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Intercollegiate Swimmers’ Experiences of Anxiety and their Perceptions of a Mental Skills Training Program

by

Emily Ann Roper

A thesis submitted in conformity with the requirements for the degree of Master of Science

Graduate Department of Community Health
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0-612-40722-5
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Abstract

This investigation examined intercollegiate swimmers’ experiences of anxiety and their perceptions of a mental skills training program. The participants consisted of five intercollegiate swimmers in Canada (m=3, f=2). Within this investigation there were two interview phases, a pre- and post-intervention interview. Following the pre-interview and prior to the post-interview the swimmers received six individual mental skills sessions. Eight higher categories emerged including experiences of anxiety, sources of anxiety, performance satisfaction, coaching styles, previous exposure to sport psychology, application of mental skills, perceived benefits and suggestions for the design and implementation of a mental skills training program. This research has implications for coaches and sport psychology consultants interested in learning about athletes’ experiences with a mental skills training program and their preferred consulting format. Also, researchers and consultants can gain valuable information about athletes’ experiences of anxiety in order to assist in the development of methods to control and reduce heightened anxiety levels.
Acknowledgments

There are a number of people whose efforts, love and support are reflected in this work and I would to thank each one of them.

First, I would like to thank my supervisor, Dr. Gretchen Kerr, for her relentless support, expertise and encouragement. Her direction and patience made this experience both enriching and enjoyable.

A special thanks to my committee members for their time and contribution to this project – Dr. Ken Allison, Dr. Lynda Mainwaring, and Dr. Judy Goss. Special recognition to Dr. Diane Gérin-Lajoie for her significant contribution and assistance with the qualitative analysis of this project.

I must acknowledge the athletes and coaches whom I had the pleasure of working with over the past year. I thank them for sharing their stories and allowing me to have the opportunity to work with and learn from them.

I would like to thank my peers who have been a constant source of support and encouragement. Each of them has made life at U of T enjoyable – Jennifer Robertson, Jay Johnson, Jennifer Cowie-Bonne, Todd Loughead and Cathy VanIngen. A special thank you to Trish Miller for her constant guidance and feedback throughout this project. A very special thanks to Lynn Lavallée, whose support, guidance and feedback assisted with the successful completion of this project.

The support of my family has been immense. They have given me the love, opportunity and encouragement to reach for my goals. I would first like to thank my grandmother, Dolores Anderson, for her constant love and support provided. Thanks to
my sister Elizabeth for her support and belief in me.

In closing, I wholeheartedly thank my parents, Diane and Edward Roper, for always believing that I could accomplish all I set my heart and mind to. Without you this accomplishment would not have been possible. It is from your example and your love that I have achieved my goals.
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Chapter 1

Introduction

In today’s sporting world, there is a great deal of interest in understanding the factors which can help an athlete obtain his or her optimum performance and well-being. We tend to think of athletic prowess in terms of achievement and physical ability. However, athletic achievement is more than what we do physically with our bodies. It relies heavily upon our cognitions and motivations.

In contemporary sport, psychology plays an increasingly important role. A number of youth, university, professional, and Olympic teams are turning to sport psychology consultants to help their athletes maintain their health and perform at optimum levels.

There are a number of techniques, referred to as mental skills that are presumed to enhance athletic performance and well-being. These techniques include; goal-setting, competition planning, cognitive restructuring, attentional training, mental imagery, biofeedback, stress management, centered breathing and relaxation. There is empirical evidence to suggest that when used appropriately, these techniques positively affect an athlete’s well-being and performance. Furthermore, athletes tend to feel an increased sense of control, greater confidence, and reduced anxiety as a result of using such techniques (Cox, 1990).

The importance of anxiety and other emotional and personality factors in sports competition has been recognized for many years. Researchers have found that the experience of anxiety is an important determinant of the motor performance of an athlete. This is not surprising considering that elite sport is characterized by a demand to perform consistently at peak levels under stressful conditions. In general, it is suggested that excessive anxiety levels will interfere
with one’s ability to reach optimal performance (Cox, 1990).

The existing sport literature focuses almost exclusively on quantitative analyses of the relationship between anxiety and performance. While an understanding of this relationship is important, we know very little about athletes’ experiences of anxiety. It may be that a qualitative approach could enhance our understanding of athletes’ interpretations of anxiety and the anxiety-performance relationship.

The anxiety literature also tends to focus on the experiences of elite sport performers. While the study of elite athletes is important, there is a need to address athletes who compete at other levels, including intercollegiate competition, where a paucity of research exists.

It is interesting to note that despite the plethora of research examining the effects of mental skills programs on athletes’ performances and psychological states, no previous studies have explored athletes’ experiences with such programs. A qualitative approach may be the best way to meet this objective.

Furthermore, previous quantitative-based studies of mental skills programs have been unable to discern the effects of individual program components and have focused on the overall effects of a mental skills program. Through a qualitative study of athletes’ experiences with a mental skills program, we may be able to learn more about individual program components.

Purpose of the Study

This study sought to contribute to the existing literature by qualitatively examining athletes’ experiences of anxiety and their experiences with a mental skills program. As a result
of the limited amount of research qualitatively examining athletes’ experiences with anxiety and their perceptions of a mental skills manual, it is hoped that the findings will shed some light on this very limited area of research. In doing so, it is hoped that coaches and sport psychology consultants will be better able to serve the needs of athletes.
Introduction to Anxiety

Definitions and Descriptions of Anxiety

Anxiety is defined as a maladaptive emotional condition accompanied by arousal of the autonomic nervous system (Landers & Boucher, 1986). According to Spielberger, "anxiety states are characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system" (1970, p.3). When measuring an individual’s anxiety level, Spielberger noted that it is necessary to distinguish between state and trait anxiety. State anxiety is transitory in nature; it changes over time. It is commonly referred to as an individual’s immediate or existing emotional state characterized by apprehension and tension. Trait anxiety is a predisposition to perceive certain situations as threatening and to respond to those situations with varying levels of state anxiety. It is an enduring personality characteristic (Spielberger, Gorsuch, & Luchene, 1970).

In addition, anxiety has been recognized as a multidimensional concept. Borkovec (1976) and Davidson and Schwartz (1976) differentiated between cognitive and somatic anxiety, a distinction applied to both state and trait anxiety. Cognitive anxiety refers to negative concerns about performance, inability to concentrate, and disrupted attention. It manifests itself through distractions, constant worry, negative performance and negative self-evaluation. Somatic anxiety is defined as the bodily symptoms of autonomic reactivity, such as ‘butterflies’ in the
stomach, jitters, shakiness, sweating, and increased heart rate (Davidson & Schwartz, 1976).

There have been several tests designed in general psychology to examine an individual’s cognitive and somatic anxiety. Martens, Burton, Vealey, Bump, and Smith (1990) have stimulated this line of research in sport psychology and have developed the Competitive State Anxiety Inventory (CSAI-2). The CSAI-2 is designed to evaluate an individual’s levels of cognitive and somatic anxiety as well as self-confidence in competitive situations.

It is important to distinguish between three inconsistently used terms; arousal, stress, and anxiety. By definition, arousal is referred to as physiological activation. Researchers suggest that heart rate, blood pressure, galvanic skin responses, and respiration rate are typical indices of arousal. Stress was first defined as the “non-specific response of the body to any demand made upon it to adapt whether that demand produces pleasure or pain” (Selye, 1946). A more contemporary definition of stress is “a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Folkman, 1986). Anxiety is considered the unpleasant emotional reactions to both arousal and stress. Researchers suggest that anxiety reactions result from demands interpreted as threatening by the individual. Therefore, anxiety represents the feelings of tension and apprehension associated with arousal and stress activation.

Measurement of Anxiety

In the early 1950’s, researchers began to measure anxiety through general inventories such as the IPAT Anxiety Scale (Cattell, 1957), the Taylor (1953) Manifest Anxiety Scale and the General Anxiety Scale (Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960). As a result, research began to suggest a distinction between momentary anxiety states (state anxiety) and
more enduring anxiety traits (trait anxiety). This research was enhanced by Charles Spielberger (1966) who then developed the State Trait Anxiety Inventory (STAI). Researchers began to find that situation-specific inventories measured anxiety better than general inventories. Therefore, researchers began to develop situation-specific inventories including social evaluation anxiety, test anxiety, and heights inventories. Rainer Martens developed the first sport-specific measure of trait anxiety, the Sport Competition Anxiety Test (SCAT). The early research with the SCAT indicated that there was a need for a sport-specific measure of state anxiety. Therefore, in 1980, Martens, Burton, Rivkin, and Simon modified Spielberger’s STAI to become more sensitive to sport-specific situations. The new inventory was called the Competitive State Anxiety Inventory (CSAI).

In the mid-1960’s researchers began to introduce the cognitive and somatic anxiety components which led to the development of three inventories to measure cognitive-worry and somatic-arousal (Borkovec, 1976; Davidson & Schwartz, 1976; Liebert & Morris, 1967). This research stimulated the modification of the CSAI to measure both cognitive and somatic anxiety and became the CSAI-2 (Martens, Vealey, & Burton, 1990).

The Competitive State Anxiety Inventory (CSAI-2) was designed to assess the cognitive, somatic anxiety and self-confidence levels in competitive situations. Researchers have present significant support for the cognitive and somatic distinction (Burton, 1988; Liebert & Morris 1967; Maynard & Howe, 1987). Through systematic and rigorous analyses, evidence has been produced to support the reliability, construct validity, concurrent validity, and content validity of the CSAI-2 as a measure of sport-specific anxiety subcomponents (Martens et al., 1990). Lastly, the CSAI-2 allows a more detailed evaluation of the competitive anxiety response
and could provide a constructive rationale for anxiety management or self-regulation.

**Multidimensional Nature of Anxiety**

As noted earlier, anxiety is not a unidimensional phenomenon but is comprised of at least two subcomponents, cognitive and somatic anxiety. The multidimensional anxiety theory states that such a distinction is due to the differing antecedent conditions and effects on performance. Possibly the most convincing evidence for the independence of the subcomponents of the anxiety response is the identification of different antecedents.

Bird and Horn (1990) investigated the relationship between cognitive anxiety and mental errors in sport. The CSAI-2 was administered to 161 female high school varsity softball players from 1 hour to 45 minutes prior to a scheduled game. Each of the subjects completed the Mental Error Questionnaire which classified individuals as being lower in mental errors or higher in mental errors. The results indicated that elevations in cognitive anxiety had a positive, direct linear relationship to the number of mental errors made in sporting competition.

Burton (1988) examined the anxiety - performance relationship by asking the question: do anxious swimmers swim slower? The study consisted of two samples; sample 1 included 15 male and 13 female collegiate swimmers from a Big Ten swim team and sample 2 was composed of 31 male and 39 female collegiate swimmers who were selected to compete at the 1982 National Sports Festival. Sample 1 completed the CSAI-2 three times throughout the season including an early season invitational meet, a mid-season conference dual meet, and the Big Ten Championship. Sample 2 completed the CSAI-2 twice, once following a practice session 2 days prior to the competition and again within one hour prior to their most important race of the meet. The performance of each athlete was determined by the swimmer’s personal
record (PR) in that event from his or her time in the competition and then dividing these deviation scores by an adjustment factor designed to convert all performance scores to 50-yard/meter increments in order to facilitate comparison across races of different distances. The results suggested that somatic anxiety has a curvilinear relationship with performance, supporting the inverted-U hypothesis, while a negative linear relationship existed between cognitive anxiety and performance.

Gould, Petlichkoff, and Weinberg (1984) examined the antecedents of temporal changes in and relationships between CSAI-2 sub-components. Study 1 consisted of 37 elite intercollegiate wrestlers who were administered the CSAI-2 immediately before two different competitions. The second study was composed of 63 female high school volleyball players who were asked to complete the CSAI-2 at five different times prior to competition (1 week, 48 hours, 24 hours, 2 hours, and 20 minutes). The results indicated that somatic anxiety increased during the time leading to performance, while cognitive anxiety remained constant. The hypothesis that cognitive anxiety is a more powerful predictor of performance than somatic anxiety was only partially supported.

Gould, Petlichkoff, Simons, and Vevera (1987) performed a similar study attempting to examine whether a linear or curvilinear relationship existed between CSAI-2 sub-scale scores and pistol shooting performance. The subjects consisted of 39 officers from the University of Illinois Police Training Institute. Shooting performance was evaluated by having each subject shoot five pistol sequences, each consisting of six shots taken within a 12-second period and from a distance of 15 yards. The results indicated that cognitive anxiety was not related to performance and somatic anxiety was
related to performance in a curvilinear manner.

Rodrigo, Lusiardo, and Pereira (1990) examined the relationship between anxiety and performance in soccer players. The subjects consisted of 51 male volunteer soccer players from four different professional teams in Montevideo, Uruguay. Each subject was asked to complete the CSAI-2 and STAI. The performance of each athlete was measured in two forms: 1) each player had to indicate on a five-point scale, immediately after the competition, his performance in terms of the relationship between the actual one and the subject's average ability; and 2) an independent observer recorded for each player, on a five-point scale, the number of good passes and the ability to play position. Both the subjective and objective measures were averaged in a performance index. The results from the study revealed a moderate relationship between cognitive and somatic anxiety, confirming that these are separate components of state anxiety. The results from the study give support for the multidimensional nature of anxiety.

Hammermeister and Burton (1995) examined the antecedents and consequences of endurance athletes' state anxiety. The subjects consisted of 293 endurance athletes (118 male and 112 female) and from this sample, 167 were triathletes, 65 were distance runners, and 61 were cyclists. The triathlon sample included 104 athletes competing in the ironman-length (2.4-mile swim, 112 mile cycle, and 26.2 mile run) triathlon and 63 athletes competing in a major half-ironman-length (1.2-mile swim, 56-mile cycle, and 13.1 mile run) triathlon. Athletes who agreed to participate completed the Endurance Athlete Demographic Background Questionnaire (EADBQ). The subjects had several ways in which they could complete the CSAI-2; some subjects completed it while at the registration booth the morning of the race, others completed it
while on the bus en route to the start, and others completed it at the race start. All subjects were asked to state where and at what time they completed the inventory. The results from the investigation failed to support the anxiety-performance relationship. Although statistical significance was not reached, there was a stronger relationship between cognitive anxiety and performance than with somatic anxiety. The researchers noted that the lack of support for the anxiety-performance relationship may be due to the sport-type. The subjects were competing in a lengthy race and the pre-competition cognitions may have had very little impact on overall performance. Also, previous research has shown that endurance athletes show low levels of anxiety which may help to conserve their energy for the race.

Each of the previous studies investigating the relationship between cognitive and somatic anxiety and performance suggests that it remains unclear as to how each subcomponent of anxiety affects athletic performance. There is no doubt that a relationship exists, however, there is a need to determine the specific effects of cognitive and somatic anxiety on performance.

Facilitative versus Debilitative Anxiety

The conceptualization that anxiety is a multidimensional construct, consisting of both cognitive and somatic anxiety is being increasingly adopted by researchers in the area of competitive anxiety. However, researchers have recently begun to focus on the direction of the anxiety being experienced. It has been suggested that anxiety may not always be experienced as negative and may in fact have a positive effect on an individual. The CSAI-2 fails to measure what Jones and Swain (1995) refer to as “directional perceptions” of the symptoms. “Directional perceptions” refer to the individual’s interpretation of the anxiety being experienced.
The notion of facilitating and debilitating anxiety has been evident in the test anxiety literature for several years. However, the intensity rather than the directional approach to the assessment of anxiety has dominated the sport psychology literature as the majority of the research has assumed that anxiety is harmful to performance (Jones & Cale, 1989).

In 1995, Jones and Swain examined the predispositions to experience debilitating and facilitative anxiety in elite and non-elite performers. The main purpose of the paper was to examine the distinction between "intensity" and "direction" of competitive anxiety symptoms as a function of skill level. The participants consisted of 133 male elite and non-elite cricket players. The subjects were asked to complete the CSAI-2 and a "direction" scale developed by Jones and Swain (1992). The "direction" scale asked subjects to assess their perception of the anxiety on a scale from -3 (very debilitating) to +3 (very facilitative). The results from the investigation provided additional support for the value of distinguishing between intensity and direction of cognitive and somatic anxiety. The findings also indicated that the elite athletes found anxiety more facilitative than the nonelite group. This suggests that elite level athletes may perceive anxiety differently than non-elite athletes.

Jones and Hanton (1996) investigated competitive anxiety symptoms and goal attainment expectancies. The sample consisted of ninety-one competitive swimmers. The subjects were asked to complete the modified CSAI-2 and goal attainment expectancy scale one hour prior to the competitive event. The results from the investigation provided support for the idea that competitive anxiety is not necessarily debilitating to sports performers. Both cognitive and somatic anxiety were experienced as facilitative by nearly half of the original sample of 91. The researchers noted that the high percentage of "facilitators" is due to the high level of swimmers
in the sample. It has been shown in previous research that most high level performers perceive their anxiety symptoms as facilitative rather than debilitative (Jones & Swain, 1995).

The existing literature has significant implications for applied work in sport psychology. The findings suggest that current conventional measures of anxiety are limiting in their applicability. The majority of anxiety inventories measure only the intensity and ignore the direction of anxiety. Future research needs to further investigate this issue and determine the most effective method of assessing one's anxiety level.

**Anxiety - Performance Relationship**

The relationship between anxiety and performance has been of central importance throughout the history of sport psychology. The predominant theories examining the anxiety-performance relationship include the drive theory, inverted-U hypothesis, zone of optimal functioning (ZOF) hypothesis, multidimensional anxiety theory, and catastrophe theory. Each theory will be discussed in turn.

**The Drive Theory**

Drive is referred to as a generalized state of arousal, typically physiological, experienced by the performer. Drive researchers predicted that as anxiety increased, the probability of occurrence of behaviors that are dominant in the response hierarchy increased. This suggests that for well-learned behaviors or performance on simple tasks, where the dominant responses in the hierarchy are correct, higher levels of arousal should facilitate skilled performance. When the dominant responses are incorrect or inefficient, increases in arousal should hinder performance (Fisher, 1976).

Taylor (1956) indicated support for the drive theory using a complex serial-verbal-maze-
learning task. The results revealed that as anxiety increased, the subjects committed more errors while learning the task.

Despite early support for the drive theory, a number of criticisms have been directed against the theory. Martens (1971) conducted an in-depth review of the drive theory literature and discovered that an equal number of studies supported and rejected the relationship. Research also suggests that the drive theory is not applicable to complex motor tasks (Martens, 1971).

**The Inverted-U Hypothesis**

The inverted-U hypothesis suggests a curvilinear relationship between anxiety and performance. Extremely high and extremely low levels of anxiety will impair performance while moderate anxiety levels will facilitate performance (Figure 1).

Since the late 1960’s, most sport psychologists have emphasized the notion that a moderate level of anxiety is associated with best performance. In 1982, Sonstroem and Bernardo examined pre-game state anxiety and basketball performance. The subjects consisted of thirty female University basketball starters from 6 different teams. Each of the subjects completed the State Trait Anxiety Inventory (STAI) prior to competition. The results indicated that basketball performance was highest when state anxiety levels were neither high or low but at moderate levels. Such a finding supports the inverted-U hypothesis (Sonstroem & Bernardo, 1982).

Despite receiving empirical support from sport psychology researchers, the inverted-U hypothesis has also received much criticism. Landers (1980) indicated that the inverted-U hypothesis does not explain the relationship between anxiety and performance but merely notes
the relationship is curvilinear. Landers stated that a theory is needed that would explain and predict the relationship between anxiety and performance.

A recent criticism of the inverted-U hypothesis is that it fails to recognize the multidimensional nature of anxiety. The inverted-U hypothesis does not take into account cognitive and somatic anxiety and their differing effects on one’s performance. The recent literature has begun to examine the inverted-U hypothesis from a multidimensional perspective.

In fact, a number of studies have indicated results contrary to the inverted-U hypothesis. Demoja and Demoja (1986) investigated the relationship between state anxiety and motorcross performance. Thirty-two motorcross riders were asked to complete the STAI 30 minutes prior to competition. Performance was evaluated by each subject’s rank at the finish of the competition. The results demonstrated that the best riders as a group, were characterized by significantly lower state anxiety and significantly higher trait anxiety, while the less capable competitors had a lower mean trait anxiety and higher mean state anxiety. Such a finding indicates that the better performers tended to have a lower state anxiety level, and a significantly higher trait anxiety level than the lesser performers (Demoja & Demoja, 1986). The researchers suggested that such a finding may be due to the personality of a motorcross sport driver, more specifically, that motorcross riders may have a lower trait anxiety level than the average individual. It is only when in the actual competitive situation (state anxiety) that one may experience anxiety.

The Zone of Optimal Functioning Hypothesis

Like the inverted-U hypothesis, the zone of optimal functioning (ZOF) suggests that an increase in anxiety, up to an optimal point, increases performance. However, unlike the inverted-U, the ZOF suggests that each individual has a different optimal level of anxiety.
Hanin (1980) developed a calculation that determines each individual’s optimal level of anxiety required to produce peak performance. The calculation is the individual’s score on the state trait anxiety inventory (STAI) plus or minus two.

Hanin’s ZOF hypothesis assumes that each athlete has a unique pre-competition anxiety level at which performance is facilitated. It is suggested that performance will be at its best when the athlete is in his or her specific optimal zone of functioning. In 1980 Hanin found that weightlifters who possessed a pre-competition anxiety level that fell within his or her calculated zone of optimal functioning, performed at a superior level compared to a weightlifter who possessed pre-competition anxiety levels outside his or her calculated zone of optimal functioning.

Very little empirical support exists for the Zone of Optimal Functioning Hypothesis. The majority of the criticism has focused on the uni-dimensional concept of anxiety. However, Krane (1993) examined the zone of optimal functioning hypothesis utilizing a multidimensional approach and found that the poorest performances were observed when athletes’ cognitive and somatic anxiety were above their zones. Performances when anxiety was within or below cognitive and somatic anxiety zones did not differ.

Overall, the existing research has suggested support for the hypothesis, but further analysis will need to address the question of why anxiety influences performance within the calculated zone of optimal functioning.

**Catastrophe Theory**

Another alternative to the inverted-U hypothesis is the catastrophe theory. Like the inverted-U hypothesis, this theory proposes that increases in anxiety up to an optimal level
will increase performance. However, the catastrophe theory suggests a drastic decrease in performance once the anxiety level “goes over the top.”

There are a number of catastrophe models, of which, the most commonly researched is the cusp catastrophe model. The cusp catastrophe model indicates that the two subcomponents of anxiety are interrelated with performance. The cusp theory suggests that when an individual’s physiological anxiety is high, an increase in cognitive anxiety will decrease performance and when an individual’s physiological anxiety is low an increase in cognitive anxiety will increase performance (Edwards & Hardy, 1996).

Edwards and Hardy (1996) examined the interactive effects of intensity and direction of cognitive and physiological anxiety and self-confidence upon performance. The subjects consisted of 45 netball players from 6 teams. Three measures were utilized in the study: a modified version of the CSAI-2, a physiological arousal measure (heart rate), and a subjective self-assessment of performance. Forty-five minutes prior to competition the heart rate of each athlete was taken, followed by completion of the CSAI-2. After competition, the performance of each athlete was determined through self-assessment forms. The results revealed that a significant interaction emerged between cognitive anxiety and physiological anxiety, as suggested by the catastrophe theory.

While the catastrophe theory has recently received some support, it is considered complex and in need of considerably more research.

**Mental Skills Training Programs**

**Effects on Performance**

Most mental skills are used to enhance performance and the quality of the sport
experience for the athlete. A major premise of mental skills training is that athletes are basically healthy but may need to learn cognitive skills and strategies to cope with the demands of competition. Significant research in the area supports the performance-enhancing effects of mental skills such as goal-setting, mental imagery, attentional training, relaxation and positive self-talk. Although various mental skills are used to enhance performance, the majority of the research has examined the effects of mental imagery.

Richard Suinn, a sport psychologist and prominent researcher in the area of imagery, worked with the University of Colorado’s ski team. He divided the team into two groups that were equally matched for ski-racing ability. One group received imagery training and the other was used as a control group. The skiers began with progressive relaxation and through imagery, proceeded to practice racing techniques, course concentration, improve course memorization and correct committed or potential errors. The results from the study indicated that imagery training was successful in enhancing performance (Suinn, 1976).

Burhans, Richman, and Bergey (1988) investigated the effects of a mental imagery training program on running speed. The participants consisted of 36 male and 29 female students enrolled in a physical conditioning course. Each subject volunteered to participate in the study and was randomly assigned to one of four groups; imagery of specific skills, imagery of the end results of successful performances, imagery of both specific and the end results, and a lecture control group. Each subject was initially asked to complete the Sport Competition Anxiety Test and Life Stress Scale prior to the initial 1.5 mile race. Each group then received its specific training for 12 weeks. The results indicated that all groups achieved the same level of improvement by the completion of the 12-week training period, however the specific skills
group did show a greater increase in its speed over the initial four weeks. Although statistically significant support was not provided, it should be noted that males had a faster rate of improvement than females. The male runners also reported more stress than the female runners. It was suggested by the researchers that the male subjects who utilized visual imagery prior to a race may enhance their stress level by focusing on the upcoming race. In contrast, the female subjects may have viewed the race as less competitive and therefore, were able to experience the stress-reducing effects of imagery.

In 1990, Kendall, Hrycaiko, Martin, and Kendall investigated the effects of relaxation, imagery and self-talk on the performance of a specific defensive basketball drill during competition. The intervention training was administered to each of the four basketball players during a five day interval when she was not playing. The intervention procedure involved:

Day 1: 30-minute introduction to mental preparation concepts and 15 minutes of relaxation training.

Day 2: 45-minute session in imagery.

Day 3: Combination of self-talk, imagery and relaxation.

Day 4: Combination of imagery and relaxation to specifically rehearse correctly performing the drill.

Day 5: (Game day) Use of self-talk, imagery and relaxation for 15 minutes.

The performance was determined by one of the authors who independently rated the defensive skill as either correct or incorrect. The results from the study indicated that intervention training was clearly effective in enhancing a basketball skill during competition.

In 1992, Davis outlined the development, implementation, and evaluation of a
performance enhancement program for a female college tennis player. To begin, an interview was conducted with the subject to assess her strengths and weaknesses in tennis. Throughout the eight-week intervention program, the player set and monitored both performance and psychological goals and had regular imagery sessions with a sport psychologist. The results indicated satisfactory progress on four of five performance areas and three of the four psychological goals (Davis, 1992).

Savoy (1993) examined the effects of a yearly mental training program for a college basketball player. The purpose of the case study was to assess the characteristics of a female University level basketball player. The subject was a 19-year old female basketball player who was a starter at a top-10 ranked NCAA Division I basketball team. The sport psychology consultant was approached by the coach to assist the player develop her potential. The athlete met with the consultant and agreed to participate. The mental skills program began in the off-season using Kroll’s (1979) Competitive Athletic Stress Scale (CASS) and an interview with the consultant. Within the interview they discussed the stress factors that the athlete experienced before, during and after her performances. In the second session the Test of Attentional and Interpersonal Style (TAIS) was administered to the athlete. From her responses, a mental skills program was developed for the athlete. During the off-season the athlete worked on two areas, distraction control and motivation for practice. The distraction control consisted of positive self-talk and imagery strategies. In order to prepare her for practice, several strategies were suggested including positive self-talk, imagery, energizing music, and centering breaths. Throughout the season the consultant served as a reminder of the skills developed in the off-season. The athlete’s performance was outstanding in the pre-season. The athlete continued to
play very well throughout the season. Both the coach and athlete indicated that the performance improvement was due to the increase in the athlete’s self-confidence. The athlete said that the program helped her to improve her self-confidence. The game statistics also showed positive results after the program had been employed.

Holm, Beckwith, Ehde, and Tinius (1996) examined the effects of cognitive-behavioral interventions for improving performance in competitive athletes. Sixty-two volunteers from a University-level football team (n = 26) and men’s and women’s swim team (n = 36) consented to participate. Subjects were randomly assigned to a control group (n = 31; 13 football players and 18 swimmers) or experimental group (n = 31; 13 football and 18 swimmers). In both groups athletes were matched for gender, sport, and experience. Both groups completed several psychological inventories prior to and immediately following the experimental group’s stress management program. The stress management program consisted of seven two hour weekly sessions. Each session began with a brief discussion of the stress management technique (i.e. imagery, relaxation, assertiveness) which was then followed by assistance in implementing the technique. Following the practice time, the subjects had an opportunity to ask questions and discuss methods in which one could apply such techniques in sport. This investigation had three major areas of interest, anxiety reduction and management, academic performance and athletic performance. The experimental group showed significantly lower levels of cognitive anxiety, greater anxiety management skills, and a trend toward fewer somatic symptoms of anxiety than the control group. The analysis showed that the stress management program had a significant effect on the grade point average of the swimmers, but not the football players. The significant improvement in the swimmers’ grades suggests that stress management can be applied to
enhance academic performance. The study also revealed that improvements in athletic performance were related to both improvements in mental skills and to reductions in cognitive anxiety and somatic anxiety.

Overall, the review of mental skills literature in sport psychology provides support for the performance-enhancing effects of mental skills training. Various mental skills have been found to enhance athletic performance. Although the majority of the research has examined the relationship between mental skills training and performance, there are a number of factors that are effected by mental skills training. Therefore, it is relevant to note the significant anxiety-reducing effects of mental skills training. However, the majority of the past research has only notational comments and peripheral examinations of the relationship.

Effects on Anxiety Management

In 1982, Weinberg, Seabourne, and Jackson attempted to examine the effects of visual-motor behavior rehearsal (VMBR) on state-trait anxiety and performance. The subjects consisted of 18 males enrolled in a University karate club. All subjects completed the STAI at the first meeting. The performance was measured by three categories; skill, combinations, and sparring. An eleven point Likert scale was used to assess each category by a karate expert. The subjects were randomly assigned to one of two groups, VMBR or practice VMBR. Subjects assigned to practice VMBR received training, literature and practice information about VMBR. The VMBR group only received instruction with no practice information or motivation to practice at home. The results from the study indicated that the group that received VMBR training and practice exhibited significantly better performance than the other group. Trait anxiety results indicated that all subjects displayed a significant reduction in trait anxiety over
the course of the training period (Weinberg, Seabourne, & Jackson, 1982).

Crocker, Alderman, and Smith (1988) investigated the effects of cognitive-affective stress management training (SMT) on affect, cognition, and performance of youth volleyball players. SMT teaches coping skills such as goal-setting, relaxation training, cognitive restructuring and mental imagery. Thirty-one volleyball players were assigned to one of two groups, SMT or control group. Cognitive anxiety was measured using the Competitive State Anxiety Inventory (CSAI-2) and trait anxiety was measured using the Sport Competition Anxiety Test (SCAT). Each subject’s thoughts were assessed by a procedure that consisted of having the athlete list his or her thoughts for two minutes after viewing one of five videotaped volleyball situations. These statements were then given to two judges for scoring as positive, negative, or neutral. The performance of each player was videotaped from a practice and rated on a five-point scale. Prior to receiving SMT, each athlete completed the SCAT and CSAI-2 and performance was measured. The results indicated that no significant anxiety-reducing effect was observed. However, the treatment group did have increased positive self-statements and enhanced performance in comparison to the control group. Such a result suggests that SMT may have a positive effects on cognitions and performance. The lack of anxiety-reducing effect by the SMT may be due to a number of reasons particularly a lack of time to produce significant anxiety-reducing effects.

Mace and Carroll (1985) examined the effect of stress inoculation training on an individual’s anxiety level prior to abseiling from the roof of a building. Stress inoculation training is a technique which teaches skills for coping with stress and provides opportunity for practice in rehearsing and applying these skills. Forty volunteers were randomly divided into
four groups; stress inoculation training, self-instruction, practical training, and no training (control group). Three separate anxiety measures were administered. Following training, each of the three measures were administered to the subjects and the results indicated that the use of stress inoculation training was extremely effective in controlling anxiety. The group that received the stress inoculation training had significantly lower scores on each of the three anxiety measures.

Elko and Ostrow (1991) examined the effects of rational emotive therapy (RET) on the cognitive and somatic anxiety levels of 6 anxiety-prone gymnasts. The anxiety-prone gymnasts were identified by their scores on the CSAI-2, SCAT, and were interviewed prior to competition. Each subject received personalized training in RET for 3-weeks. Rational Emotive Therapy, developed by Albert Ellis, is a method of psychotherapy based on the idea that an individual’s problems have been caused by his or her misinterpretations of events and goals. Rational emotive therapists instruct clients how to minimize anxiety, guilt and depression through the acceptance of others, alleviate anger and violence by becoming tolerant of others and reduce frustration by learning to cope with reality. The results from the study indicated a significant reduction in the anxiety of 5 of the 6 gymnasts.

Prapavessis, Grove, McNair, and Cable (1992) examined the effectiveness of a cognitive-behavioral intervention training program for reducing state anxiety and enhancing athletic performance. The subject was a 20 year old male rifle shooter. The subject completed the CSAI-2 to measure his cognitive and somatic anxiety levels. The subject participated in a 12-session intervention program that took place over a 6-week period. The sessions consisted of education, self-awareness, stretching, progressive relaxation, thought-stoppage, and biofeedback
activities. State anxiety levels were once again measured after completion of the 6-week intervention program. The results indicated that both cognitive and somatic anxiety were significantly reduced as a result of the intervention training. The researchers noted that consideration must be given to the fact that they could not control for the athlete’s expectations for improvement due to the intervention.

Kerr and Leith (1993) examined the effects of a stress management program on athletic performance, mental imagery, attentional skills and competitive anxiety. The subjects consisted of 24 male and female international gymnasts. The subjects were matched into pairs according to gender, age, and performance (previous year’s ranking). One member of each pair was assigned to the experimental group and the other was a control. The gymnasts in the experimental group met individually with the experimenter on a bi-weekly basis for 8 months. Each of the 16 sessions lasted approximately one hour. Three performance scales were obtained for each subject. The first score was from the previous season’s peak performance. The second score was obtained at a mid-season competition and the third score was obtained four months after the initiation of the stress management program. The mental rehearsal and competitive anxiety scales were administered at the beginning and end of the program. The results provided support for the performance-enhancing effects of a stress management program. The stress management program was found to have no effect on competitive anxiety. The researchers suggested that anxiety may be either facilitative or debilitating depending upon one’s appraisal.

Carter and Kelly (1997) examined the effect of psychological reactance on the success of traditional and paradoxical mental imagery treatments that were aimed at reducing anxiety in athletes. Psychological reactance is defined as “the tendency to counteract restrictions or
pressure in order to protect personal freedom” (Carter & Kelly, 1997). Seventy-three intramural basketball players were recruited through advertisements for a free-throw contest. The subjects completed the STAI and gave a personal estimate of free-throw performance. The subjects also completed the Therapeutic Reactance Scale (TRS) (Dowd, Milne, & Wise, 1991) which was used to measure psychological reactance, the CSAI-2 and a performance task. The performance task required subjects to complete 25 basketball free-throws. The athlete who made the most number of shots was to be rewarded with $100 cash. The award was meant to stimulate competitive performance conditions. The subjects were placed into one of three groups: confidence imagery, paradoxical imagery, or control. The confidence imagery group consisted of a 3-minute script read aloud by the experimenter, instructing the athletes to visualize themselves performing basketball free throws. The subjects were asked to vividly imagine the setting while focusing on feeling confident. The paradoxical group was read a 3-minute script asking the athletes to imagine performing basketball free throws while feeling nervous or anxious. The athletes were told to focus on experiencing worry and anxiety while picturing themselves at the line. The control group received no treatment. The results from the study indicated that reactance does moderate the effect of the success of traditional and paradoxical imagery treatments for reducing athletes’ cognitive and somatic anxiety.

Overall, research has provided support for the efficacy of various mental skills in terms of enhancing performance and life skills for athletes. However, it is important to recognize that many of the studies in this area lack rigorous methodologies. For example, there tends to be a lack of randomization, low sample size and absence of control groups. There is a need for future researchers to examine the effects and benefits of mental skills through more rigorous designs.
Also, there is a need to further examine the athletes' personal experiences with mental skills programs. The existing literature focuses on the quantitative effects of such programs on performance, stress, and anxiety. There is a need to qualitatively examine the experiences of athletes to gain a more in-depth understanding of the athletes' preferred methods.

**Unimodal Versus Multimodal Interventions**

Recent research has demonstrated the usefulness of mental training packages involving relaxation, cognitive restructuring and mental imagery (Kendal, Hrycaiko, Martin, & Kendall, 1990). However, there is little research determining whether combining mental preparation strategies is more effective for enhancing performance than a single strategy.

Weinberg, Chan, and Jackson (1983) investigated free throw performance with a single or combination of mental strategies. Forty subjects were randomly assigned to one of four groups; imagery, relaxation, relaxation plus imagery, and control. After a practice session, subjects shot 20 test shots using the assigned technique. Each subject had 10 seconds to utilize his or her mental preparation strategy. Results indicated that the imagery group produced the highest number of free throws. Although the single strategy produced the best overall performance, researchers suggested that the time needed for instruction, practice and use of a combination of strategies was insufficient. Therefore, more research in different settings is needed to examine the effectiveness of a combination of strategies versus a single technique.

**Matched Process Hypothesis**

Borkovec (1976) and Davidson and Schwartz (1976) each note that cognitive and somatic anxiety reflect two independent factors that are affected by stressors independently. Thus, the treatment of anxiety may be more efficacious if the method of treatment is directed at
the system most activated by the stressor, a process known as the "matched process." The evidence supporting the "matched hypothesis" is by no means unanimous, although research tends to support it. Morris, Davis, and Hutchings (1981) investigated the cognitive and emotional components of anxiety. The results of the study suggested that relaxation techniques, biofeedback and stress management are expected to be better suited to reducing somatic anxiety. Cognitive strategies such as positive thinking, focus control and imagery are thought to be more effective in reducing cognitive anxiety.

Maynard and Cotton (1993) examined the effects of stress management training on matched symptoms manifested by 20 male collegiate field hockey players. Matched symptoms refers to one's anxiety symptoms that are presumably controlled by the matched process. Each subject completed the CSAI-2 2 days, 3 hours, 1 hour and 10 minutes prior to competition. Relaxation training was administered to the subjects rated as highest in somatic-based anxiety and positive thought control was administered to the cognitive-based subjects. The results suggested that reducing anxiety by an intervention directed at the subject's dominant anxiety is a more efficacious approach than applying random anxiety-reducing strategies.

Maynard, Smith, and Warwick-Evans (1995) investigated the effects of a cognitive intervention technique with semi-professional soccer players. Twenty-four male soccer players volunteered to participate in the study. Each completed the CSAI-2 20 minutes before three soccer matches. A scale developed by Jones and Swain (1992) related to direction, was used in conjunction to the CSAI-2. The scale asked subjects to rate the extent to which the experienced intensity of each symptom was perceived as either facilitative or debilitative to performance. The direction scale was measured on a 7-point likert format ranging from -3 (very debilitating) to
+3 (very facilitative). The subjects were then placed into one of three groups, a debilitative cognitive anxiety, debilitative somatic anxiety, and a control group that perceived their cognitive and somatic anxiety as facilitative. The results from this investigation indicated partial support for the matching hypothesis in that a compatible treatment proved more effective in reducing the targeted anxiety in both experimental groups.

In 1995 Maynard, Hemmings, and Warwick-Evans examined the effects of a somatic intervention strategy on competitive state anxiety and performance in semi-professional soccer players. Seventeen subjects completed the modified CSAI-2, which included the direction scale (Jones & Swain, 1992) within one hour of a soccer match. During the game each subject’s performance was evaluated by four experts associated with the team. Each rater was given a scale consisting of performance criteria on a scale from 1 (poor) to 5 (good), which had been developed by an independent football association coach. The subjects were then assigned to one of two groups, experimental and control. The experimental group was given an 8-week somatic intervention with training in applied relaxation and the control group was given placebo tasks. Each subject was instructed to recognize the signs of anxiety and learn to cope with anxiety. The results indicated support for the “matching hypothesis” as the compatible treatment proved most effective in reducing the target anxiety.

Teny, Coakley, and Karageorghis (1995) examined the effects of interventions upon pre-competition state anxiety in tennis players. The subjects consisted of 100 elite, junior, tennis players competing in the 18 and under or 14 and under Championships. Each subject was randomly assigned to one of four groups; cognitive-based, somatic-based, both cognitive and somatic-based interventions, and control. The cognitive group received mental imagery, the
somatic group worked on centered breathing, the cognitive and somatic group received centering followed by mental imagery, and the control group worked on a non-specific concentration grid exercise. All individuals completed the CSAI-2 and then received individual instruction on the specific intervention. The intervention was provided on audiocassette. After the intervention training, each subject again completed the CSAI-2. The results from the investigation indicated that somatic-based centering had significant cognitive anxiety-reducing effects, whereas, mental imagery significantly reduced somatic anxiety. These findings do not provide support for the proposed matching hypothesis, but rather for the idea of crossover effects. Terry et al. suggested that the physical control induced by centered breathing reduces worry, and the positive images created by mental imagery had a calming effect on somatic functioning. There was no significant benefit to using both techniques in preference to either one. Terry et al. also suggested that the use of mental imagery and centering may be particularly helpful in a sport such as tennis, where short bursts of intense action are interspersed with frequent recovery periods. These recovery periods may allow for the application of such techniques.

In 1997, Maynard, MacDonald, and Warwick-Evans examined anxiety in novice rock climbers. The main purpose of the investigation was to further examine the matching hypothesis in a non-competitive sporting situation. Thirty male subjects completed the CSAI-2 on four occasions prior to their first rock climb. Dependent upon the subjects' dominant anxiety, the subjects were placed in either a cognitive anxiety or a somatic anxiety group. Both groups were given a 12-week applied relaxation intervention program. The results from the study suggested that the most efficacious approach is to reduce anxiety with a method directed at the dominant
type of anxiety being experienced. Maynard et al. acknowledged the fact that subjects were better able to reduce one anxiety component than the other because they were higher in that component at the outset. The researchers also acknowledged that the subjects may not require reductions in anxiety. The reduction may hinder performance by altering individuals’ perceptions of their own readiness to perform.

**Crossover Effects**

While there has been some support for the matching hypothesis, researchers have indicated a need to investigate the manner in which both cognitive and somatic anxiety can be reduced through the matching of interventions. It has been disputed that there is a need to apply both cognitive and somatic anxiety interventions simultaneously (Burton, 1990). However, Maynard and colleagues (Maynard & Cotton, 1993; Maynard, Hemmings, & Warwick, 1995; Maynard, Smith, & Warwick-Evans, 1995) indicated that compatible treatments proved most effective in reducing anxiety through ‘crossover’ effects. ‘Crossover effects’ refers to the notion that the application of an anxiety intervention targeted at one system, may also reduce symptoms in the less compatible modality of anxiety (Borkovec, 1976; Maynard & Cotton, 1993).

Maynard, Smith, and Warwick-Evans (1995) examined the effects of a cognitive intervention strategy on competitive state anxiety and performance in semi-professional soccer players. The results from the investigation indicated a significant reduction in both cognitive and somatic anxiety intensity, indicating support for the crossover effect. In a similar study, Maynard, Hemmings, and Warwick-Evans (1995) investigated the effects of a somatic intervention strategy on competitive state anxiety and performance in semi-professional soccer players. The results also provided support for the crossover effects indicating a significant
reduction in both cognitive and somatic anxiety.

Although research has indicated support for the notion of ‘crossover effects’ there is a need to further investigate the effectiveness of various programs. Maynard and colleagues identified a need to compare the effectiveness of unimodal compatible, unimodal non-compatible, and multimodal techniques in the sport setting.

**Athletes’ Experiences with Mental Skills Programs**

Sport psychology consultants continue to offer applied training and instruction of mental skills to athletes. However, very little research has qualitatively examined the athletes’ experiences with such programs.

Gould, Murphy, Tammen, and May (1991) evaluated the U.S. Olympic sport psychology consultant effectiveness. The participants consisted of 47 athletes representing 19 U.S. Olympic sports. Each athlete was mailed a questionnaire to examine the effectiveness of the sport psychology consulting offered. The results indicated that the athletes enjoyed the time spent with consultants and found the strategies beneficial. The athletes were particularly interested in the use of imagery, self-talk strategies, and relaxation training. The athletes indicated a desire to meet more frequently and for the consultant to have more involvement in the athletes’ daily training and traveling. Also, the athletes expressed the need to individualize strategies to better meet each athlete’s needs.

In 1994, Weinberg and Comar investigated the effectiveness of psychological interventions in competitive sport. The researchers proposed that although significant performance-enhancing effects are evident, there are a number of methodological shortcomings that limit the applicability of the findings. The findings focus on the need for more qualitative
based examinations of psychological techniques. It is proposed by the researchers that qualitative methods will enhance the understanding of how interventions affect athletes' performance and personal growth.

Cogan and Petrie (1995) evaluated a season-long intervention program with female collegiate gymnasts. The intervention group consisted of 14 gymnasts from an NCAA Division I University in the mid-west. Eight of the gymnasts had previous exposure to sport psychology, however six had little or no experience with such training. The control group consisted of 14 female gymnasts from an NCAA Division I University on the west coast. The control group did not receive intervention training. The intervention group followed the following intervention program throughout the season:

Team-Building Interventions
1. Program overview and acquaintanceship
2. Leadership workshop
3. Team camp-out
4. Communication sessions
5. Team meeting

Anxiety Management Components
1. Introduction to Stress Management
2. Relaxation training
3. Visualization

During team meetings, the researchers gathered the qualitative information. The information consisted of themes and topics addressed in each team meeting. Observational tactics were employed during the team meetings and were recorded by the researchers. The results from the qualitative information suggested that the gymnasts found the team-building sessions most beneficial. The anxiety components, stress management and relaxation were rated as less helpful than the team-building components. Overall, the qualitative evaluation supported
the program’s effectiveness. However, it is important to recognize the potential differences that may have existed between the two teams such as coaching styles and gymnast’s motivation.

The existing literature examining the athletes’ experiences with mental skills is limited. In order to develop the most effective and beneficial mental skills training programs there is a need to further investigate the perceptions, perceived benefits and drawbacks of such programs and the participants’ recommendations. Ideally athletes would contribute to the development and design of mental skills programs. Through qualitative analysis of existing programs, researchers could gain this information.

**Summary of Related Literature**

Overall, the majority of the research in the area of anxiety has examined the relationship between anxiety and athletic performance. However, it is important not only to learn of the relationship, but the mechanisms by which performance is affected by anxiety. The existing literature on anxiety has quantitatively examined athletes’ experiences of anxiety through various inventories and questionnaires. Very little research has examined the athletes’ experiences of and feelings associated with anxiety. A qualitative approach is needed in order to gain a more in-depth understanding of the athletes’ feelings and experiences of anxiety. Through such research, coaches and sport psychology consultants can determine the most effective method to manage and control athletes’ anxiety.

In addition, little research has examined the experiences of athletes with a mental skills program. While the existing literature indicates the need for and benefits of mental skills training, research is needed to better understand athletes’ personal experiences with a mental skills program. Most of the literature has examined the effects of mental skills programs on
performance and anxiety on a quantitative level. There is a need to qualitatively examine the perceived benefits and effects of such programs on the athlete. In doing so, coaches and sport psychology consultants would be better able to develop and implement the most effective and beneficial programs.
Chapter Three

Methodology

Introduction to Methodology

The purpose of qualitative inquiry is to “make sense of massive amounts of data, reduce the volume of information, identify significant patterns, and construct a framework for communicating the essence of what the data reveal” (Patton, 1990, pp. 371-372). Patton (1990) stated “qualitative analysis ultimately depends on the analytical intellect and style of the analyst” (p. 372).

The majority of the studies examined within the literature review have used mostly quantitative research methods. However, the use of qualitative work within the field of sport psychology is increasing. In a 1995 newsletter published by the North American Society of Sport Psychology and Physical Activity (NASPSPA), Strean and Eklund discussed the growing interest and significance of qualitative research in the area of sport psychology and physical activity. The main purpose of the article was to assert the “goodness” of qualitative research and to discuss methods to put it to good use in the field. The article asserts that description in qualitative work gives information on what people are experiencing. It “offers opportunities to describe both processes and contexts” (Strean & Eklund, 1995, p. 5).

Participants

The sample for this study consisted of five competitive intercollegiate swimmers (male = 3; female = 2). The swimmers were between 21 and 23 years of age and were training and competing with a University in Ontario, Canada. Each swimmer volunteered to be a participant in the study. All were national-level athletes training on a year-round basis and
devoted between fifteen and thirty hours per week to training.

**Mental Skills Training Program**

The mental skills training program was comprised of six individual sessions which included training in goal-setting, cognitive restructuring, attentional training, relaxation, centered breathing and mental imagery. Table 3.1 depicts the order of the mental skills in the training program. Each mental skill will be described in turn.

Table 3.1

**Mental Skills Training Program**

<table>
<thead>
<tr>
<th>Mental Skills Training Sessions</th>
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<tbody>
<tr>
<td><strong>Session 1</strong> Introduction &amp; Goal-Setting</td>
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<tr>
<td><strong>Session 2</strong> Cognitive Restructuring</td>
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<tr>
<td><strong>Session 3</strong> Attentional Training</td>
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<tr>
<td><strong>Session 4</strong> Relaxation Training &amp; Centering</td>
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<tr>
<td><strong>Session 5</strong> Mental Imagery</td>
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<tr>
<td><strong>Session 6</strong> Competition Planning</td>
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</tbody>
</table>

**Goal-Setting**

By definition, “a goal is that which an individual is trying to accomplish; it is the objective or aim of an action” (Raalte & Brewer, 1992). Goal-setting is a positive motivational strategy designed to enhance performance by focusing attention and promoting increased intensity and persistence. The majority of athletes have very little difficulty establishing their goals, as most have an objective or an aim. However, they often have difficulty setting effective goals and working with goals once they are established. During the sessions the athletes were introduced to goal-setting and discussed the guidelines for effective goal-setting, as detailed in Table 3.2.
In order to establish effective goal-setting, it is necessary to use a variety of strategies. As with all techniques applied, it is important to allow the athlete to determine his or her personal program. Depending on each athlete’s needs and desires, an appropriate program was implemented.

The goal-setting session began with an introduction into goal-setting. The athletes were educated on the following points:

- What is goal-setting?
- The importance of goal-setting
- The benefits of goal-setting
- Guidelines of effective goal-setting
- Types of goals (i.e. dream, realistic, outcome)

The athlete and I then discussed the athlete’s past history with goal-setting, preferred goal-setting format, and current goals. Each participant then completed the Goal-Setting Form.
While discussing the athlete’s responses we worked together to develop an appropriate goal-setting program. In addition to the initial goal-setting session, approximately 10 minutes of each session was devoted to goal-setting. This allowed the athlete a moment to discuss his or her progress, roadblocks, and modifications (Botterill & Patrick, 1995; Burton, 1984, 1989; Orlick, 1990).

**Positive Thinking/Cognitive Restructuring**

Cognitive restructuring is a technique utilized to assist an individual to control and focus thoughts. Within competitive sport this exercise can be used to help an athlete recognize, stop, and replace his or her negative thoughts that can harm performance.

As with all techniques, it was necessary that each athlete receive a brief introduction into the background and format of cognitive restructuring. The participants were educated on the key guidelines for effective positive thinking, as detailed in Table 3.3.

**Table 3.3**

**Guidelines for Positive Thinking**

- Self-statements should be positive and constructive.
- The self-statement should state relevant information. It should identify what you will do, how you will do it, and why you will do it.
- Self-talk should focus on factors within one’s control.
- Self-talk must be learned and rehearsed in practice and simulated in competition.
- Individuals may experiment with self-statements to establish a personal regime.
- Progress must be monitored.

**Note:** Adapted from T. Orlick, 1990, *In Pursuit of Excellence* Champaign, IL: Human Kinetics

To assist with the implementation of the strategies discussed, several exercises were completed in the session. The athletes listed approximately six to eight negative thoughts or statements or potential negative concerns. The athlete and consultant then discussed possible restructuring for each negative thought or concern.
Attentional Training

Focus and concentration are factors that are of great importance to successful athletic performance. While performing in competition many athletes indicate being distracted by any number of factors (e.g. family members present, crowd, past mistakes, location). It is when an athlete reacts to a distraction that his or her ability to perform at peak level is effected negatively. Therefore, it is necessary to establish a plan to combat any distractions that may occur. Similar to other strategies, each athlete must determine an appropriate and preferred method to use.

The following is a list of possible techniques to refocus and gain control at different times throughout competition (Nideffer, 1985). Each of the following strategies was discussed with the participants in reference to attentional training.

- Establishing a competition focus plan.
- “Treeing” and “parking it” (Orlick, 1990; Riley, 1993).
- Positive self-talk/cognitive restructuring
- Cue words
- Visual cues
- Mental imagery
- Goal setting

Each participant was introduced to attentional training and discussed distractions that have occurred in his or her competition and practice experiences. Practical examples and solutions were also discussed.

Mental Imagery

Imagery, also referred to as visualization, mental rehearsal or mental practice is a technique that involves “the symbolic rehearsal of a physical activity in the absence of any gross muscular movement” (Richardson, 1967, p. 915). Imaging a situation, position or
performance, allows an individual to deal with a situation before it occurs, therefore allowing one to better deal and cope with the actual event. As a result, an individual is able to prepare himself or herself for what he or she may expect to experience and how to respond effectively.

Imagery is a strategy that, with practice, can be invaluable to athletes. Most top competitors indicate its positive effects. However, it is necessary that the athlete establish the correct manner of developing and utilizing an imagery program.

The participants were educated on the use of imagery for motivational purposes, to correct past and potential errors and the use of imagery in combination with relaxation training and positive thinking. In addition, the athletes were instructed on the use of both external and internal imagery. Internal imagery involves the individual imaging him/herself as if performing the movement. With external imagery, an individual images the performance as if watching himself/herself on a television screen (Nideffer, 1985; Sheikh & Korn, 1983).

**Centering**

Centering is defined as gaining control over tension and concentration under pressure. Centering involves directing one’s focus towards the center of gravity (area directly behind navel). When one is centered he or she feels confident, strong, more relaxed and focused. Centering involves breathing patterns that consist of deep inhaling and exhaling. Centering is a technique that many athletes currently utilize, but may need formal instruction to enhance its effectiveness.

Each participant received instruction and training towards establishing successful centering techniques. Sample centering techniques were applied during the sessions. The centered breathing was discussed in conjunction with other techniques including relaxation
training and mental imagery.

Relaxation Training

Being able to relax gives an athlete the ability to gain control over his or her body, which enables one to remain calm and responsive to the task at hand. For many athletes the use of relaxation is used in collaboration with other techniques. Relaxation is a technique that many athletes use for a number of situations (induce sleep, pre-competition, post-competition).

Progressive muscular relaxation (PMR) training is a popular relaxation method used by a number of successful athletes. Progressive relaxation involves the tensing of muscles, focusing on the feeling of each muscle, and releasing the muscle tension.

The following is a sample of a progressive relaxation script:

Begin with your hand...clench it into a fist, notice the tension, release, and notice the contrasting relaxed feeling... Tense the other hand into a fist, then relax... Flex the right arm to tighten the biceps, then relax... Flex the other arm, relax... Raise your eyebrows and frown to tense the forehead, relax... Shrug the shoulders for tension, relax... Take a deep breath, hold it to tense; slowly exhale and notice the relaxation... Do it again... Tighten your stomach muscles, relax... Point your toes down to tense, relax... Return to normal breathing (Jacobson, 1938).

Several athletes were familiar with progressive muscular relaxation and were guided through a short relaxation session. The athletes unfamiliar with PMR were introduced to the method and guided through a longer relaxation session. The purpose of the session was to allow the athlete to become aware of his or her areas of tension and gain an understanding of the feelings associated with relaxation. From the sample exercise the athletes discussed their perceived areas of tension and established exercises and methods that could assist relaxation. Each athlete was given a sample relaxation cassette tape and was asked to try the tape at his or her convenience.
Pre-competition Planning

When entering competition an athlete may experience heightened anxiety and stress as a result of a number of factors including location, past errors committed, rank or type of meet. During a performance there are a number of events that an athlete can expect to occur, however there are also a number of events that athletes may not expect or may not desire. Therefore, it is necessary to work with an athlete to develop personalized pre-competition plans to imagine possible situations and effective solutions.

Each athlete’s pre-competition plan consisted of a detailed list of events that may occur from the time one arrives at the site to the completion of the performance. The list included a series of possible solutions to a variety of potential situations. For instance, a swimmer may devise a plan for a possible race delay or rowdy crowd.

Researchers suggest that an athlete answer three questions prior to competition; what to do, why do it, and what to do if it doesn’t work? After the competition an athlete should evaluate how the plan worked and make any necessary changes to the existing plan. Such a strategy can be extremely helpful to the athlete who is competing in unfamiliar surroundings, such as in many championship or international competitions.

Each athlete was introduced to the strategy and worked to establish a competition plan. An upcoming meet was selected and the entire day leading up to race time was organized (Orlick, 1990).

Mental Skills Manual

Each athlete received a number of mental skills strategies through the six-week training period. As with physical talent, it is necessary for an athlete to practice the
psychological techniques in order to achieve success, meaning and familiarity with a specific method. For instance, an athlete must practice mental imagery, distraction control and relaxation at home and during simulated competition in order to achieve success. An athlete cannot sample a strategy such as a cue word/image and expect instant results. As previously mentioned, a cue word/image must represent meaning for the individual and therefore must be applied in both practice and actual competition in order to become effective in reducing one’s anxiety.

The use of a mental skills manual allows each athlete to monitor and modify his or her personal psychological training program. Each athlete received a number of worksheets, scripts, and assessment tools throughout the program that built upon one another. As previously stated, each athlete received a variety of training options such as various goal-setting methods and forms in which he or she had the option to select the most appropriate, effective or preferred method. In doing so, the athlete was able to acquire a collection of materials that he or she could turn to for assistance.

The mental skills manual was also used to allow each participant to record his or her experiences, thoughts, and progress with the established program. Within the weekly sessions the log was used to inform the consultant of the athlete’s progress.

Journals

Furthermore, each participant was asked to maintain a weekly journal. The purpose of the journal was to allow each individual to freely express his or her personal feelings and experiences with the intervention program and any experiences of anxiety or arousal.

The objective of maintaining a journal was to stimulate discussion within the weekly
sessions, identify problems and success within the program (i.e. time conflicts, difficulties with certain strategies, success with techniques, etc.), and assist with appropriate program development. It was thought that many participants may be uncomfortable or unfamiliar with the one-on-one weekly session format and may find the journal a discreet and effective means of disclosing one’s feelings. No participant was pressured to discuss any portion of his or her journal’s content.

Throughout the investigation I also maintained a journal in order to record my personal experiences, feelings and thoughts about the study and the participants’ progress through the program. Weekly sessions were recorded in detail. The benefits of maintaining a personal journal include a clearer focus and understanding of each week’s sessions and the chance to discreetly express my feelings about the program and its participants. It also became a format in which I could record thoughts in relation to data analysis such as possible categories or recurring themes. Patton (1990) indicated the importance of recording analytical insights that occur during data collection. The overlapping of data collection and analysis is thought to enhance the quality of the analysis.

Techniques

Interviews

Within qualitative work there are numerous methods utilized to gather and collect data. Patton (1990) suggested that,

*we interview people to find out from them those things we cannot directly observe... We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they have attached to what goes on in the world - we have to ask*
people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective (1990, p. 196).

Within this investigation interviews were conducted in order to gain depth, description, and detail of each participant’s experiences. More specifically, interviews were implemented to gain information about each participant’s experiences of anxiety, coping styles, exposure to sport psychology and experience with the mental skills program. Berg (1995) defined several types of interviews including the standardized interview, unstandardized interview, and the semi-structured interview. The standardized interview uses a formal schedule of interview questions. An interviewer is required to ask the interviewee each question. In contrast, the unstructured interview does not involve a schedule of questions. An interviewer must adapt, develop and generate questions and probes appropriate to the situation and purpose of the investigation. The semi-structured interview consists of predetermined topics and issues to be covered. They are guided by a list of probes and/or questions in which the exact wording or order of the questions is not set ahead of time. Although the questions are asked in a consistent and systematic order, the interviewer is able to deviate from the interview guide in order to gain information needed.

In this study a semi-structured interview format was applied. This format allowed each interviewee to fully elaborate on his or her experiences and permitted probing by the interviewer of relevant or central issues that arose through the interview session. The benefit of a semi-structured format is that it allows an interviewer to have a set direction, but also to have that ability to respond to the situation at-hand.

**Procedure**

At the beginning of the competitive swimming season, a meeting was organized with
both the head and assistant coach of the men’s and women’s swimming team. The coaches were informed of the study and received a brief proposal of the time requirements and mental skills program to be applied. At a scheduled practice the researcher made a brief (15 minute) introduction to the study. The athletes were given a letter of information and consent form informing them of the confidentiality of individual results and the ability to withdraw at anytime without penalty or prejudice (Appendix A). An information sheet was placed on the swim bulletin board to serve as a reminder to all athletes of the available services (Appendix B). After approximately two weeks, five swimmers had consented to participate and were telephoned to further discuss the study and confirm their interest in the program. Each of the participants completed a consent form after confirming his or her interest in the program.

In this investigation, there were two interview phases, a pre-intervention and post-intervention interview. The pre-intervention interview was conducted with each of the five participants. All interviews took place in the researcher’s office at the university and lasted between 60 and 75 minutes. Each interview began with introductory comments, in which respondents were again informed of the purpose of the study, and guaranteed confidentiality. With the permission of the respondents, face-to-face interviews were audio-taped. The participants were advised that all tapes would be destroyed at the completion of the project.

The interviews followed an interview guide developed to serve as a reminder of the topics to be addressed and ensured that all areas of interest were covered (Appendix C). The interviews were semi-structured to allow the researcher to explore areas relevant to the topic as they emerged. The pre-intervention interview examined the athletes’ experiences and sources of anxiety and previous exposure to mental skills training. Probing questions were asked in order
to encourage the participant to elaborate on a point. For example, “What did you mean by that? Can you describe that experience for me? Could you say more on that?” In addition, several questions were asked to elicit information that may not have been otherwise addressed and that may have given some additional insight into the participants’ swimming life. For example: “If you had a magic wand, what, if anything, would you change about your swimming experience?”

The interview ended with the interviewer asking the respondent if he or she had anything else to add. Additional comments were addressed and the tape recorder was then shut off. The participant and the interviewer then discussed their schedules and coordinated a time for the initial mental skills session. Each interview session concluded with the researcher thanking the participant for sharing his or her experiences.

Phase two of the interview process, the post-intervention interview, was conducted using the same sample from the pre-intervention interview. The post-intervention interview took place at the completion of the six-session mental skills training program. As with the pre-intervention interview, an interview guide was developed to serve as a reminder of the topics to be addressed (Appendix D). Probes were used to encourage the participant to elaborate or clarify a point. In the post-intervention interviews, each respondent’s experiences with the mental skills program and his or her perceived benefits from the program were discussed.

As with the pre-intervention interview, permission was obtained by each participant to record the interview. The interviews were conducted in the same location as the pre-intervention interview and lasted between 45 and 60 minutes. Again, all participants were advised that all tapes would be destroyed at the completion of the study. A numerical coding system was used throughout the research project to protect the anonymity of the participants.
As I am both the interviewer and mental skills trainer there may be a potential researcher bias. Furthermore, the participants may in some way feel reluctant to share their true feelings and thoughts of the mental skills training program. As a precaution, I stated to each participant that every athlete is different and will have different results and preferences, therefore allowing each interviewee to respond honestly without the fear of upsetting or offending the interviewer/trainer.

After the pre-intervention interview and prior to the post-intervention interview each subject received six 1-hour mental skills training sessions throughout the swimming season (November - March). Two sessions were conducted prior to the holiday training camp and four conducted in the new year. All sessions began at the beginning of the season. The swimmers had only swam in two pre-season meets when the sessions began. The final sessions were completed approximately two weeks prior to OUAA and OWAA competitions and five weeks prior to National Championships. Each session was arranged according to the athletes’ availability. Table 3.4 depicts the participants’ swimming season and estimated schedule of sessions.

Table 3.4
1997-1998 Swimming and Mental Skills Schedule

<table>
<thead>
<tr>
<th>November</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Coach and researcher meeting</td>
</tr>
<tr>
<td>• Introduction of program to swim team</td>
</tr>
<tr>
<td>• Initial telephone contact with interested swimmers</td>
</tr>
<tr>
<td>• Pre-intervention interview</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Session 1 - Goal-setting</td>
</tr>
<tr>
<td>• Session 2 - Cognitive restructuring/positive thinking</td>
</tr>
<tr>
<td>• Holiday Training Camp</td>
</tr>
</tbody>
</table>
January
- Session 3 - Attentional training
- Session 4 - Centering and relaxation
- Session 5 - Mental Imagery

February
- Session 6 - Pre-competition planning
- Post-intervention interview
- (OUAA)/(OWAA)
- (CIAU)

March
- Nationals

Data Analysis

To begin, the pre-intervention interview was transcribed verbatim at the conclusion of the pre-interview. The post-intervention interview was transcribed verbatim immediately following the post-interview. Together, the interviews produced 98 single spaced pages of combined text (Pre = 62, Post = 36). All transcripts were reviewed to ensure that the information was clear and correctly printed (Tesch, 1990). All alterations were editorial in nature and did not alter the content. Both the pre- and post-intervention interviews were returned to the participants in order to validate the content and allow them to make any corrections or additions to the interview text.

The analysis began with an initial focus on the interview guide questions generated at the beginning of the inquiry. Each “meaning unit” was tagged with a descriptive label. A meaning unit is “a segment of text that is comprehensible by itself and contains one idea, episode or piece of information” (Tesch, 1990, p. 116). An open categorization format of examining the interview material was applied. Examples of tags include sources of anxiety, exposure to sport psychology, ideal coach and suggestions for mental skills training. Tags of similar meaning
were grouped together and re-labeled. For example, the tags of ideal coaches, coach personality, and perceptions of coaches were grouped into the property of coaching styles. The relationship between the properties were then examined and regrouped into 8 categories: coaching styles, feelings surrounding competition and practice, sources of anxiety, performance satisfaction, exposure to sport psychology, mental skill use, perceived benefits and suggestions for implementation and design of mental skills program. In addition, the interview material was examined by a researcher with experience in qualitative analysis to ensure that the same categories were generated. Any discrepancies were discussed and re-evaluated by both researchers. The development of categories allowed the researcher to make connections within the data and generate a broader representation of the experiences surrounding competition and practice and athletes’ experiences with the mental skills program.

Limitations of the Study

While this research holds implications for athletes involved in intercollegiate-level athletics, it is limited in its investigation to swimmers, whose issues may be different from athletes at other competitive levels or who participate in other sports. Also, without a follow-up session it is impossible to determine whether any positive effects experienced by each swimmer are maintained.

Allowing interested swimmers to volunteer their time for the study provided interested and eager participants. However, when a study involves volunteer participants the investigation is subject to self-selected bias. In particular, the swimmers who volunteered their time may be in some way different than those who did not.

The small number of participants allowed for rich information regarding swimmers’
experiences of anxiety and their perceptions of a mental skills program. However, this small sample size may limit overall understanding of anxiety experiences and mental skill preferences relevant to all intercollegiate swimmers.

All information regarding the participants was confidential. However, the majority of the participants discussed their participation in the study with their coaches. As a result, it is possible that the coach may have treated the participants differently which may have altered their performance and level of satisfaction.

It is possible that by simply showing attention to the participants, a positive effect resulted. This relates to the Hawthorne Effect which suggests that the effects of the program may be due to the researcher/consultant and the attention provided to each participant.

Finally, as I am both the interviewer and mental skills trainer there may be a potential researcher bias. Furthermore, the participants may have felt reluctant to disclose their true feelings and thoughts of the mental skills training program.
Chapter 4

Participant Profiles

There are a number of factors that can affect an individual’s anxiety level and success with mental skills training programs including a subject’s age, family background, education, level in sport, relationship with coach, self-confidence level, and competitive nature. In order to allow the reader to become familiar with the factors that affect an individual, participant portraits will be described. A participant portrait is an in-depth description of each subject’s personal background and the many factors that contribute to his or her personality and character.

Adam

Adam is twenty one years old, and is in his second year of eligibility. In CIAU sport athletes are eligible to compete for five years. After swimming one season on scholarship in the United States Adam returned to Ontario to swim. In Adam’s words,

I went down there and tried it out, I was pleased with the way the school was going, I liked the school and the people, but I wasn’t totally happy with the swim program and how the coach was running the program (1-1).

Adam has two younger brothers who both swim competitively. Adam considered his family to be extremely involved with his swimming performance and how the team was designed and run. However, Adam’s family lives several hours away which prevents him from seeing his family as often as he would like. His family does however support Adam by attending a couple of major competitions throughout the season. Adam indicated that because of the distance from his family he has received less attention, with regard to his swimming, than his two brothers who are living and swimming at home.
Adam currently competes in the 200 freestyle and 200 butterfly. At the initial interview Adam indicated being satisfied with his current performances and felt much stronger in the water than in previous years. However, Adam expressed concern that he had not seen improvement in his 200 butterfly. Adam attributed this to the fact that he had not yet come under the “full cycle” of his current coach.

Adam had a very close relationship with his current coach and was extremely dependent upon his coach’s assurance and feedback. He referred to his coach as his “best-ever” coach. He noted his coach was able to relate to him, was aware of what he needed and gave him a sense of security. Adam felt he was receiving the attention he needed and deserved from the coaching staff.

From the initial interview and through the mental skills sessions Adam always seemed positive and excited to swim. He enjoyed competing, training and working hard to better himself. He indicated that his top priority for the next three years was swimming and training for the 2000 Olympics. As a result, Adam decided to attend college only part-time in order to focus on his swimming. Adam was consistent with his performances throughout the season and was generally satisfied with his performances. However, Adam’s greatest difficulty was realizing his own potential and ability. He seemed to often express doubt in his ability to swim with top level performers and was not always able to view himself as a top performer. Adam was extremely good at developing positive cue words and motivational reminders, but found that he lacked control of his thoughts. In many sessions Adam expressed concern about his opponents past performances and abilities and was constantly making comparisons to himself. Adam’s biggest concern was his lack of confidence.
Throughout the 1997-98 season Adam competed extremely well. His performances were consistent with his abilities and goals. At the final mental skills session Adam was preparing for Nationals in March. For Adam, Nationals was the major meet of the season. This was the meet which he had been training for throughout the year. Going into Nationals Adam seemed extremely positive and prepared. He indicated that he was satisfied with his physical and mental preparation for the upcoming meet. The final mental skills session was three weeks prior to Nationals. At the completion of the mental skills sessions Adam expressed an interest in continuing the sessions until Commonwealth Trials in August. Arrangements were made to continue seeing Adam on an as-needed basis.

Mark

Mark is 23 years old and is in his third year of eligibility at the university. He has two younger brothers neither of whom swim competitively. Mark started swimming competitively at age 11 as a result of the closing down of his gymnastics club. Mark considered his family to be fairly supportive of his swimming, however, Mark felt that they did not always understand or accept his perspective on swimming (2-2).

Mark is very dedicated to his school work. He places a great deal of time and effort into his studies. Mark has applied for and been accepted to various internship opportunities within his field and is interested in continuing his education through graduate work.

Mark currently competes in the 100 and 200 butterfly. In the initial interview, he indicated that his recent performances had been extremely inconsistent. Throughout the season Mark seemed very unaffected by his poor performances, and continued to indicate a sense of confidence approaching OUAA and CIAU's.
During the 1995-96 season Mark suffered a minor injury to his back. He had been in rehabilitation at the Sports Medicine Clinic and indicated that the pain significantly reduced over the summer months. Throughout the season Mark experienced little pain from his back. He indicated that at times it would be painful to swim, but that the pain quickly subsided. He found that his back pain may have accounted for some of his poor performance throughout the season, but was not the only factor. As a preventative measure, Mark plans to rest his back through the summer months.

Mark indicated concern about the lack of attention that he had received from the coaching staff and was interested in developing better communication. Mark felt that because he was not a top performer on the team he was not given quality attention. When strategies or suggestions were provided by the coach, simplistic and general tips were given. To Mark, the suggestions provided were useless and unimportant.

Mark had difficulty making the scheduled practices, especially morning training. He indicated feeling extremely tired and having no motivation to get out of bed. He found that his training was generally very poor and that he often left the pool discouraged and unsatisfied. Mark suggested that this contributed to his poor and inconsistent performances throughout the season.

At the completion of the 1997-98 season Mark expressed some regret and frustration regarding his season performances. As a result, he began to express doubt about the upcoming OUAA competition. He indicated that his back had been hurting for the past couple of days and that his taper was not feeling as it should. Approaching OUAA Mark seemed frustrated and worried about his abilities and indicated that he may not be as prepared as thought.
Mark seemed very excited to end the season. He was looking forward to having the time off and spending his time away from the pool. At the final session Mark had no plans for swimming during the summer months. However, he was looking forward to next season as he would receive the captaincy which would give him the opportunity to assume a leadership role within the team. He discussed many of his ideas for this position and was extremely excited to perform the duties. Mark indicated that he was interested in continuing the sessions on an as needed basis.

Amanda

Amanda is a 23 year old university graduate fulfilling her fifth year of eligibility. Amanda has two younger brothers who were both involved in competitive swimming. Amanda considered her family to be very involved in her swimming. She stated that her mother

was extremely dedicated to our swimming, getting us to practice, driving, volunteering, the whole works (3-1).

Amanda currently competes in the 200 butterfly. However, she is not training at the same level as in previous years. She noted in the initial session that her goals have changed drastically from previous years and she decided to come back to the team because

I’ve been swimming since I was 7 years old and being in Toronto, knowing that I had a year of eligibility, I didn’t really feel that I could get away from the sport yet... I couldn’t be here and not swim if I had eligibility” (3-1).

Her current swimming goals revolve around enjoying the social aspects of the team, assisting with team points and maintaining a healthy physical fitness level. Amanda has significantly reduced her number of workouts per week as she is unable to commit to the same amount of time as in previous years. She is currently making approximately five practices a week. The
main difficulty Amanda faced returning to swimming for her final year was that she was not at the same level as in previous seasons. The decreased number of workouts and less emphasis placed on sport were difficult to deal with. She was at times comparing herself to her accomplishments of last year which led to frustration.

Although Amanda was not training and focusing on competition as much as in previous years she still had an enormous role in the team’s overall performance at meets. She needed to perform well in order to gain the points for the team. Particularly at major competitions Amanda felt nervous and expressed some concern regarding her performance. She was realistic and knew her ability, but did not want to “let down” the team.

Going into OWAA’s Amanda indicated her experiences at previous focus meets as extremely unsettling and anxiety provoking. She was nervous about the upcoming competition and did not want to let herself, her coach or teammates down. Two weeks prior to OWAA competition Amanda’s coach indicated her importance to the team and placed added pressure on her. At the final session she indicated that nervousness and worry were common at major competitions and that she had difficulty establishing effective coping methods.

Overall, Amanda was satisfied with her performances throughout the season. She indicated that she enjoyed the experience with the team and the relaxed atmosphere in which she trained. Amanda was pleased to have competed during her final year of eligibility.

Melissa

Melissa had just turned 23 at the beginning of the mental skills training sessions. She is in her fourth year of eligibility and is planning on returning for her fifth. After graduating from high school, Melissa received a swimming scholarship to a United States university and
spent her first year in the States. Melissa returned to Canada as a result of poor coaching. Melissa described her previous coach as follows, “she basically told me what I wanted to hear to get me to go down there. When I went down there she was not at all what she said she would be and I had no respect for her by the time the season was finished. She seemed like she didn’t know what she was doing and I wasn’t able to put myself in her hands...she was the basic reason I decided to come home” (4-3).

Melissa has one brother who is a recreational swimmer. She considered her family to be extremely supportive of her swimming. Melissa explained it as follows, “I’ve been doing this since age 6...they’ve had to be involved and supportive to drive me to the pool at odd hours of the morning” (4-1).

Melissa currently competes in the 200 and 400 freestyle. At the beginning of the season Melissa was very happy with her performances. She noted that she felt better than in previous years and thought that her stroke was looking much better. Melissa attributed her positive early season performances to the fact that she had taken a more relaxed approach to swimming the previous year. Two years ago Melissa had a “horrible” experience at Olympic trials. Six weeks prior to trials she was swimming well and felt prepared, however, she then hit rock bottom in her training. She had several blood tests performed, but still could not move well in the water. Two weeks prior to trials she began to see improvement. She competed at 1992 Olympic trials, but was unable to move in the water. She explained this experience as very frustrating and upsetting. As a result, Melissa made a significant transition over the summer and began to realize why she competed in swimming. Melissa realized that she was not enjoying the sport and needed to adjust her outlook. As a result Melissa has had a much more relaxed approach to
swimming and competition. She places less emphasis on winning and more on enjoyment and satisfaction. Melissa remains a top level performer in Canada, but is better able to control her anxieties and enjoy the competition.

Melissa has been very close with all of her coaches through the years and found the coach-athlete relationship to be a significant aspect to her performance. Melissa discussed the need for her to feel that she can put herself in his or her coach’s hands and feel a sense of security. She noted that she tends to have personal relationships with her coaches and enjoys talking with them with respect to other issues going on in her life. She seemed to have had very positive experiences with all of her coaches with the exception of the coach from the United States.

Melissa competed exceptionally throughout the season and was very satisfied with her performances. She was very positive and excited to swim and displayed no signs of frustration or self-doubt throughout the season. At the final session when discussing OWAA and CIAU competition she expressed little concern or worry and felt prepared and excited to perform.

**Martin**

Martin is 20 years old and is in his second year of eligibility. Martin’s parents are both very involved in his swimming. Martin telephones his father frequently to discuss his frustrations associated with swimming. Martin seems to appreciate and respect his father’s advice.

Martin indicated that he was not happy with his early season performances. He stated that he needed to refocus and establish his goals for the season. His performances in practice were described as frustrating and upsetting. Martin was beginning to question his role in
swimming and the value of the sport in his life. He had established his long-term goal to compete at the Olympics. With his recent performances he began to question the chances of obtaining that goal. As a result of the doubt he began to reconsider his future in the sport and whether it would be worth it to compete next season.

Martin was very frustrated by school and the lack of time he was able to devote to his school work. He wondered if he was capable of handling both school and swimming. Martin’s frustration with school stems from his desire to continue with graduate work in his field. He expressed concern about his grades and chances of acceptance to graduate programs. Martin seemed fairly motivated to do well in school, but was unable to manage his time effectively. At the completion of the Fall term Martin was extremely frustrated by his poor academic performance. After the December Holiday break, Martin returned with a new perspective and goal. He applied many suggested organizational and study techniques and found that he was able to more easily handle his studies. However, certain set backs such as a poor quiz score or missed exam quickly put him back into his former mindset. He was however much happier with his academic progress in the second term.

Martin’s difficulties with his studies carried over to his swimming performances. When frustrated with school Martin was unable to focus on any other aspects of his life, especially swimming. As a result, Martin’s performances were extremely inconsistent.

At the final sessions Martin expressed little concern approaching OUAA competition and felt prepared and excited to compete. He indicated that once he was shaved and tapered he would have an even greater level of confidence. By the final session Martin indicated having a better handle on both school and swimming. He was very pleased with the progress he had made in both areas of his life.
Chapter 5

Results

Qualitative Research Findings

The rationale for using qualitative research methods was to gain a better understanding of athletes’ experiences surrounding competition and training and their perceptions of a mental skills training program. Analysis of the interview text revealed rich information about the sources of anxiety, experiences associated with competition, perceptions of coaching styles and preferred style of coaching, exposure to sport psychology and experiences with a mental skills training program.

Each transcribed interview was examined for common themes. Raw data themes, in the form of direct quotations, served as the primary unit of analysis. Each theme was organized into aggregations sharing explicitly similar meaning. The identification of these raw data themes led to the emergence of several categories which were used to organize and present the findings. Each category represents a broad theme and is broken into several more general themes or subcategories. Table 5.1 depicts the categories for qualitative data analysis.

Within this investigation there were two in-depth interviews, a pre-intervention and post-intervention interview. The pre-intervention interview focused on the athletes’ experiences surrounding competition and training and their exposure to sport psychology. The post-intervention interview focused on the athletes’ perceptions of the mental skills program and suggestions for program development.
Table 5.1

Categories for Qualitative Data Analysis

<table>
<thead>
<tr>
<th>Categories</th>
<th>Sub-categories</th>
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</thead>
<tbody>
<tr>
<td>I. Experiences of Anxiety at Competition and Practice</td>
<td>Competition Practice</td>
</tr>
<tr>
<td>II. Sources of Anxiety</td>
<td>Others' accomplishments Competition schedule Preferred events Academic concerns Training prior to competition Impact of shave and taper Competition preparation</td>
</tr>
<tr>
<td>III. Performance Satisfaction</td>
<td>Best performances Not-so-best performances</td>
</tr>
<tr>
<td>IV. Coaching Styles</td>
<td>Preferred coaching styles Ideal coach</td>
</tr>
<tr>
<td>V. Exposure to Mental Training</td>
<td>Knowledge of mental training Previous exposure Areas of interest</td>
</tr>
<tr>
<td>VI. Application of Mental Skills</td>
<td>Goal-setting Cognitive restructuring Attentional training Relaxation and centering Mental Imagery</td>
</tr>
<tr>
<td>VII. Suggestions for Mental Skills Program Design</td>
<td>Issues of time Program structure Gaining access Coach’s role in program Sport knowledge</td>
</tr>
<tr>
<td>VIII. Perceived Benefits of Mental Skills Program</td>
<td>Strategies learned Opportunity to “talk” New perspectives learned</td>
</tr>
</tbody>
</table>
Pre-Intervention Interview

Category I: Experiences of Anxiety Associated with Competition and Practice

Competition

The experiences of anxiety described were individualistic. Each participant noted experiencing extremely personal and distinctive feelings of anxiety or nervousness. The majority of the participants experienced cognitive-based symptoms, while some described somatic-based symptoms. Cognitive-based experiences included a lack of focus, constant worry, negative thought patterns and low confidence in abilities. Melissa discussed her experiences of anxiety as follows,

I always used to swim slower in the finals than I did in the preliminaries. It was almost a mental block. I was always thinking; “oh no it’s finals I’m going to swim slow again.” I would be very nervous, I couldn’t have anyone around me before the race, it would freak me out, so I had my walk-man on and I wouldn’t listen to anyone. (4-6)

Somatic-based experiences included butterflies in the stomach, fatigue and gut feelings of uncertainty. Amanda and Mark explain their experiences as follows,

(I experience) butterflies in my stomach. it’s just that kind of gut nervousness kind if thing. The predominant thing I notice is that I start to get butterflies in my stomach, but nothing else. (3-5)

I realize that I’m nervous. I don’t know why I’m nervous. I guess if I knew the why then I’d be able to fix it. It’s more in my stomach. I don’t know if it would be butterflies. When I get nervous I think a lot, I think and I think and I think and I’m just thinking all the time and I don’t talk to anyone and sometimes its a good thing because if I’m in the right frame of mind, I’ll just get up and go, but other times I’ll be thinking too negatively and I won’t swim as well as I could. (2-6)

The participants indicated that although they experienced negative thoughts and worry more often, they also coincidentally experienced butterflies, nausea and fatigue. However, they indicated that the negative concerns and worries were the predominant form of anxiety
experienced. Also, the participants indicated that the cognitive-based symptoms had a greater effect on their performance than the somatic-based symptoms.

Sometimes I feel really negative and start to worry before I race. I worry about the other opponents, what they’ve done and what I haven’t. I start to think about the training I’ve done leading up to the meet and feel nervous that it wasn’t enough. I also sometimes feel a little butterflies in my stomach, but that’s only after I start to think about all the things I’m worrying about. It’s usually the bad thinking that does me in. Well, that’s what I think does it to me, but who really knows (2-7).

The participants also indicated that their cognitive anxiety was consistent at all major competitions. However, when they did experience somatic-based anxiety it was typically only immediately prior to competition. The swimmers indicated that they began to feel butterflies when they entered the pool deck and the feelings lasted until they began their race. Once their race had begun all somatic-based symptoms subsided. However, negative thoughts, worry and constant comparison were prevalent during the swimmers’ races. Martin explains his experiences prior to a race as follows,

Right before the race I start to get butterflies, but as soon as I hit the water it all comes back to me. I do keep thinking though. I think about how my last turn wasn’t right and how I am behind the guy to my right (5-8).

Practice

The participants discussed their typical feelings and thoughts surrounding practice. Prior to practice the participants typically noted feeling excited and eager to get into the water. They indicated that practice was part of the daily routine and became almost automatic. The nature of the swimmer’s day would also determine mood, willingness to train and performance in the water. The participants had all experienced poor practices that were the result of fatigue, mood, illness, or personal difficulties. The participants discussed such practices in which he or she had
little or no motivation to swim. However, the practices were generally positive experiences in which the swimmers looked forward to attending. Adam discussed his feelings surrounding practice as follows,

*Generally you feel happy, you can get excited, you feel normal, you’re not sad, depressed or anything. You just want to go out there and work hard.* (1-8)

The participants indicated being nervous prior to specific workouts, particularly with practices that are designed to be difficult. The physical difficulty of certain workouts was considered unbearable. Adam described his fear and anxiety surrounding the heart rate set. A heart rate set is a hard set in which one does four 100’s, two 50’s, two 100’s, two 50’s four to six times. The goal is to increase one’s heart rate from 160 to 165 to 170 and higher each interval.

*For some reason as soon as I hear the word heart rate it just destroys me. If I know I’m doing heart rate set the night before or he tells us we’re doing heart rate set Wednesday, something screws up my mind. I’ll say: “Oh my goodness what am I going to do, am I going to be able to finish this heart rate set, am I going to be able to do this heart rate set?” Just heart rate (the words) gets me scared. I’m just scared and worried... sometimes it just screws with your mind.* (1-9)

Adam was asked to explain how he feels during and after the particular set.

*During the heart rate set I concentrate. I’m not sure what I think about when I’m swimming. I just concentrate on what I have to do. And after, I feel accomplishment... I’ve made the set and you feel great.* (1-9)

No other participant expressed concern for this workout. In fact, in a mental skills session Martin indicated that he found the set enjoyable and viewed it as a challenge.

Simply completing a practice or ‘getting through’ was not sufficient for the participants. The participants had a need to accomplish something in each practice. After a satisfactory practice the participants expressed relief and excitement. There was a sense of accomplishment that was associated with completing a workout well. The participants noted that the feelings at
the completion of a workout depended upon the amount of effort put into the training.

After a poor workout the participants indicated feeling frustrated and disappointed by their performance. Martin noted that after consecutive poor workouts a swimmer begins to question his or her ability and role as a competitive swimmer. Several participants provided support for this finding by indicating the increase in self-doubt that accompanies poor practices. However, some participants were better able to refocus after a poor workout. The majority of the participants found that going home, eating and relaxing were the best methods of dealing with a poor practice. Martin described his method of coping with a poor practice as follows,

_I want to go home, eat, watch TV and not do any school work. We always talk at home about getting caught in the TV trap... if you’ve had a bad day you’re at the TV from 6 to 9._ (3-6)

**Category II: Sources of Anxiety**

Qualitative results concerning the perceived sources of anxiety were derived from an analysis of the pre-intervention interview text. Within the interview guide the researcher devoted significant attention to the experiences of anxiety surrounding competition. Through an in-depth analysis of the interview text, various sources of anxiety emerged, including others’ accomplishments and presence, competition schedule, preferred events, and academic pressures.

**Others’ Accomplishments**

Several of the athletes indicated feeling “nervous” when performing against opponents of equal or greater skill level. The opponents’ accomplishments were seen as a threat to the athletes, remained constant in the participants’ minds and were at times extremely anxiety-provoking and frustrating. Martin discussed his nervousness associated with others’ accomplishments as follows,
Concentrating on others throughout the season just gets discouraging. If I take a look at the rankings I begin to say; “I don’t know if I can do that.” I doubt myself a lot. I see the times I haven’t gone. (5-6)

Typically I’m not nervous about the people that I’m racing against, but what they’ve done that I haven’t. At any given race you can race beside them (an opponent) and beat them, but you see their best all around time and you say; “well, on his best day he could beat me.” (5-6)

As noted in Category I, experiences surrounding competition, the sources of anxiety described by the athletes were dependent upon the nature of the meet. Again, small dual meets were insignificant and produced little if any anxiety, whereas larger provincial or national-level meets carried a greater amount of pressure.

During a race it is not uncommon for a swimmer to notice his or her opponent in the next lane. Although this is discouraged by coaches and trainers, swimmers are often distracted by the position of his or her opponent during a race. By focusing on another individual’s race, the concentration is removed from one’s own performance. Mark discussed his experience at a recent meet,

At an Ontario University Invitational I was seated 4th and was determined to go and win this ... I said in the back of my mind, this is how I’m gonna swim it, I’m gonna go out at the 75 meter mark and then try to leave everybody behind. Well, what happened was I tried to leave everybody behind, but the guy beside me was staying with me, so I really shortened up my stroke, which wasted a ton of energy and so I was dead by the 150 mark and the guy just blew by me... I was too busy concentrating on what he was doing. (2-7)

Martin indicated,

If you concentrate on someone else they’re gonna beat you. (5-8)

Competition Schedule

Swimming competitions typically involve several races for a swimmer. When discussing the sources of anxiety associated with competition all subjects discussed the lengthy wait
between events. The period of time between races was used to socialize, discuss strategies with coaches, rest or physically and mentally prepare for an upcoming race. However, the swimmers noted that at times the wait may have a negative effect on one’s preparation. When the subjects had several races the first race was described as a significant determinant of one’s performance at the entire meet. The first meet was also described as a relief to complete. Amanda described the significance of the initial race.

*Getting that first race over with is always a big thing... if I can swim well it takes the edge off the other race cause I know it will carry on.* (3-7)

The other participants also discussed the importance of swimming well in the initial race. Depending on the initial race, the swimmers experienced little to extreme cases of nervousness, frustration and worry. The swimmers discussed cases in which they had swam poorly in the first race and how that affected their feelings and thoughts approaching their next event.

*When you swim poorly first it makes it worse, like at OW’s last year I swam my 200 fly awful. I’m not good with that event and I started hurting really bad at the end and so when I had to swim it at consuls the day and a half later I was up all night. I have never been like that in my life and I was nervous because of how I swim, because of the pain, because of all of those things.* (3-8)

Other swimmers found that they were able to refocus and look past the poor performance and look to the next event. Several of the swimmers had well-developed coping strategies. Adam discussed his coping methods as follows,

*I’m pretty good with brushing that (poor swim) off and then refocusing and trying to swim better in the next one. I know some people get all frustrated and all mad and upset that they’re gonna swim poorly the rest of the meet, but for me I think I can take the bad, drop it and refocus.* (1-6)

**Preferred Events**

Swimmers typically compete in several events at a single competition. As expected, a
swimmer will have a preferred event. For many, this event can become a significant source of anxiety and nervousness because of the amount of pressure placed on the individual competing in “his” or “her” event. Adam described his experience with his preferred event, the 200 freestyle.

_Sometimes I get a weird feeling inside even though it is my best event. I wonder: “how can I swim this race?” Sometimes I’m not focused enough or sometimes I have doubts about how I feel and how I’m going to swim and sometimes I even get scared._ (1-6)

Amanda described her race as “mentally challenging.”

_It’s (200 butterfly) always been a mental hump for me to get over. I should be able to swim faster, but because I’m scared of the event I don’t always give it all. I just sort of hold back and when getting up on the blocks I’m always thinking; “it’s just eight lengths.” I’m always thinking about my strategy, how am I going to get through this and not choke 15 meters before the wall._ (3-8)

**Academic Concerns**

The pressure of being a student-athlete was an obvious source of anxiety and stress. The workload, time constraints, sleep deprivation and pressure from university officials, parents, coaches and self can have a heavy toll on an athlete and his or her performance. The participants discussed the difficulty of handling both school and swimming throughout the season. The participants indicated feeling overwhelmed and “stressed out” by the amount of work and lack of time to devote to their studies. Martin explained his experience as follows,

_As the work began to accumulate with school and stuff in the pool, as soon as school started getting busier and busier and busier my level of confidence dropped. I started to say things like; “I gotta go there (the pool) now, I gotta do this.” Then you start to say things like; “I’m not going to achieve my goal, I’m taking too many courses” and it’s just this that and the other thing. It’s just a burden._ (3-5)

Other participants discussed their desire to devote more time to their studies. Several of the participants had very developed career plans including graduate school and medical school.
One swimmer noted that swimming was becoming a burden. The participants’ academic and career goals were at times being pushed to the side as a result of swimming priorities.

**Level of Competition**

The feelings and experiences surrounding competition and practice were found to be significantly dependent upon the nature of the meet. Small dual meets were generally considered non-threatening, whereas larger provincial or national-level competitions caused a greater amount of pressure.

*I feel different at CI’s (Canadian Intercollegiate Athletic Union) rather than at a dual meet. I’m going to be a little more nervous cause there’s a little more at stake, but at dinky dual meets I don’t really care so much. I usually go in there and I race and I swim fast, but I don’t worry about it as much.* (4-5)

*It(level of nervousness) depended on the competition and what was going on. If I was trying to qualify for CI’s I would get nervous or if it was coming down to the crunch and I wasn’t going to make it by the cut-off date I would be more nervous than at a dual meet at the beginning of the year.* (3-6)

*During varsity dual meets I’m not nervous at all. During the day of the meet I just know that I have to do it and I have to do my job, but before a shave and taper meet I’ll be hyped a week and a half in advance.* (5-5)

Generally, the swimmers found their experiences prior to competition to be very low-key and relaxed. Depending upon the meet, the participants would socialize, discuss strategies with coaches and physically and mentally prepare for the race as needed.

*I like to keep low-key and low pressure and go up there and hopefully let the swimming do the talking for me.* (1-5)

*When I go to the blocks I tend to be very low key.* (1-5)

*Generally I’m pretty relaxed. I was never one of those people that had to be off by themselves. I was always able to talk to everyone and was never really nervous.* (3-7)

However, prior to major competitions the swimmers noted feeling nervous or worried. Typically
these competitions were national or international level competitions and were considered
important meets.

Training Prior to Competition

The participants discussed a number of factors which contributed to their nervousness
prior to competition. The weeks approaching a competition were considered to have a
significant affect on the athlete's self-confidence. More specifically, the amount and type of
training were extremely important to the swimmers' confidence and mental preparation. The
participants expressed a need to feel confident with the training they had prior to the
competition. There was a need for training to run smoothly. Melissa became ill six weeks prior
to Olympic Trials and discussed the effects on her performance and mind-set going into
competition.

I was swimming really well up until six weeks (prior to Olympic trials) and then I hit
rock bottom in my training. I got blood tests, I had everything done, but I couldn't move.
We had a couple days out (of the water) and I went slower and it was just horrible. Then
two weeks (prior to trials) I started to get a little better and my taper was OK, but it was
always in the back of my mind that I had those four weeks of training that were horrible.
It was in the back of my mind and I was really trying to push it out. (4-6)

Impact of Shave and Taper

The participants also discussed the mental impact of shave and taper. Although shave
and taper are physical forms of competition preparation, there was a significant effect on the
athletes' confidence and sense of preparation. There was a notion that being shaved and tapered
meant that one should be serious and ready to compete. It was seen as the final step of the
training process and symbolized readiness for the athletes. Mark discussed his experience with
shave and taper time as follows,
If I'm swimming on taper and swimming really fast, I can't wait to race...I can't wait to get in the water and see what I can do. (2-6)

The Use of Competition Preparation Strategies

The participants also had various strategies, both physical and mental, that were applied to assist with competition preparation. Adam found that he was able to perform better when woken up earlier and given the extra time to warm-up. Melissa found it beneficial to stay out of the water the day before an important race. Giving her body rest produced a greater physical and mental edge when competing. The participants’ strategies were necessary components of their mental preparation and provided a sense of readiness.

Category III: Performance Satisfaction

A section within the interview guide was devoted to best and not-so-best performances. Each participant was asked to recall his or her thoughts and feelings surrounding each competition. Although most participants noted very individualistic factors associated with each competition several commonalities emerged.

Best Performances

The participants described their best performances as very positive and highly emotional moments. Each “best” performance was characterized as an extremely consequential and significant meet. Many of the athletes noted competitions at Commonwealth Games and Olympic Trials.

Prior to their best performances the athletes indicated very little difference in their preparation. Sleep patterns, social interactions and warm-up were similar to usual competitions. Several of the athletes indicated the use of a motivational strategy prior to their “best”
performances. For instance, Mark described his coach’s use of motivation and intimidation. The participant’s coach spoke with him the morning of his race and said, “everyone’s going home, do you want to stay or do you want to go home. Are you going to make this worth our time?” Mark found this tactic very motivational and used the coach’s words as a source of inspiration and encouragement. During the afternoon Mark rested and began to prepare for his evening race. Mark described the experience as follows,

\[
\text{I was just like, 2:09, maybe my taper isn't working, I'm not swimming that great. I started thinking and thinking. I got up after my rest and tried to calm down. I went and took a shower and this is fifteen minutes before I had to leave for the pool. I was just like, wash off the bad. It sounds really cheesy, but that's what I did and I got out and was like, I'm going to swim fast, I'm going to do well, it doesn't matter what I did in the morning I can do this and that is exactly what I did. I attacked the whole race. I just went hard and I touched and I looked up and I had gone 2:07 and I was first. It was so amazing. I had just missed Nationals again, but that didn't matter, I didn't care. I took off 2 seconds from the morning and I turned the whole year around. I came first at Ontario Cup and beat all these really fast people. It just felt good. (2-5) }
\]

Prior to their best race the participants described their nervousness as at a “normal” level and found it facilitative rather than debilitative. They described their nervousness in terms of feeling energized and ready to swim. Most of the participants were excited to get in the water and were looking forward to racing. Several of the subjects described their extreme desire and drive to swim well. They indicated feeling prepared and eager to race. Amanda discussed her feeling of excitement as follows,

\[
\text{I was 3rd or 4th and that was a total shock to me so, going into finals I was just going to give it all and hope that I get a medal. It wasn't a dreading nervousness I was just excited. I really really wanted this. (3-8) }
\]

The athletes described their best races as effortless and natural. The descriptions of their experiences implied being in what athletes refer to as the “zone” or optimal state. Several
of the athletes’ descriptions involved a sense of “knowing.” A sense of “knowing” referred to a certainty or confidence in one’s abilities. There was a trust in one’s training and “knowing” that the body will perform as it has been trained to perform. Athletes described their experiences as follows,

*It (best performance) felt effortless, like I’m not putting any effort and it’s just really easy. I’m not trying at all and am just relaxed.* (4-5)

*You can’t (think too much). You gotta remind yourself of all the hard work you’ve put in for the last year or two or whatever. You’ve gotta feel loose and get up there and let the stroke do the work. I just say to myself, “I’ve done great, a lot of hard work, its felt great this year,” and then just let the stroke do the work for you.* (1-7)

There was also this sense of “knowing” that accompanied the athletes’ dive or first 25 meters.

The entry into the water was described by the swimmers as a significant indication of how one’s race will result. Melissa discussed her experience with entry into the water as follows,

*I can usually tell during the first 50 meters whether or not it’s going to be a good race.* (4-4)

**Not-So-Best Performances**

The participants’ worst performances were also generally at large focus or pressure meets, such as Olympic Trials or Nationals. The participants expressed complete disgust with their performance and tended to be much more reluctant and apprehensive to discuss the event.

As with the best performances, as soon as the athletes entered the water there was this sense of “knowing.” Adam referred to an unfamiliar feeling while racing.

*It just didn’t feel right as soon as I hit the water. I knew as soon as I dove into the water for the finals, I went four seconds faster, but I knew it didn’t feel the same as it did at ’96 Olympic Trials (best performance). I was still tense, the stroke didn’t feel as good, I was having to work harder than I usually would to make it feel that good. It felt different, it didn’t feel as relaxed.* (1-12)
Several of the participants indicated physical difficulties during or prior to the race. Many of the participants indicated having to struggle or fight to stay alive during the race.

*I got killed (during worst performance). I just couldn’t breath.* (5-9)

*I just died (during worst performance) and was just trying to survive.* (2-7)

Prior to the best performances several participants expressed a strong desire to compete and perform well. However, prior to the not-so-best performances, several participants indicated having no drive or motivation to compete. Mark discussed his lack of motivation as a result of the coach and lack of attention received.

*Coach never gives me any strategies. He’ll give me something silly that doesn’t help me. So I kind of figure that I have to figure it out for myself. In the morning (at a competition) I didn’t go out hard enough and at night I just said screw it.* (2-6)

Martin suggested that he had little desire to compete.

*I didn’t even want to go to the meet. I was too done, too tired and I needed to go home. I needed to do more training.* (5-10)

This participant’s statement also suggested a lack of confidence in his physical and mental preparation. As in category I, feelings associated with competition, there was a need for the participants to feel confident in their training prior to competition. Several of the participants’ not-so-best performances were preceded by poor training or a difficulty with the taper.

Amanda indicated that her not-so-best performance was the result of unrealistic expectations. She had been training only part-time and had re-established her goals to coincide with the competitive level with which she was training. However, when competing she was unsatisfied and frustrated with her lower level of performance.

*I still wanted to perform the way I was, the way I’d been performing.* (3-7)
Several of the participants indicated the presence of negative thought patterns, feelings of uncertainty and self-doubt prior to competing.

Because I wasn’t in as good of shape as I used to be I went into it thinking, Oh goodness, how am I going to do this? (3-7)

Category IV: Coaching Styles

The interview guide devoted attention to the participants’ coaches and coaching styles received through the years. Through analysis of the interview material it became apparent that the role of the coach was an independent category worthy of in-depth analysis. All participants discussed their personal experiences with previous and current coaches, perceptions of coaching styles and preferred style of coaching. The majority of the interview material focuses on the ideal coach and the athletes’ preferred style of coaching.

The majority of the participants noted that a coach must have a basic awareness of his or her swimmers and provide for his/her individual needs. Each participant suggested that a coach be flexible in his style of coaching in order to provide the most effective and beneficial program for all athletes. Melissa discussed her positive experience with a previous coach,

If you needed to take a break he’d let you take a break, so he was very lenient in what he lets you do, but he also pushed you and knew what every person needs individually (4-3)

Adam discussed his experience as follows,

He knew what I needed and I can relate to him, he is the best coach that I have had... he can relate to me and I can relate to him on where he is coming from and how he goes about it. I think this is the first time I can say I trust a coach fully. I’m not worried about how I am going to swim during the year or by the end of the year. I just have a sense of security. (1-7)

A crucial point that all subjects noted was the amount and type of attention awarded to each swimmer. It was suggested that an ideal coach would give each swimmer the attention and
feedback desired and needed. Prior to a race it was suggested that an ideal coach would give his or her swimmers a strategy or tip to apply during the race. All of the participants placed great importance on this pre-competition talk with the coach and found it to be a crucial aspect of their competition preparation. Participants who did not receive the attention indicated that this may in fact have contributed to their poor performances. Participants’ responses in reference to the lack of attention included,

*I think an ideal coach just needs to be approachable... I wish they would all be approachable.* (2-4)

*I was just swimming for whatever and no one was paying attention to me.* (5-4)

All of the participants mentioned that the ideal coach would depend upon the point in one’s life. The ideal coach during their competitive club years would change depending upon the stage of one’s career. Melissa discussed her thoughts on the ideal coach as follows,

*I think it depends on what time of life I’m in, like in high school I didn’t have any real stresses, so I could swim as much as I wanted and not be really tired and not have to worry about other things, so I wanted a coach that could pound it out of me and got everything out of me... now I think it would be really nice to have that, but I’m getting older and I’d probably die if somebody did that to me and also being in University it’s a lot more stressful.* (4-3)

**Category V: Exposure to Sport Psychology**

There were two purposes to including a section on the interview guide devoted to knowledge and use of sport psychology. First, it was necessary to gain an understanding of each participant’s background with sport psychology to design the most appropriate and beneficial program for each athlete. Secondly, very little research has examined athletes’ previous history with or perceptions of mental skills programs.

The interviews suggested that the participants had a basic understanding of mental skills,
but were unable to provide a solid definition. All of the participants mentioned three very popular forms of performance enhancement: positive thinking, relaxation, and imagery. When asked about their knowledge of sport psychology, one participant responded as follows,

*I don't know... positive thinking... I don't know... visualization* (2-9)

The participants' responses focused only on labeling certain techniques rather than explaining the benefits, services or reasons for working with a sport psychology consultant. Adam noted that he may apply the techniques, but may not know the proper terminology.

*I might know of them, I might even practice them, but I never know the terms.* (1-9)

Although the participants were not very familiar with the strategies, benefits of and services offered within sport psychology each participant's comments implied use of mental skills. For instance, when discussing his preparation for a race, Adam discussed the use of an individual theme. An individual theme is a statement or slogan developed by an individual that has personal meaning. The benefits of such a statement include an increased sense of personal pride and motivation.

*I like to use a little saying I've come up with... Believe to Achieve... One thing I've thought about in the past couple of weeks is that I'm swimming really great and it's now just putting it together so therefore, believe to achieve... If you believe you can achieve.* (1-10)

Amanda discussed her use of imagery as follows,

*If I know where I'm going to be racing I try to picture the pool, sort of walk behind the blocks... it's fairly detailed depending on how much time I have. I tend to get distracted easily so I try to see the race in sections... my dive, my stroke, my turn. I think about doing my race, I think about doing perfect turns, I think about how good the stroke feels... getting off the blocks quickly, I think about finishing and seeing the time that I want.* (3-6)

Of the five participants, only one had previous individual experience with a sport
psychology consultant. Melissa explained her experience as positive, but with few long-term benefits.

*I find a lot of it to be too structured, he wanted me to put goals down for every little thing I wanted to do, and long term goals and short term goals. I found it a little too much. Personally, I like to take it to relax. I do have goals, but I don’t stick too strictly to them cause I think they can change. I think it was a little too structured for me. I think just having positive thoughts and having a positive outlook on everything was great and I learned a lot from that. I can’t say that I can take much more out of it, they weren’t necessarily bad things, but just weren’t things for me. (4-8)*

The participants’ coaches typically presented the mental skills material during their youth club swimming years. Mark discussed his coach’s use of sport psychology techniques as follows,

*Coach would come in with these sheets and it would be something with nutrition, or visualization, or some sort of insightful essay that he’d found or we’d have to write down our goals. (2-7)*

However, Amanda noted that a sport psychology consultant was brought in periodically to discuss mental training with the club.

*She (sport psychology consultant) would come in, have us fill out some questionnaires, like how do you feel today, have you felt like this, do you ever feel sad. When I was 14 or 15 we started doing mental imagery, picturing things, breathing stuff, relaxation, but nothing ever one on one. (3-6)*

It is important to note that two of the participants discussed interest in sport psychology as a career option. Both participants expressed an interest in the course work and requirements of a sport psychology program. Extra time was devoted within the sessions to discussing their interests in the educational components of the field.

Overall, the participants had a very limited knowledge of sport psychology and the services provided to athletes and coaches. The participants’ areas of interest were quite individual and focused mainly on the techniques and strategies with which they were familiar.
The participants expressed an interest in learning how to effectively set long-term goals, manage time, enhance confidence and motivation, and apply relaxation. The participants were asked to indicate areas with which they were interested in developing. Some of the participants’ responses included,

(I am interested in) organization and managing myself. You can not have a sport without managing everything else. (5-9)

Goal-setting seems like a hard thing for me. I don’t know where to set my goals. If they’re too high or too low. (2-9)

(I am interested in) focusing. Sometimes you lose track of how good you really are, sometimes it just gets messed up. You just get lost in how much work you put in and how good you really are. (1-10)

The participants’ responses were individualistic and were a direct reflection of their personal knowledge of and exposure to sport psychology.

**Post-Intervention Interview**

The post-intervention interview focused on the athletes’ perceptions of the mental skills training program. The athletes were asked to discuss their experiences with the program, and offer suggestions for implementation and design of mental skills training programs.

**Category VI: Application of Mental Skills**

The athletes’ use of mental skills were extremely individualistic. Although each athlete enjoyed and benefited from similar strategies, individual styles of application were evident. Each athlete was introduced to goal-setting, attentional training, pre-competition planning, cognitive restructuring, relaxation, centering and mental imagery. The athletes’ use of each strategy was explored and is described as follows.
Goal-Setting

All of the participants preferred competition specific goal-setting over daily or weekly goal-setting methods. Daily goal-setting was described as overwhelming and frustrating. The participants found it difficult to adhere to the daily task and had trouble being consistent. Although no structured method of daily goal-setting was applied, several of the athletes indicated addressing small goals they hoped to focus on in training. Adam discussed his experiences with goal-setting as follows,

Sometimes I will think about daily goals, but it’s not in a written form. It is more of an idea or plan of what I want to do today (1-3).

The participants found competition-specific goal-setting to be most effective for the sport of swimming. They indicated that there were generally only three major competitions within a season, OUAA, CIAU and Nationals. At the beginning of the season the swimmers would discuss their goals with their coaches and determine a realistic season goal. The swimmer would then determine the short-term goals he or she would need to focus on throughout the season. Focusing on short-term goals was considered the most beneficial and appropriate method of working towards their competition goals.

Some of the participants preferred to write down their goals in an organized manner. Martin indicated that he regularly monitored and evaluated his progress. By writing their goals down the participants indicated that they were better able to control their progress in training.

Several of the participants explained their experience as follows,

Writing it down on a sheet of paper and setting it out helps. It makes you feel as though you are on top of everything. All you have to worry about is what is on the paper. It makes it simple (5-4)
I'm just focusing on the paper and that's it. My goal is just to do what is on the paper. If I do what is on the paper I will win (3-4).

The participants who did not write down their goals or apply a structured goal-setting method indicated that they were satisfied with their use of the skill. They indicated learning new goal-setting methods through the sessions, but only used them when approaching major competition. The greatest difficulty with writing down their goals was the swimmers’ lack of consistency.

The types of goals set were individualistic. The participants’ goals focused on physical, technical and mental areas needing improvement. The physical and technical aspects included the swimmers’ stroke, endurance level and strength in the water. Many of the participants discussed their goals with their coaches and worked on establishing areas with which they would focus on in training. Through discussions with the coaching staff the participants were able to gain an understanding of the physical and technical areas needing attention.

The mental areas focused on included remaining positive, enhancing self-confidence and gaining control of anxiety. The participants found that goal-setting was an excellent method for acknowledging their mental concerns approaching competition and training. The participants indicated that in the past they were reluctant to discuss and confront their worries, but found it to be an excellent manner of dealing with each issue. Discussing their concerns and then placing them on paper confirmed the need to improve. Adam discussed his thoughts on goal-setting as follows,

I broke it into mental and physical and focused on the things that make me swim fast, the roll, breathing and the most important part of the race, the last 50 meters. Then I focused on the mental which included believing in myself, relaxing, being confident,
being positive and blocking out all distractions. These were all of the areas I worked on (1-4).

The participants indicated that the types of goals established for mental, physical and technical improvement were extremely different. The mental and technical goals were established as a series of steps that one must take in order to improve on a certain area. The physical goals were a precise time that the swimmers hoped to race at competition.

_I really want to focus on my self-confidence, but there are so many things that need to happen first. I need to have start feeling better about my practice, how my coach thinks of me, how I am performing. It's a process of steps that I have to take (5-6)._

Within the goal-setting section of the Mental Training Manual the participants received various sample goal-setting strategies. Daily, weekly, monthly and competition-specific goal-setting plans were provided. The participants indicated that the various options allowed them to choose the most appropriate method. Many of the participants indicated that they attempted to set daily or weekly goals, but were unable to adhere to the structure. Through trial and error each participant established the most beneficial and appropriate structure for him or herself.

The participants also applied goal-setting to other aspects of their lives. Several of the subjects indicated applying goal-setting to their studies. Martin indicated that he set daily goals of what he had to accomplish in each course. He found that by setting daily goals he was better able to handle the work load and control his stress level.

_I made a conscious effort to write things down and I am still sticking to it a month later. Last week during an exam was the first time I've felt relaxed during an exam. I felt comfortable because I had done everything. I was on top of everything (5-4)._

The participants found the goal-setting session to be extremely beneficial. They indicated feeling more confident and relaxed when approaching competition. The participants
indicated that the goal-setting strategies provided made their goals seem more achievable and realistic. Through establishing a set of short-term goals the participants were better able to obtain and handle the duties leading to their long-term goal. Martin discussed his preferred goal-setting method as follows,

\[
\text{It (goal-setting) made me look at my splits and say "that's not all that hard" (5-4).}
\]

Cognitive Restructuring and Attentional Training

While the participants reported that they were generally very positive towards swimming, they indicated that there were moments during competition and training that they could be more constructive and focused. Several of the participants complained about the training hours and schedule. For many, it was tiring and difficult to motivate themselves to attend ten training sessions a week, especially in the early morning. The cognitive restructuring session provided the participants with a new way of looking at their thought patterns. For several, attending morning practice was very difficult. However, when they arrived at the pool and began to train they warmed up quickly and were glad to have been there. Through the use of cognitive restructuring the swimmers were able to remind themselves of the positive feelings associated with attending practice and the sense of accomplishment one had upon completing a practice. Adam discussed his thoughts on the cognitive restructuring session as follows,

\[
\text{I think the session (cognitive restructuring/positive thinking) helped me to realize that I needed to be a little more positive and constructive. I would hate going to practice sometimes, but once I'd gone I'd feel so much better. I try to remind myself of the good feeling I have after practice when I'm trying to get out of bed at 5:30 in the morning. It's still hard though (1-6).}
\]

Several participants indicated that the sessions helped them become aware of their
thought patterns, particularly their negativity. This strategy was extremely eye-opening and provided several of the swimmers with a new outlook on their thought patterns.

*It (the cognitive restructuring session) was amazing. I never knew that I was being so negative. I was against everything, practice, competition, training (2-3).*

Several of the participants indicated that they applied positive thinking to other members of the swim team. They found that they were more aware of other people’s negativity and attempted to motivate and excite others. The participants indicated that by having a more positive outlook on their own swimming and the swimming of others they were better able to enjoy the competition experience. Many of the swimmers suggested that they liked to encourage their teammates.

Each participant had areas in which they needed to apply attentional training particularly distraction control. Adam had great difficulty competing against top level performers. Through the use of attentional training he learned several concentration and focus methods. He generated cue words such as “stop” and “me” that he would say to himself the moment he began to become distracted by others surrounding him. Cue images were also used to help him stayed focused during the race. Adam discussed the importance of cue words as follows,

*I had such difficulty staying focused on my own race and when it was time to race I would be worrying about his (opponent’s) past performances. When we talked about focus control in the sessions I learned that I could focus much better. I am now better at focusing on me, my race, my lane and my race. (1-5)*

As with goal-setting, several of the participants applied both attentional training and cognitive restructuring to their academic pursuits. Melissa was able to apply her accomplishments in swimming to school.
I've learned that you can take the positive swims and apply them to school. If I swim well it gives me confidence for school (4-5).

Martin found that he had difficulty letting go of his school-related worries when attending practice, leaving him less able to focus on training and more easily frustrated. He described several practices in which he had arguments with a coach and left practice early. Within the sessions he was able to discuss his frustrations. He indicated that this helped him to realize what was necessary in order to perform better. After the sessions he began to apply the strategy of “parking” to place his daily worries to the side and focus on training. He found that with time he was able to concentrate on swimming and leave his school-related worries until after training. At the final session he indicated that he was having a more positive experience at practice.

If I failed a quiz and I had to come to practice I wouldn’t be able to forget about it. I’d get it (the quiz) back at 2pm and I’d go to practice at 3:30 and I’d swim like garbage because of the crappy day I had. That parking idea was great, it really helped me to see that it doesn’t matter how my day was. I still have to go to practice and train, but it is better if I train hard and not worry about what I have to do later. I now look at school and swimming as very separate (5-2)

Relaxation and Centering

Relaxation and centering were applied by only two of the participants. The other three participants did not find it beneficial to use either strategy. Centering was a new technique to all of the participants, whereas some of the participants had past experience with relaxation. Both centering and relaxation were introduced and implemented simultaneously.

Amanda enjoyed learning new breathing methods and found it to be an excellent method for quick relaxation and calming prior to a race. She described her use of centering as follows,
I had never really used it (centering) before, but I think it's really neat how I can quickly focus on my breathing and take my mind away from everything else. I just focus on my deep breathes. (3-4).

The progressive relaxation session was effective in that it helped the participants experience the feeling of total relaxation. Many of them were able to determine specific areas in which they tended to hold tension such as in the neck, shoulders and forehead. Mark discussed his experience with progressive relaxation as follows,

It's (progressive relaxation) really neat how you can feel some areas more relaxed than others. I think that it helped me to understand which areas I need to focus on (2-4).

The participants who did not apply or focus on relaxation and centering found that they did not experience nervousness or worry prior to competition. Their experiences were described as cognitive-based rather than somatic-based.

I don't really get tied up or nervous before (a competition). There is usually a need to control my thoughts and self-doubts about my training. I never experience tension, nausea or the shakes (1-4).

Only Martin found relaxation to be a crucial part of his competition preparation. He describes his experience with progressive relaxation as follows,

I am completely relaxed, everything is relaxed. I've even fallen asleep using it before. I typically use it a couple days before a major competition. I will never use it the day of because you can be way out to lunch. I really like it the night before. It makes you feel like jello when you get up. It's great. I just have fun with it. (5-7)

Mental Imagery

The participants indicated that they tended to use imagery prior to the mental training program. However, the sessions provided them with an opportunity to discuss their generated images. As a result of the sessions, the participants indicated that they had a greater knowledge of how to enhance the quality of their imagery experiences.
Most of the participants’ use of imagery was limited and without planning or structure. The participants indicated that they typically used imagery prior to falling asleep.

I used imagery before going to sleep. I can remember at night just lying in bed and trying to go to sleep and you start to think about swimming. I’ve had images of me swimming and being on the podium, but I don’t typically consciously sit down and do imagery (1-4). When you close your eyes at night what do you think about? Of course I’m going to think about my race. I usually think about it until I fall asleep. (4-6)

Each participant was very individual with respect to his or her imagery perspective. The participants found that although their visual images were external, they were able to evoke the feelings and emotions associated with a race from an internal perspective. They indicated that through seeing themselves they were able to feel motivated, especially when they saw the end result of a gold medal or first place finish. Also, they were able to watch themselves for potential errors in their swimming technique. Through feeling their race they were better able to perfect the technique of their performance and feel the emotions and feelings associated with a race. Martin and Mark discussed their experiences with mental imagery as follows,

I’m external, but I can feel what I’m going through. I can’t hear anything because during an actual race you can’t hear anything (5-5).

I typically use external imagery, but the feeling is internal. I started using it (imagery) more last week before I got in the water. I was just thinking about the feelings of being powerful, strong and confident (2-3).

The participants used imagery to enhance self-confidence and motivation and reduce anxiety, negative thoughts and past errors. Many of the participants described their use of imagery as very informal. They found that when preparing for an important meet they used imagery for mental preparation. There was less focus on technical improvement through imagery and more use of imagery for motivation, Amanda indicated that she would visualize her
race thirty minutes before the meet. When she approached the blocks she had a sense that she
had already swam the race. Adam found imagery to be an excellent method for correcting
technical difficulties or past errors. Once he was aware of the areas needing correction he would
image the necessary changes. By imaging the correct movement he was better able to physically
execute the skill.

**Category VII: Suggestions for Implementation and Design of a Mental Skills Program**

The participants discussed their experiences with the program and offered suggestions for
the development, design and implementation of an ideal mental skills program. The participants
were asked to discuss their opinions and thoughts on how they would design a program for
intercollegiate swimmers. They were asked to examine the timing, coaches’ role and program
structure.

The participants indicated that it was necessary that the program be offered during the
competitive season. The participants suggested that if organized out-of-season the athletes
would not have the opportunity to apply the techniques and strategies learned. An in-season
program allows the athletes the opportunity to reflect upon what they have learned. Also, the
athletes were considered to be more serious and dedicated to enhancing their performance
during the season rather than in the off-season. The development of a program during the season
would also assist the athletes when attempting to handle academics and athletics.

The participants suggested that the structure of the mental skills training program should
be a combination of both presentation and applied work. The team receiving the mental skills
training should receive an introduction to the topic followed by an opportunity to apply the
strategy. Martin expressed his opinions regarding the structure of the program as follows,
Another way in which you could design the program would be to introduce the athletes to the topic and then give them 30 to 40 minutes by themselves to work on the strategies discussed. You could say something like, “I want you guys to go out there and imagine your perfect 25 meter. Let them go by themselves to apply imagery and then have them get in the water, warm up and do a 25. See how it effects their performance (5-3).

The participants indicated that the presentation should not be too formal or lengthy.

There should be a focus on what the strategy is, how it can benefit the athletes and how to implement the technique. There should also be various options with regard to the application of the strategies. For example, when learning about goal-setting the athletes should learn of daily, weekly, and competition specific methods. The athletes should have the opportunity to select the most appropriate method for themselves. Also, the consultant should provide the athletes with explanatory sheets and exercises to utilize away from the pool.

The participants suggested that in the introductory session, the consultant ask the athletes of any areas interested in focusing on. By asking the athletes for suggestions allows them to feel as though they are contributing to the development and design of the program. The participants also indicated that it may increase the athletes’ interest and commitment to the mental training program.

All but one of the participants indicated that the mental program should be a mandatory part of their training. The participants who suggested it be mandatory thought that it was necessary in order to grasp the athletes’ attention. Having a mandatory mental skills component may increase the number of interested athletes. The participants indicated that the athletes’ lack of time will often discourage them from committing to extra programs or groups. Therefore, by having the program as a mandatory aspect of their training the consultant will be able to reach more athletes. When asked if the sessions should be mandatory or optional Martin responded,
Anything else (optional activities) is an infringement on life. You need to make it mandatory and they’d probably benefit from it. You’re going to get a bunch of people who find it kind of neat and do well with it (the program). You’ll sell about 50% of the team (5-3).

Mark’s rationale for supporting optional programs is as follows,

People wouldn’t do it because they’d feel obligated to do it. Swimming is a choice that one makes and you are not obligated to swim. Therefore, you should not make this (the mental training program) mandatory (2-2).

The participants did not find that it was necessary for the sport psychology consultant to have sport-specific experience or knowledge. Although the participants wanted the consultant to have some knowledge of swimming there was no need for the consultant to have competed in swimming or understand the physical training component. Martin indicated that the sport psychology consultant’s knowledge and experience in sport was irrelevant, but that it did depend on how it was introduced to the athletes. Martin found that the consultant needed to be honest and include their sport-specific knowledge in the introduction to the team or athlete. Martin indicated that it would not be acceptable to completely avoid this important information. As with other participants he found that generally a sport psychology consultant would have some general knowledge of the sport. However, specific knowledge and experience was not necessary. Martin explains his thoughts regarding consultants sport specific knowledge as follows,

Whether or not a consultant was a swimmer is really secondary. We’ve had people come in who were Olympic level Canadian swimmers telling us what we need to do mentally. They don’t really know. They know what it is like for them, but it is different for everyone and a consultant understands this (5-3).

As with Martin, Adam indicated that most sport psychology consultants would be able to apply the knowledge they have from other sports to swimming.
All sport psychology consultants probably will have knowledge of pretty much all sports. They may not know the fine details of how a race is run, but they will have the general idea. If you boil it down, people in sport are all the same. Pretty much all athletes are the same in their thinking and what they need to do to achieve their goal. Sure, there are differences, but they (all athletes) have to have the same attitudes and mindset to succeed (1-3).

The participants discussed the coaches’ role in the development of a mental skills training program. All of the participants agreed that it was necessary for the coach to provide support for the program and the sport psychology consultant. When introductions of a mental skills program are made the coach should express the benefits and dedication to the program and its services. Martin described the coach’s “power of persuasion.”

I think they (coaches) should back it up as much as they can. Who are they (the athletes) going to listen to other than their peers and their coach. The coach can persuade you to make you understand the benefits. I think they (coaches) should have input and back it up (5-3).

Adam suggested that the coach should not only encourage the program, but should apply the strategies and techniques discussed. Adam discussed his thoughts on the coach’s use of the mental skills.

I think that all coaches could learn something from it (mental skill program). If they’ve never experienced doing this or having any sort of consultation they could benefit from sitting in on a team session and doing some of the stuff. The coach could even talk about it outside the sessions and apply it in workout. I definitely think he should use it and promote it (1-2).

The participants also indicated that the coaches may have difficulty taking time away from the physical training. Martin explains his thoughts on the coach’s emphasis on physical training as opposed to mental training.

The only argument may be that the swimmer will not get his or her meters in for the day. There tends to be this focus on the physical and technical training. I think that would be the only complaint of a coach (5-3)
Category VIII: Perceived Benefits of Mental Skills Training Program

The participants were asked to explain their initial interests and reasons for signing up for the program. Adam, Amanda, Melissa and Mark stated that they had a very light school schedule and they were interested in learning what the program had to offer. They had never received any extensive mental skills training prior to the program and were interested in seeing how it could benefit them. Martin signed up for the sessions after discussing the program with his coach who recommended that he participate. Martin explains his thoughts on signing up for the program as follows,

I was tempted (to sign up) at practice (when you introduced the program), but was afraid that it would cut into my time. I figured that I was crazy enough as it was (5-1).

The participants indicated that it was not difficult to arrange the time to meet at the weekly one hour sessions. They indicated that when making the decision to sign up for the program, time was a significant factor to consider.

The participants were asked to discuss their thoughts on why others on the team did not sign up for the program. Time was considered the most important deciding factor. Some of the participants thought that the other swimmers may also have a distorted view of themselves. They indicated that some athletes may feel as though they are performing and training well and have no problems. There was a negative image associated with sport psychology and its services. The participants suggested that some of the swimmers may feel that the only athletes who seek psychological assistance were considered lower-level or unprepared athletes. It was reported that the swimmer’s level of commitment to the sport. She indicated that several of the swimmers were not serious competitors and therefore had no interest in enhancing their
performance.

The participants were asked to discuss the perceived benefits of the program. All of the participants found that they learned new strategies and techniques to enhance concentration and self-confidence and to reduce anxiety and tension associated with competition. The overall knowledge of various skills was found to be extremely beneficial to the athletes. The participants indicated that the most beneficial aspect of the program was the overall knowledge of various mental skills.

I've learned some stuff that I didn't know and I've reviewed some stuff I already did know, but it really just helped me gain more confidence as a swimmer and hopefully I will see some of the benefits at Nationals (1-1).

The participants found the weekly sessions to be an excellent forum to discuss their worries and difficulties associated with swimming. Many of the participants discussed other issues in their lives that were impacting their swimming performances such as school, family and relationships. The participants indicated that they enjoyed the opportunity to discuss the relevant worries and concerns. They also indicated that they tended to look forward to each session.

I really liked talking to you. It was nice to have someone listen to my side for once. You were impartial and I enjoyed that. (2-5)

Many of the participants indicated that the sessions provided them with a new perspectives on swimming and competition. In the post-interview Martin indicated that he realized that the best physical trainers do not always succeed in their sport. Often times it is the athlete who is mentally ready and strong. Mark found that he began to look at his swimming in a more serious light. He indicated that he increased his level of motivation and desire to excel and train. Other participants indicated that they would feel energized and motivated to train after having a session. They indicated that talking about their experiences allowed them to feel more confident and excited about swimming.
Chapter XI

Discussion

The purpose of this investigation was to qualitatively examine the anxiety experiences of intercollegiate swimmers and their perceptions of a mental skills training program. Several broad categories emerged from the interview material skills program, and perceived benefits. Each category will be discussed in turn including: experiences of anxiety associated with competition and practice, sources of anxiety, performance satisfaction, preferred coaching styles, application of mental skills, suggestions for design and implementation of a mental skills program.

Experiences of Anxiety

Competition

Major competitions were described as extremely anxiety-provoking. The experiences of anxiety were described as cognitive and somatic-based. Reported cognitive-based feelings included constant worry, negative thinking and low self-confidence. Somatic-based feelings included fatigue, nausea and butterflies in the stomach. These results indicate support for the multidimensional anxiety theory which suggests that anxiety is comprised of both cognitive and somatic anxiety components (Borkovec, 1976; Martens, Burton, Vealey, Bump, & Smith, 1990).

Despite experiencing both cognitive and somatic-based anxiety, cognitive symptoms were more prevalent. This finding suggests that athletes may experience a dominant and non-dominant form of anxiety consistent with Maynard and Cotton’s (1993) observation that athletes were dominant in either cognitive or somatic-based
anxiety. It is possible that an athlete’s dominant form of anxiety may have a greater effect on his or her performance, an area in need of further investigation.

The participants’ temporal patterns of experienced anxiety were also consistent with previous research (Gould, Petlichkoff, & Weinberg, 1984), as their cognitive anxiety symptoms remained constant approaching competition and showed no temporal fluctuation, while symptoms of somatic anxiety steadily increased as competition approached.

Although performance was not examined within the present investigation, the participants described the perceived effects of anxiety on their performance. The results suggest that cognitive anxiety was perceived as having a greater effect on performance than somatic anxiety. Although this finding is consistent with previous investigations, it is important to note that the participants reported experiencing a greater amount of cognitive anxiety than somatic anxiety. Therefore, the participants may have perceived greater effects from the dominant form of anxiety which they were experiencing (Gould, Petlichkoff, & Weinberg, 1984; Martens, Burton, Vealey, Bump, & Smith, 1983).

Practice

The swimmers indicated that they were generally excited and eager to train. However, the nature of their day prior to practice would often determine their mood, willingness to train and performance in the water. Prior to particularly difficult practices, the swimmers indicated experiencing nervousness and anxiety. However, these experiences may be better described as arousal, which refers to physiological activation (Selye, 1946).
After a good practice the swimmers indicated feeling motivated, energized and having a sense of accomplishment while frustration was experienced after a poor practice. They suggested that when the number of poor practices began to increase, their level of motivation, commitment and confidence began to decrease suggesting a negative linear relationship with performance. These findings may provide helpful information for coaches interested in enhancing their athletes’ sport experiences. It would seem beneficial if coaches could discuss the problems occurring in practice with his or her athletes, especially after an athlete has had several poor practices. Research has indicated that the coach is often the most significant and impacting voice for an athlete (Salmela, 1996).

Very little research has examined the experiences of athletes surrounding practice. The majority of research focuses on competition. There is a need to understand how the athletes’ total sport experience including practice, can be enhanced. Also, researchers need to investigate the effects of both positive and negative practice experiences on athletes’ self-confidence level, motivation and performance.

**Sources of Anxiety**

The participants were asked to discuss their experiences of anxiety surrounding competition. Analysis of the interview material suggested that various sources of anxiety emerged from the data, including others’ accomplishments, time pressures, certain races, and academic concerns, training prior to competition, impact of shave and taper and competition preparation strategies.

The participants were asked to discuss their feelings surrounding competition.
The results indicated that more important meets created pressure for the athletes. This finding is consistent with previous research which suggests that major competitions have a greater effect on athletes because of the pressure and distractions associated with such an event. An important competition was determined by the swimmers’ appraisal. The swimmers suggested that OUAA/OWAA, CIAU, Nationals, International meets and Olympic trials were the most important competitions. Research suggests that factors associated with important competitions such as media, spectators, caliber of opponents and location have a significant effect on an athlete’s feelings prior to competition (Orlick & Partington, 1987). Contrary to previous research which indicates that athletes tend to worry about their competition results and performance (Scanlan, Ravizza, & Stein, 1989), the participants in the present investigation did not report feeling preoccupied or worried about their performance outcome. Rather, the swimmers were concerned about specific components of the race such as the turn, other opponents, stroke and breathing patterns. There tended to be a focus on the individual components of a race rather than the overall outcome. Researchers have indicated that focusing on process rather than outcome goals is more beneficial. Further examination is needed to gain a better understanding of athletes’ worries and concerns prior to competition.

With the exception of major competitions, the results indicated that most of the swimmers were low-key and relaxed prior to regular-season competitions. In the mental skills sessions the swimmers indicated that a swimming season revolves around two major competitions. The other swimming competitions were considered less important and had little impact on their progress. Therefore, the lack of importance placed on the
regular season meets may have had a significant impact on the swimmers’ feelings associated with competition. When a competition was associated with a great deal of importance and pressure, the swimmers were less able to remain relaxed and focused. Future research needs to examine the coping methods used by athletes from different sports. It could be hypothesized that athletes having greater exposure to pressure situations would develop better coping mechanisms. More research is needed in this area.

The majority of the research examining the sources of anxiety among athletes has involved elite level performers. Gould, Eklund, and Jackson (1992a) reported that elite-level performers’ sources of anxiety included readiness and performance problems, time pressure, coach and team-mate problems, social support, and transportation. The only reported source of anxiety shared by elite athletes and intercollegiate level athletes of the present study was the experience of time pressures. The intercollegiate athletes reported that their time pressures involved constant focus on academics and sport and the need to structure their day accordingly. Wrisberg, Johnson, and Brooks (1997) supported the prevalence of excessive time demands associated with intercollegiate athletics. Although both elite and intercollegiate level athletes reported experiencing anxiety as a result of time pressures, there is a need to further examine the exact nature of the pressure. Jones and Swain (1992) suggested that elite level performers may perceive anxiety differently than non-elite level athletes. It is important for future research to examine the experiences and sources of anxiety among various populations and across sports.

The results indicated various factors which contributed to the swimmers’
anxiety. The quantity and quality of training in the weeks prior to competition were found to have a significant effect on the swimmers' confidence. Troup (1991) interviewed 7 world-class swimmers regarding the characteristics of peak performance and found that a belief in their previous training was a critical factor. Although Troup's research examined elite-level swimmers, the findings are consistent with the experiences of intercollegiate swimmers in the present study.

Sport-specific research has indicated that swimmers have very individual methods of preparing themselves for competition (Hanc, 1997; Vealey, 1993). The results from the present investigation provide additional support for athletes' use of individual strategies which range from listening to music, sitting alone, and visualizing their race, to socializing with teammates. Researchers have found no set strategy to mentally prepare athletes for competition; instead an athlete must find the most appropriate method to prepare him or herself for competition.

The results suggested that intercollegiate athletes may experience unique stressors associated with the student-athlete experience (Pinkerton, Hinz, & Barrow, 1987). Ferrante (1989) suggested that the time requirements to travel, train and practice, the pressure and obligation to perform, and academic concerns and physical effort required are mentally, physically and emotionally exhausting experiences. Etzel (1989) examined the sources of life stress, perceptions of control, and stress reactions of 263 male and female student athletes. The results suggested that the athletes experienced greater amounts of stress and cognitive worry than did non-athletes. It is important to note that the majority of the research has examined the experiences of student-athletes among
American universities and colleges. Although several commonalities exist between the American and Canadian university sport experience, there are also several distinct differences that one must acknowledge. University athletes live with different pressures depending on whether they are recruited as student-athletes in Canada or are on an athletic scholarship in the United States (Salmela, 1996). Extensive research has reported on United States scholarship athletes, however, very little research has examined athletes’ experiences and perceptions of intercollegiate athletics within a Canadian context. Further research is needed in this area.

Ferrante (1989) recommended that student-athletes be assisted with their difficulties. He proposed that student-athletes could benefit from the availability of informational and educational programs. Several universities and colleges in the United States have highly developed student-athlete support services including academic support, one-on-one counseling, communication training, time management and assertiveness training. The recent development of the National Collegiate American Association (NCAA) sponsored the “CHAMPS/Life Skills” program. Life skills refer to strategies and tools applicable to student development and enhancement. Researchers have found that the implementation of such a program can have significant enhancing effects on the well-being and personal development of the student-athlete.

**Performance Satisfaction**

Each participant was asked to discuss his or her best and not-so-best performances. The participants described their physical and mental preparation, anxiety level, feelings experienced during competition and self-confidence level at
each competition and their coach’s role. Although the participants indicated very
individualistic experiences, several commonalities emerged.

**Best and Not-So-Best Performances**

Examination of best and not-so-best performances was consistent with the
findings of Eklund (1996) and Gould, Eklund and Jackson (1992a & b). The swimmers
reported their best experiences as being characterized by a sense of effortlessness, high
self-confidence, commitment, total concentration, complete control, lack of fear, and
total immersion in the performance. In other words, the swimmers’ best performances
were characterized by physical, mental and technical mastery. In contrast, the
swimmers’ not-so-best performances were characterized by a lack of focus, physical
difficulty, little motivation, negative thought patterns, and confidence problems.

The characteristics of the swimmers’ best performances were consistent with the
research on peak performance and optimal functioning. Csikszentmihalyi (1990)
indicated that peak performance was defined as a state of exceptional functioning. The
characteristics of peak performance were consistent with the swimmers’ best
performances. Hogg (1995a) reported that peak performance in swimmers also included
a sense of optimism. This sense of optimism may be consistent with the participants’
sense of “knowing”.

The characteristics of the swimmers’ best and not-so-best performances include
the anxiety experienced prior to the competition. The results suggest that prior to the
best performances the swimmers experienced facilitative anxiety. The participants
described themselves as excited and eager to race. Whereas, prior to the swimmers’ not-
so-best performances the swimmers experienced debilitative anxiety. They reported feeling unsure and worried. These findings provide support for the need to distinguish between the intensity and direction of anxiety (Jones & Swain, 1995). It is suggested that researchers and consultants not rely on the intensity of the anxiety experienced alone, but also consider the directional perceptions. This research provides support for the need to examine the individual’s interpretation of the anxiety being experienced.

Although past research has suggested that significant differences exist between elite and non-elite level athletes, the current study suggests that the athletes’ descriptions of their best and not-so-best performances may not differ between competitive levels. This comparison would be an interesting topic for future research.

Coaching Styles

The participants were asked to discuss their personal experiences with their coaches, perceptions of coaching styles and preferred styles of coaching or the “ideal coach.”

The interviews with the swimmers revealed some common perceptions and responses with regard to the characteristics of the ideal coach. The majority of the participants suggested that the characteristics of an ideal coach include being supportive prior to competition, providing individual attention, demonstrating commitment to the team, and having expert knowledge in the field. These findings support previous research examining athletes’ perceptions of the ideal swimming coach (Troup, 1991). The majority of the swimmers indicated several positive characteristics of their current and past coaches. However, each swimmer indicated several areas in
which their coaches needed improvement such as providing appropriate feedback, being approachable and enhancing athletes’ motivation. Only one swimmer indicated that he had ever had an ideal coach. In 1995, Bortoli, Robazza, and Giabardo asked 240 young athletes to describe their perceptions of the ideal coach. Bortoli et al. indicated that athletes clearly wish to have a better coach. Further research is needed to examine athletes’ perspectives of their coaches, how these perspectives change with maturity and experience and the characteristics of the ideal coach from different sports. It is important to recognize that the individual differences and needs of each athlete will make each coach-athlete relationship unique.

Previous research has found that swimmers prefer their coach to be personable and friendly (Troup, 1991). However, the results from the present investigation suggest that the swimmers preferred their coach to be demanding and challenging. Several of the swimmers indicated that they needed their coach to be authoritative and directive in his or her coaching style. The competitive level of an athlete may be a significant factor to examine. Intercollegiate level swimmers may need to be challenged, motivated and directed more often than elite level swimmers. At the elite level, research has suggested that athletes have a greater amount of control over their motivation, commitment, and dedication to their sport and therefore, coaches do not need to be as directive and authoritative towards their athletes (Schinke, Bloom, & Salmela, 1995).

The participants indicated that there was a need to receive individual attention and appraisal from their coach. Several of the participants indicated that they were not receiving the attention they needed and deserved. As a result of the lack of attention, the
participants indicated that they were frustrated and often questioned the value of their participation in sport. Qualities of the ideal coach, as suggested by the swimmers, were consistent with characteristics of expert coaches. The swimmers suggested that due to the individual nature of the sport of swimming its athletes may need a significant amount of attention. Very little research has examined athletes’ need for attention. Previous research suggests that age, personality, and competitive level of an athlete can have a significant effect on one’s need for attention (Gould, Eklund, & Jackson, 1992a). Future research needs to examine the level of dependence across different sports and at varying competitive levels. There is also a need for researchers to determine the effects of not receiving the attention desired.

The swimmers indicated they were extremely dependent upon their coach to provide them with pre-competition strategies. Previous research also supports the need for swimming coaches to provide their athletes with a mental or physical strategy prior to competition (Troup, 1991). Bloom, Durand-Bush, and Salmela (1997) reported that expert coaches acknowledged the need to discuss strategies with their athletes prior to competition, and suggested that expert coaches provide their athletes with reminders and helpful strategies. Future investigations need to examine the effects of pre-competition discussions between the coach and athlete on performance and satisfaction levels.

**Application of Mental Skills Training Program**

One purpose of this investigation was to examine the participants’ use and perception of the mental skills program. Each participant was educated in the mental skills of goal-setting, cognitive restructuring, attentional training, mental imagery,
relaxation, centering, and pre-competition planning.

**Goal-Setting**

The participants indicated that goal-setting was extremely beneficial. Although each participant had a very personal and individual method of applying goal-setting, several commonalities emerged.

The participants agreed that daily and weekly goal-setting were extremely rigid and constraining forms of setting goals. They preferred setting competition-specific goals. The competition goals involved a series of short-term goals leading towards their long-term competition goal. The participants indicated that the short-term goals allowed them to remain focused and confident. By focusing on smaller, more obtainable goals the swimmers were better able to remain positive, directed and on task. Research supports the contention that short-term goals provide immediate feedback and incentives (Bandura, 1982). The swimmers suggested that focusing on only long-term goals created unnecessary stress and pressure from having to concentrate on something inconceivable at that moment. The swimmers suggested that applying both long and short-term goals was the most effective method of goal-setting. Previous research has shown that short-term and long-term goals together lead to better performance than long-term goals alone (Hardy, Jones, & Gould, 1996).

The swimmers reported that they set mental, physical and technical goals. Mental goals included remaining focused, positive, and confident. Physical and technical goals included focusing on one’s stroke, kick, turn, strength in the water or endurance level. Goals were established in all three areas for each competition. The goal-setting literature
Discussion 107

has focused on two types of goals; outcome and process. Outcome goals refer to the final product which an individual hopes to achieve such as a first place finish. Process goals are defined as a series of short-term goals leading towards the outcome goal such as an improvement of one’s entry into the water, breathing patterns and imagery skills. Research proposes that athletes need to set both types of goals (Locke & Latham, 1990). The participants indicated that their training goals typically included process-oriented goals, whereas their competition goal was generally an outcome or performance goal. Further examination of process and outcome goals is needed to better understand the most beneficial means of setting goals.

The majority of the research on goal-setting has focused on it’s enhancing effects on performance (Burton, 1989). However, there is a need to better understand the athletes’ experiences with such a strategy and to determine how they apply the strategy to sport and life. The results indicated that the participants found the goal-setting session to assist with their organization skills. They were better able to determine areas needing focus and what exactly they needed to do. Each small step provided them with a sense of accomplishment and prevented them from worrying about the long-term goal.

**Cognitive Restructuring and Attentional Training**

The results indicated that the participants applied both cognitive restructuring and attentional training in competition and training. The participants reported that cognitive restructuring helped them become more aware of their negative thought patterns. Researchers have provided support for the use of positive thinking (Bunker, Williams & Zinnser, 1993). In fact, Mahoney and Avener (1977) suggested that thought patterns are
the best indicators of sport success.

Attentional training was considered by the swimmers as a valuable skill. Cue words, cue images and parking were applied to remain focused and positive during competition and training. Researchers have provided support for the performance-enhancing effects of remaining focused and in control. Elite-level performers have been found to have a greater ability to focus and limit distraction than less-elite performers (Hardy, Jones, & Gould, 1996). Also, best performances at various competitive levels have been associated with better distraction control and concentration (Gould, Eklund, & Jackson, 1992).

The swimmers indicated that they were distracted by various factors including past performances, other swimmers and their accomplishments, previous errors, and academic worries. The literature supports these factors noted by the swimmers (Bunker, Williams & Zinnser, 1993; Gould, Eklund, & Jackson, 1992; Orlick, 1990).

**Mental Imagery**

The results suggest that the swimmers used mental imagery in an unstructured way. Hardy, Jones, and Gould (1996) indicated that some athletes’ use of imagery will be relatively unstructured and without appearing to serve a purpose, whereas, others have very structured imagery. Although the swimmers’ use of imagery was limited, they indicated that it was an important component of their mental preparation for competition. Orlick and Partington (1988) reported that 99% of their 235 sample used imagery to some extent.

The participants indicated that they were able to create and control vivid images.
However, the amount of attention they were able to devote to one image was limited. Very often the swimmers were unable to image an entire race without becoming distracted. For many of the participants this was the first time they had been educated about how to image more effectively. Their previous imagery experiences involved closing their eyes and imaging what they wanted to happen. Although this has its benefits, there are several more advanced methods of imagery. Orlick and Partington (1988) indicated that elite level athletes have difficulty in the initial stages of imagery and that creating successful images was a process. It was a technique that required daily practice. Therefore, the participants’ frustrations and difficulties were similar to those reported by elite-level athletes being introduced to imagery.

Imagery perspective is the distinction between internal and external imagery. Internal imagery refers to an individual viewing him or herself from within his/her body and experiencing those sensations associated with the actual performance. External imagery is defined as imaging one’s self from the perspective of an external observer (Mahoney & Avener, 1977). The participants indicated that they tended to use a combination of both external and internal imagery. Researchers suggest that internal imagery is the best perspective as it “closely allies the perceptual and kinesthetic experience of performing” (Hardy, Jones, & Gould, 1996, p. 29). However, Jowdy, Murphy, and Durtschi (1989) suggested that athletes tend to use a combination of imagery perspectives. Further examination is needed to determine the most effective way to image.

The participants used imagery predominately for enhancing motivation and
self-confidence and researchers have demonstrated the effectiveness of using imagery for these outcomes (Powell, 1973). The participants also indicated using imagery to correct performance errors and technical difficulties. They reported that the imagery allowed them to initially master the skill in their mind and then proceed to the physical practice. A significant amount of research provides support for the use of imagery for skill correction (Gravel, Lemieux, & Ladouceur, 1980; Suinn, 1972).

Relaxation and Centering

Analysis of the interview material indicates that relaxation was not an important strategy for the swimmers. The majority of the participants had previous knowledge of and exposure to progressive muscular relaxation (PMR). However, the participants did not apply the strategy to reduce their symptoms of anxiety. As discussed earlier, the participants reported experiencing cognitive anxiety more often and at a greater level than somatic anxiety. Supporters of the matching process hypothesis would suggest that a compatible treatment would be more effective in reducing the dominant anxiety (Maynard & Cotton, 1993; Maynard, MacDonald, & Warwick-Evans, 1997; Maynard, Smith, & Warwick-Evans, 1995). Cognitive anxiety should be managed by cognitive-based methods such as cognitive restructuring, mental imagery and goal-setting. Somatic anxiety should be controlled by somatic-based methods including relaxation, centering and biofeedback. Therefore, because the participants experienced greater levels of cognitive anxiety it seems there would be a greater need to apply cognitive-based techniques for anxiety reduction. Somatic-based strategies such as centering and progressive muscular relaxation would be less needed.
Only one participant applied progressive muscular relaxation and found it to be extremely beneficial. Although his use of PMR was very unstructured and limited, he enjoyed listening to PMR cassette tapes in the week leading up to competition. His purpose for using PMR was to enjoy the feeling of being totally relaxed. He indicated that he would feel increased amounts of tension in his body leading up to competition and PMR allowed him to feel fully relaxed and focused on being in control of his body.

Jones and Hardy (1990a) examined elite athletes’ use of relaxation training. The findings indicated that the athletes’ use of relaxation seemed to be part of the natural preparation which they had developed and often appeared to take place in a fairly unstructured manner. Although the majority of the swimmers did not regularly apply relaxation training, PMR made them more aware of the areas in their body which they held their tension. Consistent with these findings, Rotella (1985) reported that athletes tend to gain a greater self-awareness of the degree of bodily tension when performing progressive muscular relaxation.

**Perceived Benefits of the Mental Skills Training Program**

The results from the investigation indicated that the participants enjoyed and benefited from the mental skills training program. Each participant was able to further their knowledge of various mental skills and apply each skill as needed. Stoll, Beckett, McLean, and Plusquellec (1990) reported that swimmers indicated that mental training helped them learn specific skills and broaden their use of mental skills. All of the participants agreed that it was important the program be designed and implemented for each individual. There was a need for the program to be at the appropriate level for each
participant. Several of the participants had very limited knowledge of mental skills and needed a greater focus on the education of each skill. Other participants, on the other hand, had worked closely with a consultant in previous years and were interested in enhancing their existing mental skills. Therefore, it is important to design a program that is appropriate for the athlete or group of athletes one is working with. It is crucial that a mental skills trainer determine the athletes' previous exposure to sport psychology and mental training. Sport psychology consultants may want to develop a needs assessment for the athletes. In doing so, a consultant can design the most beneficial and appropriate program.

In conjunction with the need to know of the athletes' previous mental skills exposure, it is important to understand the athletes' reasons for seeking assistance. As a consultant it is necessary that one understand the athletes' goals, perceived areas of assistance and history in the sport. All initial sessions should be directed at learning about the athlete, discussing your qualifications and philosophies and building rapport. The participants indicated that athletes need to feel comfortable and confident with the consultant.

The participants were asked to describe their reasons for signing up for the mental skills program. The participants indicated that they were interested in enhancing their swimming experience. Several of the participants noted that they had a very light school schedule and were able to commit to the extra time. This issue of time relates to the suggestion offered by the participants in regard to the reasons why other swimmers did not sign up for the program. When asked to hypothesize why other swimmers did not
sign-up for the program the number one factor listed was time concerns. They indicated that the swimmers may have had a false impression of the time required from such a program. Also, it was interesting that the participants indicated that some of the swimmers may have had a false impression of sport psychology and mental skills training. It was suggested that many athletes feel that seeking psychological assistance is a form of weakness. Lindner, Brewer, Van Raalte, and DeLange (1993) provide support for the negative halo associated with sport psychology. It was suggested by Linder et al. (1993) that consultants face a number of barriers in gaining access to consult with a team or athlete. Among the obstacles faced include the reluctance of the potential client to seek psychological assistance due to the negative “shrink” connotations associated with the profession. In a recent investigation, Martin, Wrisberg, Beitel, and Lounsbury (1997) reported that many athletes and teams continue to be extremely reluctant to use sport psychology services.

The results also indicated that the mental skills sessions provided the participants with the opportunity to talk with and receive feedback from an impartial individual in confidence. Researchers have provided support for the importance of feedback. Locke and Latham (1990) reported that the effectiveness of skills such as goal-setting were dependent on feedback. Many of the sessions involved discussion of non-performance related issues including academic concerns, team-mate difficulties and coach-athlete relationship problems. The participants reported that the opportunity to talk with someone on a weekly basis was “enjoyable and helpful.” After each session they reported feeling very motivated and eager to train. The sessions were considered a
positive experience which several hoped to continue after the completion of the study.

**Suggestions for Design and Implementation of Mental Skills Training Program**

The participants were asked to offer their suggestions for the design and implementation of a mental skills training program. Timing, structure, gaining access, building trust, and the coach’s role were discussed.

The majority of the participants indicated that there was a need to make the program mandatory. A mandatory program would force athletes to become more aware of services provided by sport psychology consultants. Also, by having the sessions mandatory relieves any concerns regarding time. The athletes would begin to see the program as an integral part of their training. Also, by devoting time to mental skills training the coach has indicated support for the program and its services.

The participants agreed that the program needed to be during the competitive season so that the swimmers to have the opportunity to apply the skills learned. During the competitive season athletes tend to be more serious and committed to swimming. Also, the majority of the difficulties related to swimming occur during the competitive season.

The participants indicated that coaches tend to have difficulty devoting time to mental skills training. In their past experiences the coaches would prefer to spend the time focusing on the physical and technical aspects of the sport. This is a significant barrier that sport psychology consultants face. Anshel (1989) examined a football coach’s receptivity to sport psychology consulting. The findings indicated that the coach tended to ignore most of the written and verbal suggestions provided and, instead, relied
on traditional coaching tactics, despite losing far more games than were won. Not only is it important for coaches to utilize sport psychology services, but it is necessary that they support the programs being offered. The coach’s opinion has a significant impact on his or her athletes.

The structure of the program should include both education of the skills and assistance with implementation. The participants agreed that it was necessary that a consultant introduce each topic in a lecture format. Following the educational component the athletes would have the opportunity to apply the skills learned. Articles, worksheets and logs would need to be provided to assist the athletes with application. No “homework” should be required.

The types of seminars and workshops offered would depend upon the needs of the team or individual athlete. The participants agreed that the topics addressed in the mental skills program would be appropriate and beneficial.

The participants also indicated the need for the consultant to maintain confidentiality. The participants indicated that they were reluctant to use past sport psychology services because of a lack of confidentiality and trust. Also, there was a need for the consultant to be clear about his or her role within the team. The participants agreed that the consultant must work for the athlete and not the coach.

Overall, the suggestions provided from the swimmers assist with future design, development and implementation of mental skills programs for intercollegiate athletes. The information provided can assist consultants with program design, gaining entry and access. Researchers need to expand upon this investigation by examining the
experiences and perceptions of athlete's use of mental skills. Also, there is a need to continue to gain feedback and suggestions from the athletes using such programs. In doing so, consultants can develop the most appropriate and beneficial program for the athletes.
Chapter VI

Conclusion

The objective of this investigation was to examine intercollegiate swimmers’ experiences of anxiety and their experiences with a mental skills program. While the research focused on these two broad areas, several other relevant issues emerged including sources of anxiety, exposure to sport psychology, and suggestions for design and implementation of mental skills programs.

Each of the five swimmers provided valuable information regarding their experiences with anxiety and perceptions of the mental skills program. However, there is a need to note the distinct and unique contribution of each of the five swimmers. The sport experience and factors associated are unique for each athlete.

The results suggested that the swimmers experienced minimal amounts of anxiety surrounding regular season competitions and practice. In contrast, the swimmers noted experiencing anxiety symptoms at important competitions. It is possible that swimmers need more mental skills training or that they should use their regular season competitions as simulation.

The results indicated support for the distinction between cognitive and somatic anxiety congruent with the multidimensional anxiety theory. The results also suggested that the swimmers experienced a dominant and non-dominant form of anxiety. Further examination of the matching process hypothesis is needed. In particular, there is a need to qualitatively examine the matching process hypothesis. In doing so, the researcher
may gain a better understanding of the participants' experiences of the intervention being received.

Research needs to further examine the experiences of anxiety among intercollegiate level athletes. The majority of the research has examined experiences of elite-level performers. There are distinct differences from youth to elite level sport that deserve independent attention. In particular, research must further investigate the pressures related to being a student-athlete. Although a significant amount of research supports the existence of stress and pressure associated with being a student-athlete, research is needed to determine methods of better assisting athletes. It is important to note that the majority of the research examining student-athlete concerns has been within an American context. Researchers need to initially examine the factors associated with being a student-athlete in Canada. Further, they need to determine the most appropriate and effective means of controlling and coping with the anxiety, stress and pressure associated with being a student-athlete in Canada.

There is a need for research to further investigate athletes' experiences surrounding practice. Little research has examined the effects of "good" and "bad" practices on self-confidence, anxiety and performance. The existing literature focuses on competition and experiences surrounding competition. However, to fully understand the total athlete there is a need to examine all factors which contribute to his or her sport experience. The quantity and quality of athletes' practice is a significant aspect of their sport performance and experience.

The swimmers' best and not-so-best experiences indicated partial support for the
literature examining elite-level performers’ best and not-so-best performances. Although several findings among intercollegiate swimmers parallel the findings with elite-level performers there is a need to specifically examine the experiences of intercollegiate-level athletes’ best and not-so-best performances. Also, the characteristics of the swimmers’ best performances were consistent with the qualities of peak performance and being in the “zone”. Further examination is needed to examine the distinction between “best” performances and peak performances.

The findings associated with coaching focus on the swimmers’ preferred style of coaching and perceptions of the ideal coach. The majority of the research has examined the experiences and coaching styles of expert coaches while neglecting athletes’ preferred style of coaching. Many of the preferred coaching behaviors discussed by the swimmers were similar to the qualities and behaviors of expert coaches (Bloom, Durand-Bush, & Salmela, 1997). Therefore, future research needs to further examine athletes’ perceptions of coaching styles from different competitive levels and sports. In doing so, coaches will be better able to serve the needs of their athletes.

The athletes indicated that the mental skills program was beneficial. Each swimmer indicated that he or she was able to adapt the program to his or her needs. Although the swimmers applied each strategy differently similar effects were evident. Many of the participants suggested that they had particular preferences for the application of certain strategies which suggests that athletes should not be limited to only one specific method or technique. As a consultant working with athletes one must recognize individual differences and preferences when designing and implementing a
mental skills program and offer various options and strategies to allow each individual to benefit. Also, further research needs to examine the effects of mental skills programs with various athletes across different sports and competitive levels. Again, the majority of the research has examined the experiences of elite-level performers and research is needed to investigate the implementation of mental skills programs in university and college athletic programs. It is suggested that such programs not only have significant effects on athletic performance, but are extremely beneficial for the concerns associated with being a student-athlete.

Gaining information from athletes may be the most effective means of broadening our understanding of athletes’ experiences. Qualitative inquiry allows researchers to gain a more in-depth understanding of athletes’ experiences. Examining athletes’ thoughts, feelings and words allows a researcher to gain firsthand knowledge of that individual athlete’s experience. As researchers and consultants we need to not only test the effects of programs and interventions on athletes’ performance and anxiety levels, but also to examine the effects of programs on the whole athlete. Through interviewing athletes researchers are able to gain this information. Both quantitative and qualitative methodologies are needed and researchers should apply the most appropriate method of inquiry.

The development of mental skills programs needs to increase in the intercollegiate setting. Consultants need to encourage athletes to understand and implement the skills. This is a very difficult task as several barriers exist. Consultants and coaches need to work together to assist with the transition of such programs into an
existing team or club. Through the use of mental skills programs an athlete has the opportunity to enhance the performance and quality of their sport experience.

To conclude, this investigation has broadened our understanding of two very limited areas of research, athletes’ experiences of anxiety and perceptions of mental skills programs. The findings impact the field of applied sport psychology in numerous ways. First, by furthering our understanding of athletes’ experiences of anxiety, consultants may be better able to develop effective methods of reducing and controlling heightened anxiety levels. Also, by understanding the various sources of anxiety for athletes, consultants and researchers can attempt to determine the most effective method of eliminating or reducing such sources. Secondly, researchers and consultants do very little to examine the athletes’ experiences with and perceptions of mental skills programs. By examining athletes’ perceptions, consultants will be better able to design, develop and implement the most effective programs. In doing so, athletes will have the opportunity to reduce their anxiety and enhance their performance and sport experience.
References


Scanlan, T., Ravizza, K., & Stein, G. (1989). An In-depth Study of Former Elite Figure Skaters. Journal of Sport and Exercise Psychology, 11, 54-64.


APPENDIX A

Letter of Information and Consent Form
Appendix A

Mental Skills Training Program

I am currently a graduate student at the University of Toronto in the exercise science program. I am interested in examining the experiences of University level athletes with a mental skills program.

If you decide to take part you will be asked to discuss your athletic performance patterns and issues surrounding performance enhancement. Topics such as relaxation, visualization, positive thinking, pre-competition planning, and attentional training will be discussed. We will meet approximately eight times throughout the season.

Each individual will be asked to perform two brief interviews, a pre-intervention and post-intervention interview. Each interview will require between 45 and 60 minutes and will be audio-recorded for the transcribing process.

If you take part in this project you will have the opportunity to work on enhancing your athletic performance through the use of psychological performance enhancement techniques. You will receive individual and personalized mental skills training that will assist in your focus, positive thought process, stress/anxiety control, and motivation.

All results and interviews will be confidential. No one but myself will have access to the information from the study. Taking part in this project is entirely up to you. There will be no penalties if you decide not to be involved. If you agree to take part you may stop at any time.

If you want to know more information about this research project, please call me at (416) 978-3354 (Office) or (416) 588-3973 (Home) or my faculty advisor Dr. Gretchen Kerr at (416) 978-6190. This project has been approved by the Human Subject’s Review Committee at the University of Toronto. If you have any questions about the University of Toronto’s regulations for research, please call (416) 978-5585.

You will receive a copy of this consent form.

Sincerely,

Emily A. Roper, B.Sc.
Master of Science Student
University of Toronto

Gretchen Kerr, Ph.D.
Supervising Professor
University of Toronto
Consent Form

I acknowledge that the research procedures described on the attached form have been explained to me and that any questions that I have asked have been answered to my satisfaction. I have been informed of all procedures involved in the study. I know that I may ask, now, or in the future, any questions I have about the study or the research procedures. I have been assured that records relating to me will be kept confidential and no information will be released or printed that would disclose my personal identity without my permission. I understand that I am free to withdraw from the study at any time.

I hereby consent to participate.

_________________________________________  ________________________________
(Signature of Athlete)                          (Name of Athlete)

_________________________________________
(Date)

_________________________________________
(Telephone Number)
APPENDIX B

Information Bulletin
Mental Skills Training
University of Toronto 1997 - 98 Swim Team

Are you interested in enhancing your athletic performance?

Do you lose your concentration or focus during competition?

Do you experience excessive tension or nervousness prior to competition?

Have you established a personal goal for the season and the necessary steps towards achievement?

Contact for further information:

Emily Roper
Office: Room 329A Benson Building
University of Toronto
(416) 978-3354
emily.roper@utoronto.ca
APPENDIX C

Pre-Intervention Interview Guide
Appendix C
Pre-Intervention Interview Guide

Opening Remarks
- Introductions
  - Format of program
  - Issues of confidentiality

Demographics
- Age
- Schooling
- Family

Training and Coaching Section
- When did your competitive swimming begin?
- What races do you currently compete in?
- What is your Personal Best?
- Are you happy with you recent performances?
- Tell me how you feel about your training.
- When going to practice - give me an idea (%) of how hard you work at practice.
- Would you say that your coaches would agree with you?
- Why do you compete versus recreational swimming?
- What about other sports?
- How competitive would you describe yourself (on a scale from 1 to 10)?
- Describe for me your past and present styles of coaching.
- Describe your ideal coach.

Feelings Prior to, During, and After Competition and Practice

Practice
- Tell me a little about your typical day of practice (time leading up to and during)?
- Tell me how you feel going into practice?
- During practice, how do you feel?
- After practice, how do you feel?

Competition
- Tell me a little about your typical day of competition?
- Describe how you feel prior to competition?
- During competition, how do you feel?
- After competition, how do you feel?
- Pretend that you have a competition in 45 minutes - describe for me your thoughts and feelings.
- Go back to your best performance - How did you feel prior to this performance (do you remember being on deck, the location, etc.)
- Go back to your worst performance - How did you feel prior to this performance?
“Feelings” (only if discuss “feelings”)

- Describe these feelings you are experiencing.
- When are these feelings most prevalent?
- How often do you experience these feelings?
- Are there other situations in your life that evoke similar “feelings”?
- Describe what do you do to deal with these feelings?
- Are your methods of coping working for you?
- What would you think is the source of your “feelings”?
- How long prior to or during competition are these feelings most prevalent?
- When do these feelings end?
- When do these feelings begin to decrease/increase?
- Describe your coaches behavior before and during competition. How does this affect you?

**History and Knowledge of Sport Psychology**

- Tell me what you know about sport psychology.
- Which techniques or strategies are you familiar with?
- From your perspective, have any coaches or trainers suggested that you see a consultant or pushed the team to participate in a team-based sport psychology workshop?
- Have you worked with a consultant, psychologist, trainer, or coach with any psychological techniques? If so, what were they?
- Tell me about your experience with the workshop/consultant?
- Have you continued to apply the techniques learned? If so, tell me a little about you work.
- If going to work with a consultant what areas would you like to work on? And what strategies would you be interested in learning more of?
APPENDIX D

Post-Intervention Interview Guide
Appendix D
Post-Intervention Interview Guide

Overall Experience with the Mental Skills Program
- Why did you sign up for the mental skills program?
- What did you think that it would be like?
- Did you find the timing of the program to be appropriate?
- Did you think that it was difficult to make the time?
- Tell me what you thought about the order of the mental skills.
  - Goal-setting
  - Positive thinking
  - Attentional training
  - Relaxation
  - Imagery
- Overall, what, if anything, did you find beneficial?
- Overall, what, if anything, did you find not beneficial?
- What do you think prevented others from signing up for the program?
- If you were to sit down with a consultant and a coach to try to design a sport psychology program for a University level swimmer (individual or team)
  - How would you suggest it be implemented?
  - How would it be structured?
  - What about timing?
  - How would you suggest gaining interest and access among teams/athletes?

Specific Interventions:
Each series of questions applies to the following mental skills strategies: imagery, goal-setting, cognitive restructuring, attentional training, relaxation, and centering.
- What did you find beneficial about the goal-setting session?
- What did you not like about the goal-setting session?
- What did you apply?
- How did it work for you?
- What other areas of your life have you applied such techniques?

Overall Season:
- How do you feel about this season?
- How do you feel about your performances over the season?
- What are your plans for the summer months in regards to swimming?
- What are you plans for next season?