It is therefore a measure of sport self-efficacy. The State Sport-Confidence Inventory (SSCI) measures how individuals feel at the actual time of competition in a sport.

Attribution

The study of self-efficacy exists within the larger area of self-referent thought (McAuley, 1992b) and is therefore closely linked to the concept of attribution. Attribution theory is concerned with how "individuals cognitively appraise the outcomes of achievement situations in terms of causality" (McAuley, p.101). Weiner (1985) explained these perceived causes of success or failure in terms of three common properties: locus of causality, stability, and controllability. The locus of causality describes whether the cause of the result is within or external to the attributer. Stability refers to variability of the cause over time; and controllability determines whether the cause is perceived to be under the control of the attributer or someone else. Perceived causes of success can help determine levels of self-efficacy, as all experiences are filtered through the process of attribution. If a winning performance is attributed to external, variable results, such as having skilled teammates, then personal efficacy would not show any significant gains. However, if a successful result is perceived as being caused by personal effort, ability, and/or practice, then self-efficacy would be strengthened to a much greater degree. Therefore, due to

differences in their attributions, the types of sport experience which individuals have can affect their sport self-efficacy in different ways.

McAuley, Duncan, and McElroy (1989) found that children who perceived themselves as more successful made attributions for their performance that were more stable and controllable. Higher efficacy expectations also resulted in attributions that were more stable and controllable. Those who perceived that their performance was due to their own abilities perceived their accomplishments to be under personal control. This suggests that in sport situations, these children would be more likely to develop higher levels of sport self-efficacy. However, in this study involving bicycle ergometers, success and failure were operationalized solely on the basis of winning or losing. Some of the children involved may have focused on feedback that was not based on how they compared to their competitors (i.e., exertion, fun, speed).

Motivation

Bandura's (1977, 1986) theory of self-efficacy was developed to explain behavioural change. In examining the reasons why individuals cognitively decide to behave the way they do, Bandura also addressed motivation. For example, when an individual with low self-efficacy approaches a task, he/she is less likely to attempt it than would an individual with high efficacy, and motivation to participate is reduced. If an individual has low efficacy expectations about her/his ability to perform a task successfully, then she/he will be less motivated to apply the effort necessary for achievement. The resulting poor performance will then reinforce the individual's lack of belief in her/his ability to be successful. For the purposes of this study, the relationship between self-efficacy and

motivation is very important, as any potential gender differences in motivation may have enduring repercussions on the individuals' lifestyle and physical activity choices.

Deci (1975) explained that motivation can be intrinsic or extrinsic. An intrinsically motivated activity is one in which "there is no apparent reward except for the activity itself" (Deci, p.23). Extrinsically motivated activities involve a reward such as material prizes, praise, status, or marks. Deci proposed that individuals are intrinsically motivated by a need to feel competent and in control of their environment. This conceptualization identifies the relationship between intrinsic motivation, self-efficacy (competence), and attribution (control).

Age Differences

Developmental Theory

According to Nicholls' (1978) developmental theory of achievement motivation, the feeling of competence is the critical mediator of performance and persistence. Perceptions of success and failure are based on the perceived demonstration of low or high competence. The perceptions individuals use to determine level of ability vary with age, as well as differences in situations and in individuals. Therefore, as the concept of ability develops with age, so does achievement motivation. By the age of 10 to 12 years, individuals conceive that ability is a capacity which limits the effect of effort on performance. During early adolescence, Horn and Hasbrook (1986) found that improvements in physical ability were determined by peer comparison.

Developmental changes in the concept of ability are also accompanied by changes in orientation toward participation in sport, which may be of a task or ego nature (Duda,

1989). Nicholls (1984) described a task orientation as one in which personal improvement or task mastery reflect high competence, and therefore indicate success. Within an ego orientation, subjective success is based on comparison to others. Nicholls stated that children begin at a young age with a task orientation, progress to an ego orientation, and by age 10 to 12, use a combination of the two. Duda found that high school athletes with a task orientation tended to believe that sport should teach people the value of trying one's best, cooperating with others, following the rules, being a good sport, and being honest. Those with a task orientation believed that sport should enhance one's self-esteem and increase the chances of choosing a healthy lifestyle. On the other hand, athletes who demonstrated an ego orientation tended to believe that sport should increase one's social status and teach people how to "get ahead" in the world. They believed that sport would lead to extrinsic rewards such as money, better schooling, and better careers.

As the development of task and ego orientations affects the ways in which individuals are motivated, it can therefore have an impact on their self-efficacy. Ego oriented individuals might attribute success only to winning or beating their opponents. As a result, their sport self-efficacy might be enhanced only when they are victorious. A task orientation might result in more positive attributions based on successful execution of skills or improvements over previous ability. These attributions are more likely to result in perceived success or mastery experiences to the individual, and therefore strengthen self-efficacy.

Motivation and Enjoyment

Scanlan and Lewthwaite (1986) found that those who demonstrated higher efficacy concerning their ability experienced more enjoyment than their counterparts. They also found that the younger athletes showed greater enjoyment than did the older. This was supported by Harter and Connell (1984, in Biddle & Armstrong, 1992), who suggested that the intrinsic mastery focus becomes more extrinsic from the ages of 8 to 14 years. This may be influenced by differences in social pressures, parental influence, orientation (task or ego), or other age related factors (Bandura, 1977).

Brown (1985) found that continued participation of adolescent females in a competitive swimming program was not based solely on the degree of success attained or the rewards received. Attrition was associated with a combination of influences, including the increased relative importance of other activities, encouragement to pursue other activities by significant others, decreased commitment, and distancing from the athlete role (Brown, 1985). Gender-related causes of attrition for females from competitive swimming participation were not found.

Wankel and Kreisel (1985) sampled male sport participants from four age levels ranging from 7 to 14 years old to determine the factors underlying their sport enjoyment. Intrinsic factors, such as the excitement of the sport, personal accomplishment, testing skills against others, and just doing the skills were identified as the most important by all age groups. Extrinsic factors such as pleasing others, winning the game, and winning rewards were identified as the least important. These results suggest that most children and

adolescents maintain a task-orientation toward sport participation which may favour positive attributions which strengthen self-efficacy.

Motivation and Competence

Anderson and Pease (1981) studied fifth and sixth grade students, and observed that children with low levels of motor and social skill valued extrinsic rewards to a greater extent than highly skilled children. Intrinsic rewards were more important to the children with high levels of social skills than to children with low levels. Ulrich (1987) found that children's perceived physical competence was not correlated to motivation to participate in organized sports. She suggested that young children participate for a variety of reasons (such as fun and being with friends), and improve their skill level and sense of competence as a result. Eventually, with experience, the connection between perceived competence and motivation becomes established.

This theory was substantiated by Ryckman and Hamel (1993), who described a relationship between perceived physical ability and motives to participate in sport, for adolescents. They found that high school athletes with high perceived physical ability believed that skill development, team affiliation, and having fun were more important reasons for participating than did athletes with low perceived physical ability. Those with high perceived physical ability were more intrinsically motivated, and less extrinsically motivated than those with low perceived physical ability. However, in general, intrinsic motives appeared to be more important than extrinsic for all participants. The sport participation motives of achievement/status, friendship, fitness, and energy release were not seen to differ based on perceived physical ability. When comparing males and females,

Ryckman and Hamel did not find any significant gender differences in their motives to participate. This study addressed only athletes. In a general population, which would include non-athletes as well, these results might differ greatly.

Anxiety in Youth Sport Participants

Anxiety, due to competitive stress, has been linked to self-efficacy by a number of researchers (Lox, 1992; Martin & Gill, 1991; Scanlan & Passer, 1978; and Weinberg & Ragan, 1979). It can influence motivation to participate. Perception of an imbalance between the perceived response capabilities of the individual and the demands of competition can result in anxiety (Scanlan & Passer). Low self-efficacy can increase anxiety in competitive situations, by creating a large perceived imbalance. Scanlan and Passer found that a child's postgame state anxiety was determined by his/her perception of the "adequacy of his actual response in meeting the demands of the competitive situation" (p.107), including whether he/she won or lost. Postgame state anxiety is reduced to the greatest extent when the participating children have had "fun" during competition. Watson (1984) identified that competition itself is viewed differently by children than it is by adults. The imposition of the adult centered model on children's sports can be a source of anxiety to children, and may reduce their motivation to play.

Lox (1992) observed that cognitive anxiety was significantly correlated to uncertainty regarding personal performance. As well, self-efficacy and self-confidence were significantly related to perceived threat (the perception of danger arising from a competitive situation). Brustad (1988) found that competitive trait anxiety was predicted by low self-efficacy in both boys and girls in a basketball league. He demonstrated that children with

high levels of competitive trait anxiety experienced more frequent performance-related and evaluation-related worries. This suggests that their perception of failure and/or negative evaluations from competition would produce a negative affect.

As a result of the adult centered model, many children and adolescents may quit sports forever. Terminated sport participation is likely to result in a decrease in sport self-efficacy. As well, the negative verbal persuasion often received by children in the adult centered model of sports is also likely to reduce self-efficacy.

The Development of Self-Esteem

Children's self-esteem has recently been linked to motivated behaviour in sport through attributional style (Weiss, Ebbeck, McAuley, & Wiese, 1990). Weiss et al. found that children high in self-esteem made attributions for both physical and social competence that were more internal, stable, and higher in perceived control than did low self-esteem children. Allgood-Merten and Stockard (1991) related self-esteem to self-efficacy, stating that self-efficacy was generally associated with self-esteem in a sample of fourth grade children. This could suggest that self-efficacy development may be quite valuable in the total growth of children. It should be noted that Allgood-Merten and Stockard's conceptualization of self-efficacy was as a masculine gender-typed trait.

The transitions from childhood to adolescence, and adolescence to adulthood are often described as stressful periods. In spite of this, a number of studies have identified a gradual increase in self-esteem throughout this time (Nottelmann, 1987; O'Malley & Bachman, 1983; Simmons, Van Cleave, Blyth, & Bush, 1979). As well, in some individuals, self-esteem may decrease with age. Simmons et al. observed that this could

occur as a result of major changes in the individuals' lives such as changing schools or dating. However, in the adolescent group studied, dating was found to result in a loss of self-esteem for females only. This may result in some gender differences in self-esteem and self-efficacy.

Gender Differences

Gender differences in self-efficacy and other related variables will be discussed in the following section. The sections on "Age Differences" and "Participation" also include some discussion of gender differences related to those topics.

Competition and Orientation

Weinberg and Ragan (1979) found that, in males, intrinsic motivation was higher during competition than when not competing, yet remained at the same levels in females. In this study, they also observed that those who experienced success were found to exhibit higher levels of intrinsic motivation than those who experienced failure. There were some confounds to these findings. Weinberg and Ragan used a pursuit rotor for their study, likely reducing the amount of intrinsic motivation individuals could experience, due to the boring nature of the task. Sporting environments are commonly much more stimulating and offer many more opportunities for intrinsic motivation than a pursuit rotor. This study does, however, demonstrate that experiencing success increases an individual's sense of competence and belief in her/his ability to perform the task, and that males and females may react to competition differently.

Duda (1989) found that males tended to be more ego oriented and females more task oriented in sport. This again would suggest that males are more likely to be interested

in competitive activities such as sports. Gender differences in sport participation rates might be expected, resulting in differing levels of sport self-efficacy. However, there are many sociological and situational variables which have yet to be addressed.

Status and Gender Roles

There may be good reason for gender differences, as Eitzen (1976) found that in American high schools, sport participation is a source of status and popularity for males only. He identified "being an athletic star" (Eitzen, p.139) as the most important attribute for male popularity. However, for females, popularity was based on parents' achievements, good looks, and possessions. This suggests that self-efficacy, based on perceptions of success and failure, may differ between genders. It should be noted that social trends over the past 20 years may have changed these gender-typed beliefs of typical adolescents. If this study was conducted today, a different profile of this group might result.

In a more recent study of stereotypical characteristics, Die and Holt (1989) found that the first year university students they studied showed little gender differences in their amounts of "masculine" (e.g., competitive, ambitious, and logical) behaviours. There were no differences between athletes and nonathletes. However, nonathletic females described greater amounts of "feminine" (e.g., tactful, sensitive, and expressive) behaviours than female athletes and all males. The results of this study suggest a trend in today's North American society away from the traditional conceptions of masculinity and femininity in sports.

With a younger population, Corbin and Nix (1979) observed that girls had a lower self-confidence to succeed than boys, prior to a competitive "male-type" physical activity.

The children involved described motor tasks involving strength, speed, or power as being "male" activities. However, after cross-sex competition, in which the girls succeeded in these activities as often as the boys, there were no longer any gender differences in self-confidence. Activities which were perceived as gender-neutral resulted in no differences in self-confidence to succeed. Deaux and Emswiller (1974) suggested that gender differences in children's self-confidence may have an attributional cause, as a performance result which is perceived as a consequence of skill by males is perceived as luck by females. As well, Crandall, Katkovsky, and Preston (1962) stated that boys are more likely to state success expectancies equal to or above their ability, while girls are more likely to state expectancies below their ability level. It is suggested that this difference is a result of the rewarding of boys for their success predictions, while girls are discouraged, especially in an activity perceived to be "male" in orientation.

Participation

Adult Populations

Godin and Shephard (1985) found that older (aged 45-74 years) women had more negative concepts about their bodies than did men. As well, the women in the study demonstrated a lower total physical self-efficacy and perceived physical ability than did the men. The authors suggested that these results may reflect the cultural constraints of a particular era, as few of these women were active when they were younger. Feltz (1988) tested a younger group of adults, using college students in a high-avoidance, back-diving task. In this group, no gender differences were observed in self-efficacy.

In an adult population, McAuley (1992a) noted that females tended to have lower levels of exercise self-efficacy at the early stages of participation than did males. All participants were put through a 20 week training program. At the end, there were no longer any apparent differences in their perceived exertion capabilities. This suggests that participation has an influence on self-efficacy.

Youth Populations

The link between self-efficacy and motivation was examined by Roberts, Kleiber, and Duda (1981) who analysed the role of Harter's concept of "perceived competence" (self-efficacy) in sport participation of children in grades four and five. They noted that sport participants were higher in perceived competence, were more persistent, and had higher expectations for future success than did nonparticipants. Sport participants were found to score significantly higher on scales of cognitive competence, physical competence, and general self-worth. It was not known whether this difference was caused by selection or by development which resulted from sport participation. They suggested that "children with higher perceptions of physical competence engage in physical activities which allow them to demonstrate that ability" (Roberts et al., p.212). As well, they found gender differences in perceived competence relative to teammates. In boys, these perceptions correlated with physical competence, while in girls, they correlated with cognitive, social, and physical competence. Based on these results, it was hypothesized that, due to cultural expectations, only girls who perceive themselves as generally competent participate in sports. It is interesting to note that there was also a significant, albeit small, relationship

between the number of years of playing experience and both perceived soccer competence and physical competence.

Biddle and Armstrong (1992) observed a correlation between the activity level of children (11 to 12 years of age) and their motivational orientation. For boys, intrinsic (and mastery) motivation toward physical education and sport was correlated with activity levels. For girls, there was a difference between the "active" and "less active", based on their physical self-perception and motivation scores. In general, they noticed that boys appeared to pursue physical activity for its own intrinsic challenges while girls pursued it to receive the extrinsic opinions or evaluation of the teacher. It was suggested that this difference reflected a greater social acceptance of physical activities and sports in males which compelled the females to seek stronger social support for their actions. As a result, girls tended to seek approval and guidance from the teacher for participation or else seek easier tasks. However, Biddle and Armstrong also noted that physically active girls scored higher on measures of physical self-worth, global self-esteem, and perceptions of an attractive body.

Sport Participation and Empowerment

Blinde, Taub, and Han (1993) conducted telephone interviews with 24 female athletes in Division I American university sports programs. The athletes' responses to the open ended questions identified three outcomes of participation in sport which reflected personal empowerment:

- 1) bodily competence;
- 2) perceptions of a competent self; and

- 3) a proactive approach to life.

These responses suggest that women's participation in sport can be beneficial in overcoming traditional negative expectations of women's personal power and role in society. Confidence, self-efficacy, and empowerment are related variables, all of which may be influenced by individuals' participation in sports. Blinde et al. (1993) provided greater justification for the need for studies which identify means for providing positive sport experiences. Any gender inequalities which are evident in sport participation and self-efficacy may have a larger impact in terms of personal empowerment and social equality. The findings of Blinde et al. have some shortcomings; as all the interviewees were successful athletes. However, it does identify that sport had significant value for these individuals.

Hypotheses

It was hypothesized that:

- 1) males will demonstrate higher levels of sport self-efficacy than females;
- 2) gender differences in sport self-efficacy will be greater in older adolescents than in younger; and
- 3) sport participants will demonstrate higher levels of sport self-efficacy than sport nonparticipants.

Methodology

Participants

A sample ($n = 292$) of adolescents was obtained from three Thunder Bay high schools (4 to 5 classes from each school) in the Lakehead Board of Education. Three schools were used in an attempt to minimize interschool socioeconomic and cultural differences. Two age groupings were used, based on grade level, to differentiate early from late high school adolescents: 1) grade nine ($\bar{x} = 14.0 \pm 0.21$ yrs.), and 2) grade twelve ($\bar{x} = 17.3 \pm 0.81$ yrs.). To ensure a more representative sample of high school students, students were selected from required classes. Physical education classes were used for the grade nines, and english classes for the grade twelves. Both of these were required courses. A total of 14 classes were selected from the three schools (8 grade nines [$n = 161$] and 6 grade twelves [$n = 131$]). As a result, a wide range of sport participation levels were represented, as were both genders (160 male, and 132 female participants).

Design

A $2 \times 3 \times 2$ (gender by sport participation by age group) quasi-experimental, between subjects, cross-sectional design was used to ascertain differences in self-efficacy toward sport. The dependent variable of sport self-efficacy was determined with two measures:

- 1) self-efficacy to succeed in sport, and
- 2) self-efficacy to initiate participation in sport.

After initial analysis, age group was found to have no effect on participation level or either measure of self-efficacy (see Results section). As there was no significant difference

between the two grades, they were accepted as one homogenous group. This encouraged the researcher to pursue further analysis including only two independent variables (gender by sport participation), with age collapsed into one group.

Procedure

Written consent from the students and their parents was requested two days prior to the administration of the questionnaire (see Appendix A). As well, at this time a brief introductory statement concerning the purpose of the study was provided.

In a classroom setting, the students involved completed a four-part questionnaire (see Appendix B). The first component assessed general characteristics of the individual (gender, grade, and age), as well as her/his level of participation in sports and physical activities (see Appendix B, Section A). Sport participation is difficult to operationalize, and currently there is little research addressing the topic. A sport participation pilot study was used to arrive at the final method of assessing participation in this study. Three pilot groups of university students were used ($n = 49$). The first two groups completed differing questionnaires designed to measure their sport participation. Respondents were then asked "Does this questionnaire accurately represent how much you participate in sport?". Their verbal and written responses were analysed to arrive at a third questionnaire which was then provided to the third pilot group. Feedback from the last group aided in the final adjustments to arrive at the participation measuring instrument to be described.

Sport participation was operationalized for each individual by determining the total number of hours spent in sports or physical activity in an average week. Activities included in this had to be compatible with the definition of sport provided in the introduction, or be

activities which could be used as training or practice for sports (i.e., weight training, jogging, aerobic dance). These other activities, which do not fulfill the definition of sport, were included because it was felt that there would be a transfer effect of training/practice activities into sport (as that is the purpose of training or practice) which would be represented in self-efficacy levels. Hours spent in physical education class were included, as well, if the individual was enrolled in the course. Those who identified seasonal variations in their participation patterns had their total hours adjusted to reflect that of the busiest time of their year (note Appendix B, Section A: "If '*more than*', or '*less than*', explain how your activity levels usually differ over the course of the year."). The total population was then divided into three groups (high, medium, and low) by splitting the total sample into three approximately equal groups based on their average weekly participation. Those in the lowest 33.3 % (n = 95) of weekly hours became the "low participation" group. The next 33.3 % (n = 99) became the "medium participation" group, and the remainder (n = 98) were placed in the "high participation" group. Participation values for each of these groups are described in the Results section (Descriptive Analyses: Frequencies).

The second component of the questionnaire (see Appendix B, Section B) is a modified Trait Sport-Confidence Inventory (Vealey, 1986) which has been validated for sport environments and measures self-efficacy based on Bandura's (1977) conceptualization of self-efficacy. The wording was modified to be applicable to a more generalized (non-sport) population. These modifications included adjusting the individual with which the respondent is to compare her/his confidence to from "the most confident person you know" to "the average person" (of similar age and gender). Based on Bandura's (1977)

conceptualization of self-efficacy, specificity is necessary for valid measurement. These modifications made the questionnaire specific to the study sample. This inventory was used to assess the participant's level of self-efficacy to succeed in sport.

The third component of the questionnaire examined the participant's self-efficacy to initiate participation in sport (see Appendix B, Section C). The current literature has not identified tools for measuring this concept. Therefore, self-efficacy to initiate participation in sport was measured by a series of questions, based on Bandura's (1977) conceptualization of self-efficacy. It utilized the same Likert scale format as Vealey (1986), to maintain consistency throughout the questionnaire. The questions used have been modified from the questionnaires of others (Godin & Shephard, 1985; Martin & Gill, 1991; and Roberts et al., 1981) and independently developed based on the principles of Bandura (1977).

Lastly, a qualitative component was included to provide insight into why individuals do not participate in sports (see Appendix B, Section D). This involved two written, open-ended questions. This section was included to provide some insight into the possible barriers to participation. As well, it may reveal gender or age related factors which are present in the population.

The respondents were encouraged to ask the researcher about anything they found unclear or did not understand about the questionnaire.

Data Analysis

Differences in sport self-efficacy were initially determined using a 2 x 3 x 2 factorial MANOVA (gender by sport participation by age group). However, as stated above (Design), the age groups were then assimilated, and a 2 x 3 factorial MANOVA (gender by sport participation) was also executed. Written responses concerning reasons for not participating in sports were qualitatively analysed for content by thematizing into categories.

Results

In this section, gender and participation group differences are analysed on both measures of self-efficacy:

1. self-efficacy to succeed in sport, and
2. self-efficacy to initiate participation in sport.

As well, homogeneity of age groups (grade) is described. Lastly, the qualitative analyses address the responses of those individuals who identified themselves as non-participants in sport. Their answers to the two questions are categorized to provide a description of the content.

Descriptive Analyses

Frequencies

Of the total participants in the study ($n = 292$), 54.8 % ($n = 160$) were male and 45.2 % ($n = 132$) were female. These included 161 (55.1 %) grade nines, and 131 (44.9 %) grade twelves.

Participation groups were operationalized by dividing the total sample into thirds, based on their average weekly hours of sport participation. As a result, those with less than 10.00 hours/week ($n = 95$, 32.5 %) or less were placed in the low participation group. The medium participation group included all students from 10.00 to 17.00 hours/week ($n = 99$, 33.9 %). The high participation group was made up of those who described an average weekly participation level of greater than 17.00 hours/week ($n = 98$, 33.6 %). Distribution of gender and age group by participation category can be observed in Tables 1. Further

detail is available in Appendix C, Table 7. It should be noted that sample sizes differed between gender and age groups more in the high than the low participation group.

Table 1
Summaries of population by sport participation category

Group	Low		Medium		High		Total	
	n	%	n	%	n	%	n	%
Gr.9	48	16.4	52	17.8	61	20.9	161	55.1
Gr.12	47	16.1	47	16.1	37	12.7	131	44.9
female	51	17.4	44	15.1	37	12.7	132	45.2
male	44	15.1	55	18.8	61	20.9	160	54.8

Means and Standard Deviations

Self-efficacy. Level of self-efficacy was measured by two scores. The first, measuring the individual's self-efficacy to succeed in sport, was obtained from the mean of 13 questions with responses in a 9-point Likert Scale format. The mean score of the total sample was 6.98 ± 1.23 , with a range of scores from 2.31 to 9.00. Table 2 describes scores for each group based on gender and participation level. Grade nine participants had a mean score of 6.96 ± 1.29 , and grade twelves had a mean of 7.01 ± 1.16 .

The second measure, self-efficacy to initiate participation in sport, was measured in the same manner as the first measure, though it was based on five questions. The mean score for the total sample of participants for this measure was 6.46 ± 1.44 , with a range of scores from 2.20 to 9.00. Table 3 illustrates mean scores based on gender and participation

Table 2
Self-efficacy to succeed in sport by participation category

Gender	Low		Medium		High		Total	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Female	6.18	1.36	6.90	1.03	7.36	0.92	6.75	1.24
Male	6.51	1.43	7.28	0.94	7.55	1.02	7.17	1.19
Total	6.33	1.40	7.11	1.00	7.48	0.98	6.98	1.23

level. The responses of those in grade nine indicated a mean of 6.59 ± 1.45 , while the grade twelve scores revealed a mean of 6.30 ± 1.42 . A more detailed breakdown of self-efficacy scores is available in Appendix C, Tables 8 and 9.

Table 3
Self-efficacy to initiate participation in sport by participation category

Gender	Low		Medium		High		Total	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Female	5.71	1.63	6.50	1.37	6.84	1.19	6.29	1.50
Male	5.75	1.45	6.82	1.11	7.02	1.29	6.60	1.39
Total	5.73	1.54	6.68	1.23	6.95	1.25	6.46	1.44

Age. The mean age of the total sample was 15.4 ± 1.71 years, with the grade nine group averaging 14.0 ± 0.21 years, and the grade twelve group averaging 17.3 ± 0.81 years.

Ages ranged from 13 to 15 years for the grade nines, and 16 to 20 years for the grade twelves.

Participation. Average hours of weekly participation in sports or related physical activity for the total sample was 14.48 ± 8.47 hours, ranging from zero to 41.0 hours per week. After the sample was divided into the three participation groups, the low participation group had a mean of 5.94 ± 2.46 hours/week. The medium participation group averaged 12.88 ± 2.03 hours, and the high participation group averaged 24.38 ± 5.69 hours/week. Differences in weekly hours of participation between genders and age groups are illustrated in Table 4.

Table 4
Average weekly hours of sport participation

Gender	Gr.9		Gr.12		Total	
	hours	SD	hours	SD	hours	SD
Females	13.92	7.84	12.65	9.38	13.42	8.47
Males	16.17	7.92	14.52	8.85	15.35	8.40
Total	15.05	7.94	13.78	9.07	14.48	8.47

Correlations

The two measures of self efficacy: self-efficacy to succeed in sport, and self-efficacy to initiate participation in sport, were found to have a strong positive correlation of .72. As well, it should be noted that average weekly hours of participation was found to have a low correlation with self-efficacy to succeed in sport ($r = .38$), and self-efficacy to initiate participation in sport ($r = .33$).

Statistical Analyses

Primary Analysis. Differences in self-efficacy between gender, sport participation group, and age group were analysed with a 2 x 3 x 2 (gender by sport participation by age group) multivariate analysis of variance. The two dependent measures were:

1. self-efficacy to succeed in sport, and
2. self-efficacy to initiate participation in sport.

Secondary Analysis. A secondary 2 x 3 (gender by sport participation) MANOVA was employed following evidence of homogeneity of age groups.

Age Group Homogeneity

A 2 x 2 factorial ANOVA was used to analyse gender and age group for differences in average weekly hours of participation. No interaction effects were observed. A main effect was observed for gender ($F_{(1,218)} = 4.202, p < .05$), with males describing significantly higher levels of participation than females. However, there was no main effect for age group. This result encouraged the researcher to remove age group as an independent variable, and therefore, grade nines and twelves were accepted as a single homogenous group for further analysis (see Figure 1). As well, the primary analysis using the 2 x 3 x 2 (gender by sport participation by age) multivariate analysis of variance, identified that age group had no effect on either measure of self-efficacy.

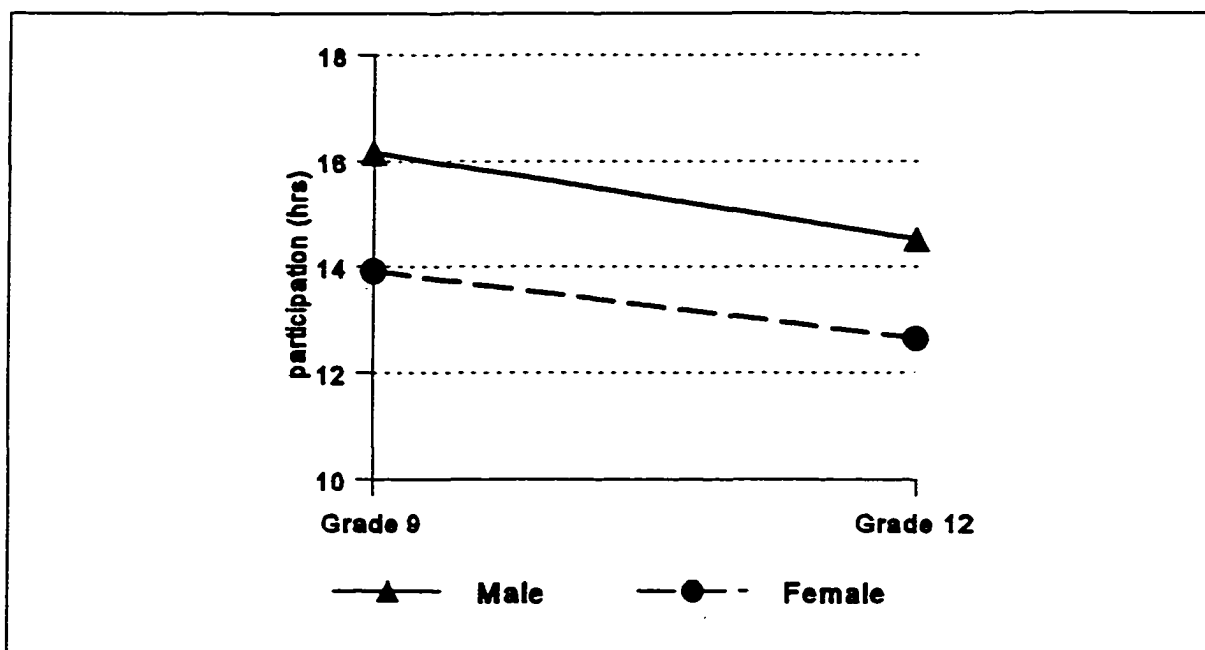


Figure 1. Average weekly hours of sport participation, by gender and age group.

Self-efficacy

Interaction effect. There were no interaction effects of gender, sport participation, and/or age group on either of the dependent measures of self-efficacy. When the age group factor was excluded, there was still no interaction effect of gender and participation.

Gender. No main effect was observed during primary analysis (three-factor MANOVA) on either dependent variable. Univariate analysis of self-efficacy to succeed in sport demonstrated a non-significant effect ($F_{(1,180)} = 3.77, p < .10$). Though not significant, this identified a possible trend. No main effect was observed on the second measure: self-efficacy to initiate participation in sport.

Secondary analysis (without age group) identified a significant main effect on the gender variable. Results of univariate analysis described this effect for the self-efficacy to

succeed in sport measure ($F_{(1,216)} = 4.96, p < .05$) (see Table 5). Therefore, the two groups are significantly different, with male adolescents demonstrating higher levels of self-efficacy to succeed in sport than the females.

Table 5
Gender differences in sport self-efficacy

Self-Efficacy	Females		Males	
	\bar{x}	SD	\bar{x}	SD
Succeed in sport	6.75*	1.24	7.17	1.19
Initiate participation in sport	6.29	1.50	6.60	1.39

* $p < .05$

There was no main effect on the second variable, self-efficacy to initiate participation in sport (see Table 5). Differences between males and females are accounted for by the variability within the sample. Gender does not affect this measure of sport self-efficacy.

Sport participation. On both dependent variables, a main effect was seen for level of sport participation in the primary analysis (see Table 6). Univariate testing of self-efficacy to succeed in sport demonstrated a significant difference between the sport participation groups ($F_{(2,210)} = 22.96, p < .001$). Post hoc analysis using Tukey's honest significant difference demonstrated that the self-efficacy of the medium and high participation groups were significantly different from that of the low participation group ($p < .05$). However, any differences between the medium and high groups were not found to be significant (see Figure 2).

Table 6
Participation group differences in sport self-efficacy

Self-Efficacy	Low		Medium		High	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Succeed in sport	6.33**	1.40	7.11	1.00	7.48	0.98
Initiate participation in sport	5.73**	1.54	6.68	1.23	6.95	1.25

** $p < .001$

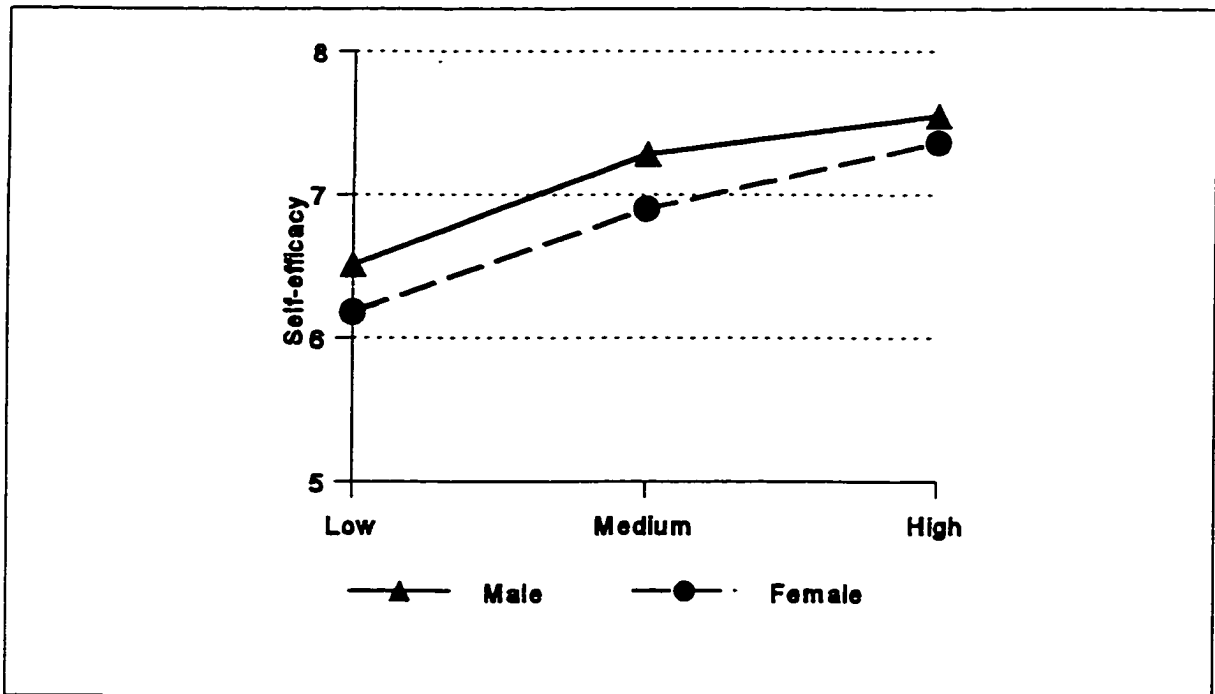


Figure 2. Self-efficacy to succeed in sport, by gender and participation group.

This difference was also evident in self-efficacy to initiate participation in sport ($F_{(2,210)} = 18.52, p < .001$). Analysis with Tukey's honest significant difference revealed that,

again medium and high participation groups were significantly different from the low participation group ($p < .05$). As well, differences between medium and high participation groups were not significant (see Figure 3).

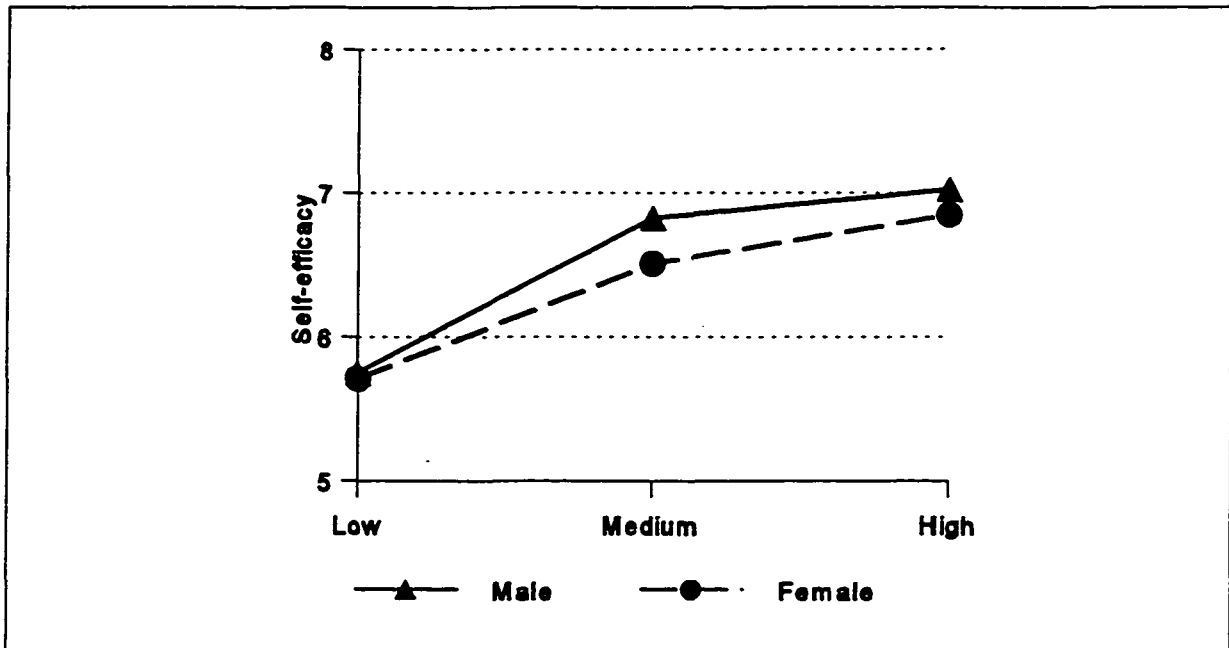


Figure 3. Self-efficacy to initiate participation in sport, by gender and participation group.

Qualitative Analyses

Individuals who “do not participate in sport” were asked to respond with written answers to two questions. This represented 29.8 % ($n = 87$) of the total population. Their responses to each question were categorized by type of response. A minimum of five similar responses was required to create a theme. Due to the overlap and inter-related nature of responses, they are not listed in a ranked order. Rather, they are described in a format which attempts to represent the major themes described in the participants’ open-ended, written opinions.

Question One: What are some of the reasons for not participating in sports?

Reasons for not participating in sports were categorized as: self-efficacy, enjoyment, pressure and competition, social group, time and other priorities, and physical inability.

1) A lack of self-efficacy in sport was evident in responses such as: “I’m not athletic”, “...no ability”, “I’m bad at sports”, “I’m not good enough”, and “I’m not an athletic person”. One grade nine male stated that he did not participate in sport because “I think I will suck at it”. Others wrote: “I hate sports (I’m not a super jock)”, “they’re too hard”, and “too tiring”.

2) Sports were described as not being enjoyable by many of the respondents. They described not liking them, not being interested, and that they are boring. One grade nine female stated: “I hate sports, ...I’m not a very active person”. A common response from a number of grade nine males was that “sports suck”. As well, some individuals revealed that none of the sports available interested them; a grade twelve male stated: “I don’t like running and chasing balls”.

3) Pressure and competition provided reasons for a number of the respondents to not participate in sports. Sports were identified as being “too competitive”. A grade nine female stated that during participation in sports, “everyone is watching me, making me nervous”. Similarly, a grade twelve male explained that he was worried that he would “panic and make real big mistakes”. As well, losing was described as discouraging. For example, one grade twelve female student wrote: “if you don’t have the ability, what’s the point?”

4) Identification of sport participation as being associated with a particular social group was also described as a reason for not participating. One grade nine female related that “sports are for jocks, and I’m a grunge” (specific social group). A grade twelve female reasoned that “teams are little more than elite social cliques, and therefore not any fun”. Social group was not identified as a reason by any of the male respondents.

5) A major contributor to not participating in sport appears to be having other, more important priorities, or “not enough time”. Students stated that they had other better or more important things to do, such as: their job, “going out with friends”, listening to music, and their studies. This reason was especially evident in the grade twelve students.

6) Some of the adolescents described a physical inability to participate in sports. This was caused by illness, “having glasses and asthma”, a heart condition, and injuries (particularly knee problems). As well, some of the respondents were unable to participate in sports because of logistical problems due a lack of money and transportation, or living out in the country.

Question Two: Would you like to participate in sports? Why, or why not?

Responses to this question included both yes and no answers. As well, within the “yes” answers, respondents stated reasons why they would like to participate, and reasons why they could not. “No” answers included reasons why they could not, or did not want to participate.

Yes: reasons. Respondents who wanted to participate in sports identified reasons in four categories for wanting to participate. These included: enjoyment, competition, social and status, and fitness.

1) Enjoyment emerged as a reason for wanting to participate in sports by both males and females. One grade nine male described sports as being “fun”. A grade twelve male stated: “I enjoy playing”. Another described sports as being “a personal improvement thing”. Several other respondents explained: “I love to play sports”.

2) Competition was described as a reason for wanting to participate. “Competing against different people” was identified, as well as “wanting to succeed”, wanting “to win”, and finding challenge.

3) Social and status reasons also appeared often, though appeared differently for females than males. Females described “meeting new friends”, “meeting people”, being “part of a team”, and “socializing”, while these did not appear in the male responses. However, status appeared as a reason explained by both genders. One grade nine female stated that sports “are impressing”. A grade nine male wrote: “I would like to be in the spotlight for our school”.

4) Sports were identified by many of the respondents as a means to improve physical fitness. “Good exercise”, “keeping you fit, and making you feel better”, and “feeling energized and healthy” were described as reason for wanting to participate in sports. As well, they were described as relaxing. One grade twelve female stated that sport “takes my mind off of other things”.

Yes: barriers. As well, some of those respondents who wanted to participate in sports identified barriers to participation. These were categorized under: self-efficacy, pressure and competition, other priorities/time, and physical inability.

1) A lack of self-efficacy was described by many of these respondents through statements such as: “not good enough”, “not big enough”, “...if I had more skill”, and “I feel I’m average”. One grade nine female described that she needed to be motivated to participate.

2) Pressure and competition were also perceived as barriers to those who wanted to participate. One grade nine female said she did not want to do sports “when a lot of people are watching”. Another stated that she was “afraid of messing up and getting them mad at me”. A grade twelve male explained that he might participate in sports if they were not too competitive.

3) Other priorities and a lack of time were described by a number of respondents as reasons which prevented them from participating. “If I had more time, (I would participate)”, was stated by both males and females.

4) The last barrier identified in the responses was physical inability, such as being injured.

No. Respondents in the “no” category identified reasons why they could not participate or did not want to. These were categorized under five themes: self-efficacy, enjoyment, pressure and competition, social group, and other priorities/time.

1) A lack of self-efficacy was described through responses such as: “I’m not good enough”, and “I’m too lazy”. As well, one grade twelve female stated that she did not “want to learn a whole sport over again”.

2) Some respondents stated that they did not want to participate in sports because they are not enjoyable. “I hate sports” was stated by a number of individuals, both male and

female. As well, one grade nine male wrote that sports “suck” and “take too much energy”. It should be noted that several grade nine males also described that it is only some sports which they don’t like, and those that they do enjoy are not available at the school.

3) Competition and pressure were described as reasons for not wanting to participate in sports. Commonly reported from both males and females were phrases such as: “...don’t like competition”, and “...too much competition”.

4) The influence of social group on individuals’ inclination to participate in sports is evident through comments such as: “sports are for jocks”, and “I don’t want to be a jock”. As well, one grade twelve female stated that she “didn’t like the attitude of people in sports”. Social group was not described by males as a reason for not wishing to participate in sport.

5) Lack of time and having other priorities were explained as reasons for not wanting to participate in sports. Statements such as: “no time”, “...other things to do”, and “...other things more exciting”, were described. One grade twelve male wrote that he would “rather make money working than playing”. As well, a grade twelve female stated that she would “rather watch than participate”.

Discussion

Effect of Gender on Self-Efficacy

Results from the self-efficacy to succeed in sport measure supported the hypothesis that males would demonstrate higher levels of self-efficacy than females. These results corroborate Corbin and Nix's (1979) work with children, and McAuley's (1992a) findings in an adult population. As well, Weinberg and Ragan's (1979) studies on children and motivation in competition also suggested this gender difference would be observed. Duda (1989) described a male preference for competitive activities by explaining gender differences which she had found in orientation to sports. As males demonstrated a greater ego orientation and females a greater task orientation, her study suggested that males would likely show greater interest in competitive activities than females. Greater interest in sports might lead to higher self-efficacy levels. Crandall et al (1962) suggested that boys were rewarded for their success expectations, while girls were discouraged. This kind of social reinforcement could have a negative impact on the self-efficacy development of young females. As well, the negative attributions which result from social discouragement could also adversely influence self-efficacy.

The higher levels of self-efficacy in males were also accompanied by significantly higher levels of average weekly participation in sport. Duquin (1978) suggested that females commonly drop out of competitive sport at an earlier age than males. This was not observed in the present study as no main or interaction effect with age was identified. If this drop out occurred prior to entrance into high school, it might explain the gender difference in participation levels. Participation level differences may be reflected in gender

differences in self-efficacy. The low correlation ($r = .38$) between participation level and self-efficacy to succeed in sport demonstrates some support for this possibility. However, due to the circular nature of self-efficacy and participation (experiences), it is difficult to tell whether participation determines self-efficacy or vice versa.

McAuley (1992b) conceptualized self-efficacy, attribution, and motivation as inter-related variables. Each one influences the other two. Motivation to participate in sports is therefore based on the individual's beliefs about his/her own abilities and performance (self-efficacy). As well, participating in sports would likewise affect the individual's beliefs through the process of attribution. Gender differences in self-efficacy are likely to reflect and influence gender differences in motivation to participate in sports. If it is accepted that participation does have an influence on self-efficacy, then activities which encourage participation of both males and females may help to eliminate differences in self-efficacy.

Gender differences were apparent in the self-efficacy to succeed in sport measure, yet there was no significant difference observed in the sample's self-efficacy to initiate participation in sport. This result, which does not support the initial hypothesis, is surprising in light of the moderately high correlation found between the two measures ($r = .72$). However, based on the results of this study, males and females appear equally confident in their ability to enter into new sporting activities. Self-efficacy to initiate participation in sport may be less dependent on previous sporting experience than self-efficacy to succeed. As a result, self-efficacy to initiate participation may not favour those who have had more past sporting experiences (potentially the male group). Further studies could examine this discrepancy.

Effect of Sport Participation on Self-Efficacy

Higher levels of sport participation were found to have higher self-efficacy scores than those with a lower level of participation, supporting the initial hypothesis. This corroborates the observations of Roberts et al. (1981) who noted that sport participants were higher in perceived competence, were more persistent, and had higher expectations for future success than did nonparticipants. They believed that this difference was caused by individuals engaging in activities which allowed them to demonstrate their competence. Those who had confidence in their physical abilities engaged in physical activities. They also found a significant relationship between number of years of playing experience (in soccer), and perceived competence. McAuley (1992a) substantiated this by observing an increase in exercise self-efficacy in an adult population over a 20 week training program.

The theoretical background to self-efficacy theory (Bandura, 1977) identifies actual experiences as being the single greatest influence on self-efficacy. Therefore, it is not surprising that level of sport participation has an effect on sport self-efficacy. This effect was observed for both self-efficacy to succeed in sports and self-efficacy to initiate participation in sports. With reference to the second measure, it is therefore likely that those who presently do not participate in sports to a great extent are also less likely to try new sports. This is potentially a serious roadblock for physical educators to overcome in their attempts to motivate this group into sport participation.

The difference in self-efficacy occurred between the low and the medium participation groups, as well as between the low and the high groups. There was no difference between the medium and high groups. It is possible that this is due to a ceiling

effect (self-efficacy to succeed in sport measured at 7.28 ± 0.94 for the medium group and 7.55 ± 1.02 for the high group, out of a maximum of 9.00) which minimizes possible differences. However, it is likely that this result is an accurate reflection of the self-efficacy of these individuals. This suggests that participation in sport at a moderate level has the same effect on self-efficacy as does participation at a high level. Therefore, it might be suggested that physical education programs which are concerned about students' self-efficacy should encourage a moderate level of participation. Focussing on encouraging a high level of participation does not appear to offer any added benefits.

Effect of Adolescent Age on Self-Efficacy

Age group did not appear as a factor in determining self-efficacy on either of the measures. This may be due to several factors. As individuals age, their self-efficacy may increase or decrease, depending on their experiences. The older individuals are likely to have had more sporting experience. However, if those were negative experiences, than self-efficacy is likely to decrease; positive experiences are likely to have the opposite effect. It appears that the greater cumulative experience of the grade twelves in the sample was not sufficient to result in either an increase or a decrease in sport self-efficacy, compared to the grade nines.

Actual participation levels in sport were found to show no difference between age groups. This fact is a likely explanation for the similarity in self-efficacy. It had originally been thought, based on the observations of Brown (1985), that participation rates would decrease over adolescence. As well, it was thought that more females would drop out of sports than males. However, there was no interaction effect of gender and age group on

participation. As a result of these findings, it appears that there is no significant difference in participation levels between grade nines and grade twelves. It is possible that drop-out from sports participation may have occurred before the grade nine level. Future research could explore a broader age range to examine this possibility.

Measurement Concerns

Sport Participation

Operationalization of sport participation has limited coverage in the literature. The method used in this study can provide a template for future researchers to continue the development of participation measurement tools. It was effective in providing a quantitative measure of participation in sports and allowed flexibility in its responses.

However, several limitations emerged as problematic issues in this self-report measurement tool. First, inaccurate recall is a potential source of error as individuals attempt to re-create their activities. Use of a one-week description appeared to minimize this issue, but the possibility of inaccuracy still exists. However, the standard deviation of the weekly hours of participation did not vary to a great extent by age or gender (range of S.D. was 7.84 to 9.38). A second potential source of error is that exaggeration of participation levels may have occurred as the respondents attempted to describe themselves as they would like to be viewed (even though it was an anonymous questionnaire). Participation in sport is often perceived as a socially desirable activity (note: some of those who identified themselves as nonparticipants described sport as being socially undesirable), resulting in some over-reporting of responses. This is may especially be a concern with the grade nine males, who also had the highest participation scores.

It should be stated that a number of individuals in the study described high levels of participation in a variety of physical activities, without participating in sports (as defined in the Introduction). It is a delimitation of this study that only sports are addressed. It is not the intent of this researcher to suggest that sports are more important than general physical activity, especially from a lifestyle perspective. In the future, investigating a possible link between general physical activity and self-efficacy within an adolescent population could provide fascinating research.

Self-Efficacy

The two measures of self-efficacy, based on nine-point Likert scales, provided a useful quantification of the variables. Vealey's (1986) Trait Sport Confidence Inventory was modified by changing the reference for individual comparison from the "most confident person" to "an average person". This change was made to provide a better reference for the average adolescent, as opposed to athlete, which the original TSCI was designed for. By definition, self-efficacy is specific to the situation (Bandura, 1977). This situation involved all types of high school students, and therefore needed to be more generally applicable. However, this modification resulted in respondents describing perceived levels of self-efficacy which averaged well above a medium score of five on a scale of one to nine (in fact self-efficacy scores averaged 6.98 and 6.46 respectively). These results suggest that the average adolescent perceives him/herself as being more confident than the "average person". Reported self-efficacy may not coincide with actual ability.

These high self-efficacy values may also manifest in a ceiling effect, making it difficult to effectively differentiate between moderately high and high levels of self-efficacy.

Exaggeration of scores is also a concern in self-reporting of self-efficacy as it was for sport participation. It should be noted, however, that an exaggerated description of self-efficacy may be an accurate representation of that individual's exaggerated perception of her/himself. This exaggerated perception of personal confidence is likely to result in the same patterns of behaviour as an "accurate" perception. However, after repeated experiences, efficacy expectations are likely to become more representative of "true" abilities. In this study, grade nine males may have been more likely to exaggerate their self-efficacy. This observation would corroborate the dated findings of Crandall et al. (1962) who stated that boys are more likely to state success expectancies equal to or above their ability. They suggested that this is due to boys being rewarded for their success predictions, while girls are discouraged. However, self-efficacy scores in this study appear to suggest that both males and females state success expectancies above their ability.

This exaggeration of responses is also a potential problem with the second self-efficacy variable. The self-efficacy to initiate participation in sport measure is also a new questionnaire which requires further testing to establish its validity and reliability.

Concerns with Qualitative Responses

Written responses were very informative from an exploratory perspective. Unfortunately, the quality of responses was often age related, as the older individuals appeared more adept at expressing themselves than did the younger. As a result, the most revealing answers often came from the older group. As well, many of the respondents (who all claimed to be sport nonparticipants) were not interested in describing their feelings about sport, a topic in which they may have had little interest. The goal of this component of the

study was simply to get an idea of what types of reasons the individuals had for their actions or non-actions. In this, it was successful. Future studies might employ a method involving greater personal involvement, such as one-on-one interviews.

Explaining Sport Nonparticipation

Responses to the qualitative component of the questionnaire yielded some insights into the reasons why some adolescents do not participate in sports. These reasons have been summarized under the following themes: lack of self-efficacy, not enjoyable, competition and pressure, social reasons, and physical or logistical inability. It should be noted that these themes are not independent, and overlap each other noticeably.

Lack of Self-Efficacy

As Bandura (1977, 1986) and McAuley (1992b) identified, self-efficacy is integrally linked to motivation. Respondents often described that they were “no good” at sports and therefore did not want to participate. It is likely that their low level of confidence is based on negative sport experiences. Low self-efficacy discourages future participation. This circular process continues and the individual responds by avoiding sports entirely. One grade nine female wrote “I suck (at sports)!” no less than three times on her questionnaire. It was apparent that she had had very negative experiences within the sporting environment and/or her development of general self-confidence.

Not Enjoyable

Sports were described as not being enjoyable by a number of the nonparticipants. Enjoyment is critical in maintaining long term patterns of physical activity. Scanlan and Lewthwaite (1986) noted that those with high self-efficacy tend to experience more

enjoyment than their counterparts. This link ties enjoyment to the self-efficacy/attribution/motivation circle (McAuley, 1992b). Negative sport experiences may result in an internal, stable, and uncontrollable attribution. This, in turn, results in low self-efficacy and reduced motivation to participate in the future. Throughout this whole process, the individual experiences a negative affect. Therefore, this lack of enjoyment in the activity should be described as the result of the attributional process, rather than an isolated sensation.

Enjoyment was also cited by many of the respondents as a reason for wanting to participate in sports. There are obvious implications of this for any coach or physical educator who is interested in encouraging youth participation in sports.

Competition and Pressure

Competition, and the resulting anxiety, appeared as problematic for many nonparticipants. Anxiety is a negative affect which a number of researchers have related to self-efficacy (Lox, 1992; Martin & Gill, 1991; Scanlan & Passer, 1978; and Weinberg & Ragan, 1979) and self-esteem (Brustad, 1988). Anxiety can be produced by competitive situations in which the individual perceives an imbalance between his/her ability to perform and the demands of the situation (Scanlan & Passer). Those individuals who have a low level of self-efficacy would likely have a greater difference between their perceived abilities and the demands of the situation. As a result, they would be more likely to experience high anxiety and the negative affect associated with it. Based on the written responses of the nonparticipants in this study, this appears to be a common problem for adolescents. The competitive environment, which is so carefully cultivated in the sporting world, is a major source of alienation for these nonparticipants. The solution for these individuals may be to

experience physical activity in a low pressure, non-judgemental environment. This may stimulate the development of self-efficacy, eventually allowing them to participate in the competitive world of sports with greater confidence and comfort.

Social Reasons

Social reasons influenced participation in sports in several ways. Meeting people was a reason commonly cited by females for wanting to participate in sports. It was not observed in the male responses, which is surprising, as Ryckman and Hamel (1993) observed that there were no gender differences in adolescent motives to participate in sport. Brown (1985) also found no gender-related reasons for ending participation in sport. Perhaps further research should be conducted to address this discrepancy. The “meeting people” reason could be valuable in developing programs designed to encourage adolescent females to engage in and maintain interest in sports.

Status was also identified by both males and females as a reason for wanting to participate. Eitzen’s (1976) study identified this as a reason for males only. Sports may now be a source of popularity in high schools for both genders. However, sports were also seen to have a negative social image by some of these female nonparticipants. The grade nine female who stated “sports are for jocks, and I’m a grunge”, identified her concerns about associating with a social group with which she was uncomfortable. Being in a social group provides a source of identity and comfort for adolescents. It is difficult to promote universal participation in physical activity when these social barriers exist.

Physical or Logistical Inability

This last group of reasons is mostly concerned with the realities facing individuals who may still want to participate in sport, yet are unable to due to factors beyond their control. Physical injuries and disabilities are realities which may be addressed through more active adapted programs of sport or participation. Unfortunately, it appears that for some of these individuals, the situation prevents them from participating. This is also the case with those who live too far from the school to participate in extra-curricular activities or simply cannot afford the cost of most sports.

“Not enough time” was the most common reason which prevented individuals from participating in sports. This was due to homework, part-time jobs, and other commitments. As a result, these individuals have to choose their priorities, with sports being far down the list. One grade twelve male wrote that he would “rather make money working than playing”. For some, this is a reality, while others may be using it as an excuse, when the real reason is based in their low self-efficacy or fear of competition.

Conclusions

Future directions for research have been described in the text of this paper, including: the exploration of physical activity and self-efficacy in this population group, continued development of participation and self-efficacy operationalization tools, and longitudinal examination of sport self-efficacy over the course of adolescence and beyond. The relationships between sport self-efficacy, self-efficacy, self-confidence, and self-esteem would provide fascinating avenues of research. Other directions include determining what

age gender differences in self-efficacy and sport participation begin, and a more detailed exploration of adolescents' reasons for avoiding sport participation.

The hypothesis that sport self-efficacy would be higher for adolescent males than females was substantiated by the results of this study. However, these findings identified this difference in only one measure: self-efficacy to succeed in sport. No gender difference was observed in self-efficacy to initiate participation in sport. A major finding of this study was that those who participated in sport at moderate or high levels had higher levels of sport self-efficacy. This finding suggests that participation is valuable for adolescents, male or female, as it may be reflected in their development of self-efficacy. Schools need to recognize the existence of gender differences in participation levels as potentially problematic, and establish programs that cater to, and encourage, both genders.

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Appendices

Appendix A:
Informed Consent Package

PARTICIPANT CONSENT FORM

I _____ agree to participate in the study
 (Full Name)
 concerning the attitudes of adolescents about sports, conducted by Scott Manktelow, a
 Lakehead University Masters student, with Dr. Joey Farrell, faculty advisor.

I understand that I will be asked to answer a questionnaire that will require about 30
 minutes to complete.

I understand that all information will be confidential and that I may withdraw my
 participation in this research project, at any time.

SIGNATURE : _____

DATE : _____

PARENT/GUARDIAN CONSENT FORM

I _____ agree to allow my
 (Full Name)
 daughter/son _____ to participate
 (Full Name)
 in the study concerning the attitudes of adolescents about sports, conducted by Scott
 Manktelow, a Lakehead University Masters student, with Dr. Joey Farrell, faculty advisor.

I understand that my daughter/son's participation will involve completing a short
 questionnaire.

I understand that all the information will be confidential and that my son/daughter may
 withdraw from participating in this research project at any time.

SIGNATURE : _____

DATE : _____

March, 1996

Dear Participant and Parents/Guardians,

I would appreciate your participation with the following survey, which is a vital part of a research project undertaken by myself, Scott Manktelow, a Masters' student, and Dr. Joey Farrell, my faculty advisor from the Department of Kinesiology at Lakehead University.

The purpose of this research is to examine the attitudes of adolescents toward sports.

Students will be asked to fill out a short questionnaire (20 minutes), that will ask questions regarding their sport participation, their confidence in their ability to pursue sports, and related questions.

All information you provide will be strictly confidential.

If you agree to participate in the survey, please complete and return the attached consent form.

Thank you for your cooperation.

Yours truly,

**Scott R. Manktelow, B.P.E.
Research Investigator**

**Joey Farrell, Ph.D.
Faculty Advisor**

Appendix B:
Questionnaire

Participation and Confidence in Sport

Section A

Grade: _____

Year of Birth: _____

Gender: *Male* *Female*

Please describe, using the following chart, the sports (organized or recreational) or physical activities that you **presently** participate in during an **average week**. As well, include how often you participate in each sport.

<i>Sport or Activity</i>	<i>Times/week</i>	<i>Average length of each session (hours)</i>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Are there any sports or physical activities which you presently participate in less than once/week? If so, please explain.

Is this **average week** *more than*, *less than*, or *equal to* your average activity levels over the course of the year? (Circle one)

More than

Less than

Equal to

If "*more than*", or "*less than*", explain how your activity levels usually differ over the course of the year.

<i>Sport or Activity</i>	<i>Season</i>	<i>Times/week</i>	<i>Average length of session (hours)</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Section B (adapted from Vealey, 1986)

A sport is any physical activity which has a set of rules which you play by, in which you compete against others or against standards. It can be recreational or very competitive, including everything from a pick-up game of basketball to professional and international events.

What is the sport in which you feel the most confident? _____

For the following questions, think about how self-confident you are when you compete, play, or participate in this sport.

Answer the questions below based on how confident you *generally* feel when you participate in this sport. Picture someone of your age and gender who you believe has an

average level of self-confidence in sport. Compare your self-confidence to this average individual when answering the questions.

Your answers will be kept completely confidential, so please be comfortable and provide your true feelings.

When participating in *this* sport, how confident do you *generally* feel? (Please answer by circling the number that best represents your level of confidence.)

Compared to the average person, what is:

- | | | | | | | | |
|----|--|--------------|---|---------------|---|---|-----------|
| 1. | ...your confidence in your ability to execute the skills necessary to be successful. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |
| 2. | ...your confidence in your ability to make critical decisions while participating in this sport. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |
| 3. | ...your confidence in your ability to perform under pressure. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |
| 4. | ...your confidence in your ability to execute successful strategy. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |
| 5. | ...your confidence in your ability to concentrate well enough to be successful. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |
| 6. | ...your confidence in your ability to adapt to different game or competition situations and still be successful. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |
| 7. | ...your confidence in your ability to achieve your competitive goals. | low
1 2 3 | 4 | medium
5 6 | 7 | 8 | high
9 |

- | | | | | | | | | | | |
|-----|---|----------|---|---|---|-------------|---|---|---|-----------|
| 8. | ...your confidence in your ability to be successful. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 9. | ...your confidence in your ability to <i>consistently</i> be successful in this sport. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 10. | ...your confidence in your ability to think and respond successfully while participating in this sport. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 11. | ...your confidence in your ability to meet the challenge of competition. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 12. | ...your confidence in your ability to be successful when the chance of you succeeding is poor. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 13. | ...your confidence in your ability to bounce back from performing poorly and be successful. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |

Section C

For the following questions, you will again be comparing your confidence to that of an individual of your age and gender who has an average level of self-confidence in sports.

Compared to the average person, what is:

- | | | | | | | | | | | |
|----|---|----------|---|---|---|-------------|---|---|---|-----------|
| 1. | ...your confidence before you begin participating in a sport. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 2. | ...your confidence in your ability to attempt a new sport skill for the first time. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |

- | | | | | | | | | | | |
|----|--|----------|---|---|---|-------------|---|---|---|-----------|
| 3. | ...your confidence when beginning to participate in a sport for the <i>first time ever</i> . | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 4. | ...your confidence in your ability to succeed in a new sport. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |
| 5. | ...your confidence in your ability to learn the techniques and skills of a new sport. | low
1 | 2 | 3 | 4 | medium
5 | 6 | 7 | 8 | high
9 |

Section D

If you do not regularly participate in sports, please answer the following questions.

If you do participate, please disregard this section.

1. What are some of the reasons for not participating in sports?

2. Would you like to participate in sports? Please explain why, or why not.

Thank you very much for all of your valuable input!

Appendix C:
Supplemental Tables

Table 7
Description of population by sport participation category

Gender	Grade	Low		Medium		High		Total	
		n	%	n	%	n	%	n	%
Female	9	27	9.2	30	10.3	23	7.9	80	27.4
	12	24	8.2	14	4.8	14	4.8	52	17.8
Male	9	21	7.2	22	7.5	38	13.0	81	27.7
	12	23	7.9	33	11.3	23	7.9	79	27.1

Table 8
Self-efficacy to succeed in sport by gender, age group, and participation category

Gender	Gr.	Low		Medium		High		Total	
		\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Female	9	6.27	1.16	6.82	1.13	7.28	1.02	6.77	1.17
	12	6.08	1.58	7.06	0.81	7.49	0.73	6.72	1.35
Male	9	6.50	1.66	7.10	1.33	7.53	1.09	7.14	1.38
	12	6.53	1.22	7.39	0.54	7.58	0.90	7.19	0.98

Table 9
Self-efficacy to initiate participation in sport by gender, age group, and participation category

Gender	Gr.	Low		Medium		High		Total	
		\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Female	9	5.89	1.61	6.47	1.43	7.08	1.16	6.45	1.48
	12	5.51	1.68	6.56	1.27	6.46	1.18	6.04	1.51
Male	9	5.87	1.60	6.79	1.30	7.19	1.15	6.74	1.41
	12	5.64	1.33	6.84	0.99	6.73	1.48	6.46	1.34

