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Mental Skills Interventions for Young Golfers:
Two Case Studies

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DEDICATION

To Max and Rosemarie - my parents, my teachers, my coaches,
and the creators of my golfing world. Thanks, Danke, Merci.

Abstract

The purpose of this study was to determine the effects of an individualized cognitive mental skills intervention program on the performance of two young amateur golfers. Past mental training programs for elite junior athletes have studied skiers (Hellstedt, 1987), tennis players (Davis, 1991; Terry, 1994), table-tennis players (Li-Wei, Qi-Wei, Orlick & Zitzelsberger, 1992), gymnasts (Ravizza & Rotella, 1982), and collegiate golfers (Cohn, Rotella, & Lloyd, 1990). Inquiries as to the adaptability of these former programs into the junior golfing atmosphere sparked an eight-week intervention program and postprogram follow-up interview.

Utilization of both quantitative and qualitative data allowed for an analysis of overt as well as covert processes employed by participants. Intervention sessions, journal entries, observations, parental interviews, and golf instructor interviews were used as sources for qualitative input. Audio-taped interviews and sessions provided for accuracy and personal input. Performance data, i.e., timed preshot routines and game statistics, and self-evaluation manipulation checks (adapted from Martens (1987) & Rotella, (1981)) supplied quantitative results throughout the program.

Results from performance data indicated that some categories of preshot routines and game statistics improved for both participants during the intervention program. Self-

evaluation ratings suggested increased confidence for both participants in various mental skills. These self-evaluation ratings implied that improvement in performance outcomes may have been positively affected, not only by practice, but also, by increased confidence in mental skills techniques. In addition, participants and participants' parents provided positive feedback in regard to the intervention program, based on personal involvement and observation, respectively.

Table of Contents

Chapter	Page
INTRODUCTION	1
Statement of the Problem	3
Definitions of Terms.....	5
Assumptions	9
Limitations	10
Delimitations	11
Significance of the Study	11
REVIEW of LITERATURE	13
Mental Skills Programs for Performance Enhancement.....	14
Preperformance Routines.....	30
Common Mental Factors Used by Elite Athletes	38
METHODOLOGY	43
Participants.....	44
Procedures.....	46
Rationale for Data Collection Procedures	46
Prior to Intervention	49
The Intervention	50
Following the Intervention	52
RESULTS and DISCUSSION.....	53
Case 1: Leslie	55
Case 2: John	112
Discussion	167
SUMMARY, CONCLUSION, and IMPLICATIONS	173
Summary.	173
Conclusions	176
Implications for Future Research	177
REFERENCES.....	178

Chapter	Page
APPENDICES	182
A. Informed Consent Forms	183
B. Golfer's Demographic Information.	188
C. Initial Assessment Questions	189
D. Game Statistics	193
E. Timed Behavioral Preshot Routines	194
VITA	195

Chapter 1

Introduction

The importance of successful mental skill strategies in addition to well-developed physical skills is being increasingly emphasized in all types of competitive sport, especially those of a closed-skill nature. The world of professional and elite amateur golf is seeking more sport psychologists and performance enhancement trainers who can better help competitive golfers achieve success by providing mental training programs. The maximal results, which may emerge from such programs, may give an athlete the sought-after mental edge. With the increasing demand for performance enhancement programs (Boutcher & Rotella, 1987; Cohn, Rotella, & Lloyd, 1990; Davis, 1991; Hellstedt, 1987; Li-Wei, Qi-Wei, Orlick, & Zitzelsberger, 1992; Ravizza & Rotella, 1982; Terry, 1994; Wrisberg & Anshel, 1989), it is essential that competitors utilize a well-prepared program which can be adapted to specific individual needs. The basis for such an intervention should be presented in an educational manner; applied psychology of sport is, in fact, centered around the education of a competitor in relation to performance enhancement techniques.

Recent intervention theories and applications (Boutcher & Rotella, 1987; Davis, 1991; Hellstedt, 1987; Terry, 1994) have focused on incorporating vital parameters such as individual

assessment, flexible and measurable goals specific to the individual, development of a mental skills program that is comprehensible to the competitor, and evaluation procedures. Such educational programs allow both the sport psychologist as well as the athlete the opportunity to create a flexible, suitable, and individualized program through step-by-step procedures which have been shown to be effective in sports such as archery, tennis, and skiing (Boutcher & Rotella, 1987; Davis, 1991; Hellstedt, 1987; Terry, 1994). Although there has been success in conducting experiments and field studies dealing with intervention strategies, "case study research may better assess the efficacy of the individual athletes' reactions to these kinds of programs" (Boutcher & Rotella, 1987, p. 137).

In addition to studies which have focused on flexible cognitive interventions, other research has investigated more specific aspects of cognitive/behavioral interventions. Factors such as imagery (Andre & Means, 1992; Epstein, 1980; Li-Wei, Qi-Wei, Orlick, & Zitzelsberger, 1992), attention (Crews & Landers, 1992), preshot routines (Cohn, Rotella, & Lloyd, 1990; Crews & Boutcher, 1986a; Crews & Boutcher, 1986b), as well as stress and anxiety management (Johnston & McCabe, 1993; Murphy & Woolfolk, 1987) are just a few of the aspects that can be incorporated into individualized mental training programs. Whether these elements are singled out or integrated during an intervention may be less important than the fact that an effective

mental training program should focus on the development or education of all relevant mental skills, whether that means one specific skill or a combination of skills.

Previous studies have analyzed mental links and relevant skills related to excellence in professional golf and Olympic sports (McCaffrey & Orlick, 1989; Orlick & Partington, 1988). Such research could be useful in the development of a mental training intervention program for young aspiring golfers. By comparing aspects of a professional or elite amateur athlete's mental readiness, younger athletes may be able to more easily focus on formulating a mental game plan that may help them achieve similar and/or personally improved levels of excellence in their own competitions.

Statement of the Problem

The purpose of the present research was to determine, through case study development and implementation, the effects of an individualized cognitive mental skills intervention program on the performance of two young amateur golfers. The program was based on previous interventions developed by Boutcher and Rotella (1987), Davis (1991), and Hellstedt (1987). The goal of this individualization of the intervention program was to evaluate past performance of each of the two participants and to create an effective and successful mental skills strategy to be practiced and used in golf competition. Subproblems which were addressed

throughout the case studies included:

1. Establishing each participant's pre-intervention performance through baseline game statistics, self-evaluation manipulation checks, timed behavioral preshot routines, and interviews.
2. Discussing with each participant the conceptual framework involved in designing an individual program which required commitment and willingness to change unsuccessful habits.
3. Setting flexible and challenging goals together with the participant that were specific to each program.
4. Creating a mental skills program for each participant that could be modified as needed throughout the intervention.
5. Evaluating the effectiveness of each program through game statistics, self-evaluation manipulation checks, timed behavioral preshot routines, and interviews with each participant.

The intervention program was assessed in relation: (a) to the subjective extent to which participants believed they benefitted; and (b) to relative changes and/or improvements in consistency as defined by tournament scores, timed preshot routines, self-evaluation manipulation checks, and game statistics. Prior to the intervention program, it was believed that participants could improve in the areas of game statistics, and

thereby scores, as a result of an individualized, structured mental skills program and continuous work with both the researcher, in areas of mental skill enhancement, and the participant's teaching instructor, in relation to the physical golf swing. This belief was expected to appear more prevalently in the follow-up session after the eight-week intervention. The extent of a participant's progress was also expected to be proportional to the amount of practice outside of the sessions with the researcher or lessons with the teaching professional.

Definitions of Terms

The following terms and definitions were used throughout the study:

Attentional Focus - a skill acquired through mental training which allowed an athlete to narrowly concentrate on a specific task and/or related tasks.

Behavioral Routine - a preshot routine involving overt procedures; the time from which a player was able to play the next shot after arriving at the golf ball's location until the moment the golf ball was struck; may have included club selection, practice swings, alignment, etc.

Closed-Skills - skills performed in a predictable environment that do not change. Golf was the closed-skill sport used in this study.

Competition - the rivalry of two or more athletes in a contest; in

this study, it may have consisted of nine holes in one day to 72 holes over four days.

Course Management - the knowledge of proper etiquette, game strategy, ball positioning, club selection, acknowledgment of environmental factors, and emotional control during a round of golf, assessed through interviews with the participant, the participant's parents, and the participant's teaching professional, as well as observations of the participant during practice and play on the golf course.

Distraction Control - an athlete's capability to successfully recognize a potential distractor and overcome its potential adverse effects by eliminating it from the present mindframe.

Fairways Hit (F) - a percentage of fairways hit out of all par four and par five holes played in one round of golf, regardless of the distance achieved off the tee (PGA, 1995).

Game Statistics - statistics kept during a round of golf which included fairways hit; putts per round, including putts on GIR; up and downs; sand saves; and greens hit.

Goal Setting - the development of an athlete's own personal long- and short-term goals in relation to practice and performance outcomes.

Greens in Regulation (GIR) - a percentage of greens (18) hit during one round of golf; according to the PGA (1995), a hole is considered hit in regulation if any portion of the ball

rests on the putting surface in two shots less than the determined par. A par five hit in two does not increase this statistic, but counts as one green hit in regulation.

Imagery - the creation of a mental picture or series of pictures in one's mind through the use of various senses which allowed an athlete to visualize movements, mechanics of an action, and environmental surroundings in both practice and competitive settings.

Mental Enhancement - the education and/or refinement of certain mental skills which may have contributed to the development of more stable competitive strategies.

Mental Routine - the covert procedures used by a golfer during the preshot routine; may have included cue words, visualization, observation and decision-making, alignment, focus, etc.

Mental Skills - learned capabilities such as imagery, relaxation, stress reduction, attentional focus, distraction control, situation evaluation, strategy formulation, and overcoming performance blocks, which were enhanced and refined through practice.

Mental Training - the instruction and practice of mental skills by an athlete with the intention of enhancing overall performance.

Performance Blocks - distractions which led an athlete to poor focus and unsuccessful performance.

Performance Enhancement - the improvement of an athlete's overall performance through practice of both specific physical movements as well as mental skills.

Preshot Routine - a personalized routine involving both overt and covert procedures performed by a golfer which begins from the moment it is that player's time to play the shot to the actual striking of the golf ball; predrive routines began the after teeing up the golf ball, preputt routines began after remarking the golf ball, and all other preshot routines began when the golfer approached the ball and put down the golf bag; routines may have included reading the green after marking the ball, checking environmental factors, club selection, etc., and usually may take no longer than 40 to 45 seconds (Dann, 1995).

Putts Per Round (P) - the total number of putts in one round of golf; recorded only if on the green, not on the fringe.

Putts Per Round in GIR (PGIR) - an average number of putts on greens hit in regulation. By using only the greens hit in regulation, the statistic no longer allows players who regularly miss greens to get up and down and then dominate the statistic with a very low number of putts. (PGA, 1995)

Relaxation - a technique used by athletes to reduce mental and physical stress through the easing and reduction of muscular tension.

Sand Saves - a percentage of up and down efforts from greenside bunkers only; fairway bunkers and waste areas were not included (PGA, 1995).

Scramble - *vb*: attempting to salvage a fairly good score on a hole, when not playing well and falling short of a game plan, i.e., not hitting a green in regulation and having to chip in or make a very long putt.

Simulation Training - the creation of simulated situations which were anticipated to happen during competition that aided in increasing the possibility of success in the case of such an unexpected occurrence during the actual competition; by practicing these potential situations beforehand, the athlete may have felt more at ease by having a preset solution.

Situation Evaluation - an analysis of environmental and performance factors prior to striking the golf ball which allowed an athlete to determine the best option to achieve a desired outcome.

Stress Reduction - the decrease of unwanted anxiety through relaxation, coping strategies, and stress management.

Up and Down (UD) - after missing a regulation approach shot to the green, one chip (no further than 25 yards out) from a grassy area followed by one-putt for par.

Assumptions

The following were assumptions of this study.

1. The participant faithfully incorporated and attempted to use the cognitive and behavioral strategies within both practice and tournament rounds.
2. The participant was mature enough to understand the commitment required to practice consistently the mental skills learned in the intervention and to meet with the researcher periodically to discuss the progress of the strategies.
3. The participant honestly communicated beneficial and/or unsuccessful aspects of the intervention.
4. Participants' parents did not excessively interfere with or push the participants with their own program responsibilities.

Limitations

There were several limitations related to this study. The researcher used fourteen-year old amateur golfers. The age of the golfer was thought to contribute, at times, to a temporary lack of commitment to the practice of certain mental skills due to strenuous high school schedules. All possible measures, e.g., interviews and discussion of expectations of both researcher and participants' responsibilities, were taken prior to commencing the study to insure that the participants were mature enough to understand and commit to what the program entailed.

Data in putting focused more on the total numbers of putts per round than putts on greens hit in regulation, due to

participants' lack of physical strength to hit some greens in regulation. Also, the use of this type of intervention strategy was the first attempt by the researcher in the realm of sport psychology consulting. Although the researcher had been actively involved in informal counseling atmospheres both on and off the golf course prior to this study, as well as in other sports, this research provided an initial opportunity for integrating many approaches including in-depth interview involvement.

Delimitations

The sample size in the present study consisted of two fourteen-year old amateur golfers (one male and one female). Although the study focused on the sport of golf, the applications of the principles may extend to other closed-skill sports, such as gymnastics. Data were collected using game statistics (e.g., fairways hit, greens in regulations, putts per round), self-evaluation manipulation checks, timed preshot behavioral routines, journal entries, and interviews with: (a) participants; (b) each participants' parents; and (c) the participants' teaching professional. The study occurred over a time period of eight weeks during the end of summer and the beginning of the school year. This allowed participants to practice and play in tournaments during their summer vacation, as well as in their high school matches.

Significance of the Study

It was hoped that the participants would benefit from the study enough to compete (more) successfully in national or state junior tournaments and possibly qualify for future college athletic scholarships. The opportunity for these young golfers to compete in more state and national tournaments will arise in the following summer, yet the final weeks of the study presented the opportunity for participants to put their mental skill strategies to use in high school golf matches. The success of the intervention, as determined by subjective evaluations and objective data, demonstrated: (a) the possibility of using cognitive intervention programs with other young amateur golfers; and (b) the possibility of constructing a well-designed performance enhancement program, the principles of which may be applicable to competitors in other closed-skill sports. The use of both qualitative and quantitative research methods in the case study allowed the researcher to: (a) discuss mental skills involved in the intervention with the participants at individual paces; and (b) note any improvements in the participants' golf games, through game statistics, timed behavioral preshot routines, self-evaluation manipulation checks, journal entries, and mental skills sessions.

Chapter 2

Review of Literature

Almost every competitive sport requires some type of mental and physical game plan strategy to achieve a certain level of success in performance. As modern athletes of all calibers are beginning to utilize technology of the highest quality and receive superb physical instruction, the next step in the training process is to develop the mental skills needed to apply the physical skills in performance. Winner of the 100 meters in the 1995 U.S. Championships, Mike Marsh stated, "It [mental training] has so much to do with what I'm doing now. I believe the psychological factors are the greater portion of what determines if an athlete is mediocre as opposed to great." (Patrick, 1995).

This review of literature provides an overview of cognitive-behavioral intervention strategies and related factors as they pertain to golf performance for young amateur golfers. As sport psychologists are beginning to implement various performance enhancement programs for elite athletes, it is important to remember that youngsters who have difficulty in achieving the elite status for certain reasons may also benefit from modified, individual performance enhancement programs. The review of literature was organized in the following sections: (a) mental skill programs for performance enhancement; (b) preperformance routines; and (c) common mental factors used by elite athletes.

Mental Skills Programs for Performance Enhancement

Within the past fifteen years, sport psychologists and coaches have begun to publish more articles on theories and specific successful performance enhancement techniques in the area of mental skills intervention programs. As a result, articles dealing with cognitive-behavioral interventions have been published in various sports, such as tennis (Davis, 1991; Terry, 1994), skiing (Hellstedt, 1987), gymnastics (Ravizza & Rotella, 1982), golf (Cohn, Rotella & Lloyd, 1990; Rollins, 1982), table tennis (Li-Wei, Qi-Wei, Orlick, & Zitzelsberger, 1992), or an all-encompassing educational program with brief mention of a relevant application in archery (Boutcher & Rotella, 1987). Considering that (table) tennis is seen as an open-skill sport may prompt questions relating to the usefulness of such a junior program (Li-Wei et al., 1992) in an exclusively closed-skill sport, such as golf.

The above articles have shown that structured interventions can be achieved with various types of athletes while also providing suggestions and comments for further research in this area. Presenting mental skills programs to juniors in an educational format (instead of instructing them, without explanation of the mental processes involved) may offer the young athletes an easier way of grasping the meaning behind their actions in the respective sports.

In response to the request for a program to reduce stress

and anxiety in gymnastic performance, Ravizza and Rotella (1982) designed and implemented a cognitive somatic behavioral gymnastics program for various levels of gymnasts ages 10 to 24. As in other closed-skill sports, gymnasts "have limited control of their external environment, but total control of their response to it" (Ravizza & Rotella, 1982, p. 25). The path to becoming more *aware* of how to control responses to external environments may be found within individualized interventions created to improve skills, i.e., stress management, thus allowing the athlete to recognize and alleviate certain problems.

The intervention implemented by Ravizza and Rotella (1982) occurred in five separate stages, and progress varied across gymnasts in relation to experience in competition and in the sport itself. Initially, the researchers interviewed and assessed their coping strategies for stress by establishing an open and trusting relationship with each gymnast. Upon gathering the necessary information, the researchers held a team meeting and discussed research and related issues dealing with anxiety and different levels of anxiety (hence, the individualized programs). These levels of anxiety were assessed through specific techniques such as objective tests, coaches' perceptions of how each athlete experienced anxiety, and observations by the researchers in either simulated or actual meet situations. These types of data-gathering techniques allowed Ravizza and Rotella (1982) to work within an in-depth perspective. Gymnasts were then presented

information and methods concerning how to enhance awareness of anxiety. Relaxation techniques, cognitive restructuring, stress inoculation, and other somatic-oriented strategies were also introduced.

Gymnasts then applied their coping strategy information in different situations and stages of performance, i.e., pre-meet, warm-up, during performance. Finally, the athletes transferred the knowledge and techniques to experiences outside of gymnastics. This extension of information may allow an athlete to incorporate anxiety-reducing techniques to other aspects of life, thus creating a more relaxed athlete in an overall sense. Such an athlete who is able to control or adjust arousal levels appropriate to certain situations may have a better chance at adapting to stressful moments during competition.

As in gymnastics, skiing is a sport in which split-second timing, controlled arousal levels, and acute attentional focus are vital. Hellstedt (1987) conducted an intervention used with competitive junior skiers (N=43), ages 12 to 18 with a mean age of 15, in which motivation, anxiety/performance, imagery, and goal setting were topics introduced in group settings and then later applied within individualized intervention programs. The mental skills educational material taught to skiers was very similar to that which could be introduced to junior golfers, with the difference being type of attentional focus cues during the various competitions. Skiers must remain focused during an entire race

(roughly 1-3 minutes) while a golfer must regain attentional focus before each shot (after an intermittent period between shots, which could last anywhere from 1-15 minutes). Keeping in mind the quickness of each sport, "a competitive skier [golfer] must master many mental skills because skiing [golf] is an individual sport in which competitive stress is high. Excessive anxiety can detract from performance, as can a momentary lapse of attentional focusing" (Hellstedt, 1987, p. 56).

In order to establish a refined level of attentional focus, Hellstedt (1987) initiated workshops during the skiers' non-competitive season (one workshop per month for four months) in which motivation in sport, anxiety and performance, mental imagery, and goal setting were discussed. Once the competitive season was underway, smaller groups of athletes met weekly for shorter periods of time to discuss other topics, and in some cases, prerace mental preparation workshops were conducted. Within the mental skills program, Hellstedt (1987) discussed various program goals and objectives, as well as descriptions of specific methods utilized in teaching achievement motivation, mental imagery, relaxation, and goal setting. Athletes participating within the ski academy program completed both reading and written assignments, created skits, and shared personal experiences with other athletes to supplement the information received from the workshops and to maintain a high level of involvement and interest.

Hellstedt (1987) had both the athletes and their coaches evaluate the mental skills intervention using a Likert scale format ranging in numbers from 1 to 10. Results indicated that athletes considered the program helpful, especially those items of a more applicable and practical nature, i.e., relaxation skills and coping strategies, as opposed to more conceptual items, i.e., achievement motivation and goal setting. Their mean score ratings of various program components ranged from 6.15 to 8.32 (Hellstedt, 1987). In addition, the Sport Competition Anxiety Test was administered at the beginning and again at the end of the program. A paired *t*-test comparison on means indicated that the athletes' trait anxiety scores decreased significantly from 21.97 to 8.66, while standard deviations decreased from 4.43 to 3.76 (Hellstedt, 1987).

Coaches also evaluated the program in a favorable manner, although they perceived the athletes to benefit more from the conceptual items rather than the practical items. The coaches' evaluation form consisted of a questionnaire in which various program components were rated on a scale of 1 to 10. Coaches' mean scores ranged from 7.0 to 9.8 (Hellstedt, 1987). In addition, athletes rated the role of the sport psychologist in a positive manner, although Hellstedt (1987) reminds researchers that mental trainers should be a part of the overall team with the coaches, and not the key trainer to an athlete.

Boutcher and Rotella (1987) focused on a four-phase, multi-dimensional psychological skills program for closed-skill

performance enhancement. In particular, it provides the sport psychologist with a detailed step-by-step procedure for conducting the intervention while simultaneously offering suggestions as to how the athlete can directly contribute to the success of the program. This is the essence of applied sport psychology: educational counseling and increasing an athlete's awareness of what is or is not happening in the performance. An educational, systematic method to increase awareness can provide the sport psychologist with an effective and easy-to-follow structure. Boutcher and Rotella (1987) deemed their program as one which is "systematic, allows flexibility for individual differences, has been developed from an educational perspective, and is evaluative in nature" (p. 127). This type of educational program is recommended for closed-skill athletes (i.e., a diver) and those athletes who perform closed-skill activities within an open-skill sport (i.e., free-throw in basketball or punting in football). Since there are many dimensions involved over these phases, a combination of skills and intervention strategies must be individually employed.

The first phase of sport analysis involves gathering pertinent information through laboratory/field research, personal experience, observation, and listening to coaches and athletes. Boutcher and Rotella (1987) identified a very important factor of success in this first phase, i.e., the sport psychologist's knowledge and experience in the sport. The consultant must be able to relate

to the athlete's performances and the sport specific rules, settings, and nature of events. Biomechanics, physiological conditioning, equipment, psychological skills, and strategy are five factors which may play important roles in the assessment of an athlete's performance (Boutcher & Rotella, 1987). In addition, the type and quality of the input also have an impact on the rest of the program; false information may not help alleviate the athlete's problem, but could cause potential interference by hindering it more.

Individual assessment can only follow sufficient accumulation of background knowledge (Boutcher & Rotella, 1987). Assessing an athlete's strengths and weaknesses can be achieved by standard pencil-paper tests such as Spielberger's State-Trait Inventory; other pertinent information can be obtained from interviews with the athlete, teammates, coaches, or parents, as well as through the use of videotape, imaginal recall, or statistical research. Once the individual's assessment has been accomplished, it is important to ensure that the athlete comprehends the procedures and is aware of what can be done to alleviate the problematic factors.

Boutcher and Rotella (1987) suggested in the motivational/ conceptual third phase that the sport psychologist should "discuss a framework for understanding the interaction of the athlete and the athletic situations, the kind of commitment needed to change inappropriate habits, and efficient goal-setting strategies" (p. 132).

Many athletes may feel as if they are incapable of coping with competitive pressures and thus have no control. This third phase stresses that negative thinking is part of many athletes' styles which *can* be changed. Following emphasis of effort and commitment, the athlete is given information on goal-setting, which Boutcher and Rotella (1987) believe to be one of the most effective motivational strategies.

The final phase discussed general motor skill development, followed by specific skill development, and an individualized performance routine. General mental skills can be acquired by experimentation with various skills to find the most suitable one. The goal at hand is to "develop a flexible coping repertoire and consolidate a variety of intrapersonal and interpersonal coping skills", such as relaxation or imagery training (Boutcher & Rotella, 1987, p. 133). After basic attentional control has been achieved, skills for coping with excessive arousal and competitive pressure may be brought forth. Boutcher and Rotella (1987) urged readers to keep in mind that these skills should gradually be transferred from quiet settings to game situations. Specific skills can then be applied in relation to the athlete's thoughts and goals, keeping in mind which specific cues may make situations more comfortable and relaxing. This fourth phase may also incorporate preshot, post shot, and between-play routines that are tailored to the individual athlete.

In 1980, Dan Landers of Arizona State University applied

Boutcher and Rotella's (1987) psychological skills program for two purposes: (a) to gain an understanding of archery performance; and (b) to prepare the U.S. National Archery Team for the 1984 Olympics. In the initial testing and data collection, 188 male and female archers of varying ability participated as subjects; the national squad served as subjects for the remainder of the program. Boutcher and Rotella (1987) briefly described the program Landers and his colleagues conducted over the 4-year time span. No specific outcome results were given by the authors.

Wrisberg and Anshel (1989) examined the effectiveness of differing cognitive techniques on basketball free throw shooting performance of young athletes. Forty boys ranging from ages 10 to 12 who were participating in a sports camp were randomly assigned to one of four groups: (a) mental imagery education and implementation; (b) arousal adjustment education and implementation; (c) combined imagery and arousal adjustment; and (d) no-strategy (control). The groups which followed imagery training techniques (suggested in Orlick, 1986) focused on a seven-step process, i.e., from "observe the basket for a few seconds" to "feel very confident and happy after each successful shot" (Wrisberg & Anshel, 1989, p. 99). The arousal adjustment training utilized a four-step relaxation response technique which was aimed at reducing arousal levels. All subjects in the study performed 20 free throw shots, as baseline trials, with a 45-second intershot interval.

Wrisberg and Anshel (1989) allowed for the subjects in the three manipulation groups to practice these learned strategies at certain times during the camp. A posttest ($p < .05$) revealed significant increases in the adjusted free throw percentages for the combined group (mean percentage increase from 63 to 79), and the imagery group (mean percentage increase from 36 to 49). In a 1977 study by Kolonay, as noted by Wrisberg and Anshel (1989), male college basketball players who participated in a combined relaxation/imagery group performed better in free throws than either exclusive imagery or relaxation groups. These results were consistent with those found by Wrisberg and Anshel (1989) in that the combined imagery/relaxation group showed the greatest increase in performance of free throw shots. Wrisberg and Anshel (1989) concluded that "the present study appears to offer support for the notion that young athletes are able to learn and use cognitive techniques to enhance their performance" (p. 102).

Although newer educational programs (i.e., Terry, 1994) include mental skills interventions for juniors, much of the past research has involved elite adult professional or amateur athletes. One of the most resourceful and accessible subject pools is found within college athletics. Davis (1991) conducted a case study which investigated the development, implementation, and evaluation of a performance enhancement program for an eighteen year old female collegiate tennis player. Interventions,

such as the one created by Davis (1991), are becoming common elements of practice and game preparation among elite athletes, especially those in closed-skill sports, i.e., golf.

In the study by Davis (1991), an attempt was made to develop a performance enhancement program for a collegiate tennis player in which improvement was sought in five areas of physical performance (i.e., first serves, return of serves) and in four areas of mental skills (i.e., concentration, coping strategies for negative thoughts, pregame preparation, and becoming energized when tired). Occurring over a period of eight-weeks, the intervention established a baseline of performance from both systematic observation and subjective interviews. Specific performance and psychological goals were set by the subject with the researcher's guidance after initial assessments were made about the subject's practice and playing style (including strengths and weaknesses). In addition, the subject kept a journal to monitor feelings and thoughts about the progress of set goals.

In an evaluation of the enhancement program, Davis (1991) concluded that four out of five performance goals and three out of four psychological goals were met. Although the subject was unable to achieve hitting 50 consecutive groundstrokes past the service line, or to become energized when tired (which was actually not determinable due to lack of sufficient evaluation in this area), improvement appeared in: (a) the subject's overall concentration; (b) coping with negative thoughts; and (c) becoming

more aware and comfortable with establishing controlled pregame preparations the night before a match. One must bear in mind that some interventions may not appear successful or beneficial until a later time, possibly due to varying individual differences in practice and absorption rates of skills.

Assessment of progress toward the goals set in Davis' (1991) performance enhancement program was achieved through both player's comments during sessions and in the daily journal, as well as performance data. The use of such various types of data input allowed Davis (1991) to gain a more encompassing understanding of both covert and overt processes of skills. The fact that the researcher and the subject met regularly throughout the eight-week intervention allowed for necessary modifications and discussion of problems and comments. A performance enhancement program such as Davis' (1991) can be an extremely beneficial tool for any athlete who wishes to improve upon performance through the use of mental skills training, whether in an open- or closed-skill sport.

Li-Wei, Qi-Wei, Orlick, and Zitzelsberger (1992) conducted a study which explored mental imagery training in children ages 7 to 10. If imagery training has been shown to help mature adult athletes (McCaffrey & Orlick, 1989; Orlick & Partington, 1988), then perhaps children can benefit from it as well. Due to a lack of available literature on mental-imagery training with young children, Li-Wei et al. (1992) studied a relatively unexplored

question by asking if children could be mature enough in a cognitive sense to understand and successfully use mental-imagery training to improve upon performance outcomes in sport.

Participants in the study consisted of 40 young Chinese table-tennis players who were randomly assigned to one of three groups: the experimental training group, the video observation without mental training group, and a control group which did not participate in any type of mental training program. The experimental group received an introduction to the program, relaxation training, video sessions, and mental-imagery training. Participants in the video group observed video tapes of properly executed table tennis skills by top table tennis players in the world. Throughout the study, the control group received only physical training in the gymnasium.

Performance measures included player's forehand accuracy and judges' ratings on technical quality of player's forehand attack. Results from Li-Wei et al. (1992) indicated that children ages 7 to 10 years old who used mental-imagery training improved significantly in both accuracy and technical quality of their shots, as compared to children who just viewed videos or practiced physical table tennis skills. Pretests and posttests revealed significant results in both performance accuracy (topspin: $p = .0264$; underspin: $p = .0337$) and technical quality (topspin: $p = .0007$; underspin: $p = .0002$), respectively). Topspin and underspin mean scores were greater in the mental training

group and were greater at postintervention than preintervention; the control group and video observation group maintained similar scores at postintervention as at preintervention. These results imply that specific mental training programs, i.e., those which include both relaxation and videotaped images, may be beneficial to young children.

One key to designing a useful performance enhancement program involves deciding upon the most appropriate intervention technique. Johnston and McCabe (1993) examined the effectiveness of an approach strategy and an avoidance strategy for coping with stress during a task (putting golf balls). Depending on the individual athlete and situation, an approach-type strategy may be more suitable than an avoidance-type strategy. In both cases, the object of coping is to alter the athlete's negative feelings and thoughts about the action and ensuing possible detrimental results.

Participants included 90 female undergraduate students with minimal golf experience. Subjects were randomly assigned to one of six groups: approach task/approach strategy, approach task/avoidance strategy, approach task/relaxation (control), avoidance task/approach strategy, avoidance task/avoidance strategy, and avoidance task/relaxation (control). The approach task involved putting ten golf balls into a hole on a sloped carpet (this s-shaped putting path was intended to be perceived as difficult and above performance capabilities) while the approach

strategy consisted of mental rehearsal (i.e., imagery) prior to and between putting the golf balls. This allowed subjects to successfully confront and cope with the stressful putts before they actually occurred. The avoidance task involved putting ten golf balls into a hole during which time classical music, accompanied with sound effects (distractions), played in the background. The avoidance strategy consisted of focusing one's attention on a certain object (i.e., subjects' own thumbs). Subjects in the control group were taught a relaxation method without any reference to sporting performance.

Johnston and McCabe (1993) randomly assigned subjects in Stage I and obtained baseline measures of dependent variables through a questionnaire. Stage II was utilized to teach cognitive strategies which subjects practiced for one week, and Stage III involved no practice while the effectiveness of the cognitive strategies were assessed. Results indicated that all approach condition groups improved their scores ($p = .0006$) and perceived the task demands as less difficult ($p = .046$). In addition, subjects taught the approach strategy perceived their capabilities as better ($p = .034$) than those in the other conditions (avoidance and control). Johnston and McCabe (1993) suggest that an approach strategy, as opposed to avoidance or basic relaxation, may be more useful in lowering stress and improving performance outcomes (keeping in mind individual differences) in certain

situations.

An intervention program specific to junior athletes at the Rover LTA School (Terry, 1994) is currently in use to develop mental training skills for junior tennis players. As with Boutcher and Rotella (1987), Terry (1994) briefly describes five progressive phases completed in both group and individual sessions during both the off-seasons and competitions. In stating that "mental toughness must be developed early to give a young player any chance of success" (p. 17), Terry (1994) demonstrates that mental skills acquisition is vital for success in modern competition, even at such a young age. As young amateur tennis players learn about the advantages of a mental skills program, they move through various phases: (a) assessment (i.e., psychological tests, player profiles, performance observation); (b) education (i.e., relaxation, visualization); (c) implementation (i.e., competition routines, simulation training); (d) problem solving (in which the player is guided towards a solution by a sport psychologist who listens and encourages in a nonjudgemental approach); and (e) evaluation (solicited by every person involved in that player's program). Such an educational program should also involve establishing consistent routines within the player's performance, and Terry (1994) provided two examples, i.e., a service ritual and a between-point routine.

Preperformance Routines

Elite athletic performance typically involves some type of consistent routines that occur before, during, or even after a movement. These routines may help an athlete to become more comfortable and focused through patterns that have proven to be successful in the past. Golf is a prime example of a sport in which a preshot routine can be extremely beneficial to the participant. The actual time it takes to play a round of golf is approximately 10 minutes; the other 3 to 5 hours involve walking, talking, and planning between shots. This time may be interrupted by damaging and/or negative thoughts, depending on how the golfer is faring throughout the round. The preshot routine can allow a golfer to refocus pertinent thoughts to the task at hand within a fairly small time frame (approximately 10 to 30 seconds). Cohn, Rotella, and Lloyd (1990) stated that "the purpose of the preshot routine in golf is to align the body to the target properly, focus attention, and direct behavior to relevant cues that allow for the appropriate motor execution of an upcoming shot or putt" (p. 34).

Elite athletes, such as golfers on the Professional Golf Association (PGA) Tour and the Ladies Professional Golf Association (LPGA) Tour, achieve a certain level of play within their sport, and this could be the result of fine-tuned mental skills, as well as precise physical skills. Patterns or routines are tools which talented athletes may use as a reference of familiarity (i.e., to identify if a movement is following the correct path), for

refocusing (after a pause or delay of time between actions), or as a comfort zone (an athlete may feel more at ease when initiating a movement with the same patterns which are known by the player to lead to success in most cases). One question to ponder is, whether less elite athletes or junior athletes utilize the preperformance routine for the same purposes as elite athletes.

Although research concerning preperformance routines has become more popular during the 1980's and 1990's, some coaches and athletes realized the importance of routines in competition prior to this surge of studies. Rollins (1982), a coach of an Ohio high school golf team, promoted precompetition preparation (golf-specific) in areas including general preparation, tournament-day procedures, first-tee preparation, strategy and the round itself, pressure, and post round (evaluation). Not designed to guarantee victory but enhance the chances of success, the work program endorsed by Rollins (1982) focused on knowing the rules and etiquette, eating and exercising properly, developing plans for practice and competitive play, scheduling and budgeting time during the event, positive thinking and relaxation, and evaluation. Included in the article were also tips and suggestions for minor details which are often overlooked by anxious golfers (i.e., leave time before teeing off for mother nature, check your golf equipment, eat light, plan to avoid rushing, etc.). Preperformance routines which encompass not only the competitive event but also the preparation time surrounding the days and hours of the event

can be beneficial to golfers (and other athletes). Golfers who desire to improve their scores may consider such preparation plans as described by Rollins (1982).

A variety of preperformance studies have been conducted by Boutcher and Crews (1987) and Crews and Boutcher (1986a, 1986b). In an effort to better understand preshot routines utilized by elite athletes during professional athletic competitions, Crews and Boutcher (1986a) observed and recorded overt behaviors used by professional golfers prior to a shot or putt. Trained observers recorded preshot routines for full swings and putts for 12 LPGA Tour players during 12 holes of play in competition (Crews & Boutcher, 1986a). Pre- and postshot responses (i.e., smile or head shaking) were recorded, and one full swing and one-putting preshot routine were established for each player. Commonalties were then compared across each player and combined into a general preshot routine for a full swing and a putt. Results from the study indicate that golfers were consistent ($p = .04$) with regard to time and overt preshot behaviors (i.e., club waggles), yet the more successful golfers (as defined by better ratings) utilized longer periods of time to prepare for their shots (full swing and putts), and scored lower overall. Crews and Boutcher (1986a) suggested that "consistent preshot routines appear to be associated with elite golf performance and may be a necessary skill for performing in discontinuous sports which take place over many hours" (p. 51).

Data in Crews and Boutcher (1986a) also indicated that in some cases, professional golfers may favor optimal levels of physiological arousal, i.e., club waggle, over swing rehearsal. A small movement, such as settling one's feet in the stance, may retain more muscular relaxation before a shot, rather than a practice swing. Of the golfers observed, 85% did not use a practice swing for the full swing. The fact that a general preshot routine was observed among 12 of the top professional golfers in the country may point to a greater importance of a mental and/or physical routine utilized prior to engaging in a closed athletic skill. Knowing that elite athletes use such routines may aid amateurs or rising athletes to understand the benefit of adopting a preshot routine early in training. Preshot routines can always be modified or changed according to individual needs, but at least having a preshot routine may be an added advantage for any athlete aspiring to achieve higher levels of skill within their sport.

Information concerning factors which may enhance success potential may be used by nonelite athletes as a teaching aid. Crews and Boutcher (1986b) conducted a study observing the effects of preshot routines in beginning golf performance. Thirty undergraduate students enrolled in beginning golf classes were assigned to four groups (trained/untrained men and trained/untrained women) for a 16-week period of time. Untrained subjects served as controls for the study. The trained groups were introduced to a specific preshot routine; each subject in the

trained experimental group was to practice the preshot routine the same amount of time. Both subjective and objective measurements of performance were used to assess improvement among all four groups of subjects. Results indicate that trained men benefited significantly in objective scores (over trained women, $p, .05$, and controls, $p, .03$) from learning and using a preshot routine (as measured by objective posttraining tests), and the more skilled male golfers showed more improvement on objective performance measurements. Crews and Boutcher (1986b) suggest that the preshot routine may only be beneficial to golfers who have reached a certain level of skill. No significant differences were found between trained women and other groups on pre- or posttraining tests.

In a later study by Boutcher and Crews (1987), female collegiate golfers *did* significantly improve putting performance after learning and consistently using a preputt routine. The subjects were six male and six female collegiate golfers from the same university who were assigned to one of four groups (male/female control or male/female routine). Subjects in the routine groups designed specific preputt routines (i.e., specific cue word, certain number of glances at hole or practice strokes) and practiced them in structured practice sessions. Objective pre- and postperformance measures ($p < .05$) were used to assess improvement; the female routine group significantly improved putting performance on the putting task, increased their length of

total putting time, and decreased their variability on total putting time while both control groups decreased putting time and showed no improvement on the putting task (Boutcher & Crews, 1987). Although the male routine group increased their length and consistency of their preputt routines, their scores on the putting task did not improve.

For junior golfers and amateurs who tend to rush their putts out of frustration or excitement, the study by Boutcher and Crews (1987) shows that "poorer putters may benefit more from the consistency and control achieved through learning a preputt routine" (p. 36). Boutcher and Crews (1987) offered three suggestions why such preshot routines may help closed-skill athletes such as golfers improve their performance: (a) preshot routines may deter a golfer from focusing on negative self-talk; (b) preshot routines may prevent a golfer from becoming too involved with the specific mechanics of a putt and allow the golfer to concentrate on a more global view of the movement; and (c) a comfortable pattern may help a golfer reduce stress and increase concentration in stressful or monotonous instances.

Cohn et al. (1990) studied the effects of a cognitive-behavioral intervention on the preshot routine and performance in golf through the utilization of a multiple baseline design across three collegiate male golfers. Thirteen behavioral routine observations were used to gather data on the subjects' preshot routines. Interobserver agreements throughout the study ranged

from 90.5 to 100.0%. Performance measures, such as number of putts per round, were kept for quantitative data. Both behavioral and mental routines were observed prior to and during the intervention. A hand-held video camera was used for accurate observation of behavioral routines, and interviews were conducted by the researchers to assess what the subjects did both physically and mentally to prepare for each shot and putt. The use of qualitative (i.e., in-depth interviews) and quantitative (i.e., statistics) data allowed Cohn et al. (1990) to examine both the physical and mental strategy aspects of a golfer's preshot routine; these aspects can be vital in determining how consistently one executes an action (i.e., hitting a golf ball) since the action involves both overt and covert processes.

The treatment phase of the study conducted by Cohn et al. (1990) consisted of developing a more consistent and precise behavioral routine by: (a) improving upon or introducing needed aspects of a behavioral routine, i.e., proper alignment or good posture; and (b) teaching the golfer about consistent mental strategies, i.e., commitment to each shot or club selection. Results did not show immediate improvement (perhaps due to the relatively short intervention time), yet in posttreatment interviews, subjects felt that they had improved in performance in some manner, i.e., improved concentration. Follow-up performance measures revealed improvement across all subjects. Scores dropped from 38.80 to 37.29, 39.68 to 37.83, and 40.75 to

39.40 across all three subject from preliminary recording to follow-up recordings (Cohn et al., 1990).

In posttreatment interviews, golfers felt as if the intervention was beneficial to their golf games. This demonstrates that carefully constructed cognitive-behavioral preshot strategies may successfully improve upon performance outcomes.

Interventions may vary in the amount of time needed to achieve performance improvement, but results from the study by Cohn et al. (1990) provide positive data in the area of mental and behavioral strategies in closed-skill sports. In addition, open-skill sports which contain closed-skill activities may benefit from interventions similar to the one conducted by Cohn et al. (1990).

In summary, from past research (Boutcher & Crews, 1987; Cohn, Rotella, & Lloyd, 1990; Crews & Boutcher, 1986a, 1986b) it would appear that any athlete interested in achieving higher levels of success should consider developing a more consistent preperformance routine. For some athletes, these routines may be second nature; for others, these routines must be consciously rehearsed and remembered prior to every swing, turn, flip, throw, jump, or dive. Practice makes perfect, but practicing perfect may be more beneficial to an individual if they become more consistent in their actions. In turn, athletes can rely on this consistency in times of over- or underarousal during crucial moments in competition.

Common Mental Factors Used by Elite Athletes

In an attempt to pinpoint commonalties found among successful athletes, researchers have interviewed and observed various athletes who are part of the elite world of sports to determine why they achieve success while other athletes do not (i.e., case studies of successful elite athletes by Orlick & Partington, 1986). By studying factors which may indicate high levels of success and excellence, researchers may provide practical data which can be applied to certain athletes who have trouble achieving the elite levels of competition. Rising athletic stars may benefit from understanding what factors are necessary ingredients for their success.

Orlick and Partington (1988) analyzed the experiences of 235 Canadian Olympic athletes as related to mental readiness and control during the 1984 Olympic Games held in Sarajevo and Los Angeles. By exploring elements of success among top athletes in an effort to find commonalties in elite athletic mental preparation, Orlick and Partington (1988) believed that a relationship of these elements to successful performance outcomes might appear. Seventy-five athletes were interviewed and 160 athletes completed questionnaires. Both samples of subjects included Olympic medal winners. The Athletic Interview Guide and the Athlete Readiness Form (Orlick & Partington, 1986) were utilized to assess the factors of success. Twelve transcripts were chosen (from the 75 interviews) for qualitative analysis, and common

elements were found within both transcripts and questionnaire results.

Data gathered from interviews (involving 12 Olympic gold or silver medalists and/or world champions) indicated common elements of mental readiness and control consisting of quality training, clear daily goals, imagery training, simulation training, and mental preparation for competition. Precompetition preparation included a precompetition plan, a competition focus plan, competition evaluation, and distraction control. Many athletes interviewed from the larger initial sample did not perform well at the Olympic Games, and Orlick and Partington (1988) noted that these athletes encountered performance blocks (i.e., changing patterns that worked, receiving notice of late selection, and being blown away by distractions) during the Olympics at some time or another. Quantitative data obtained through the questionnaire revealed statistically strong links between mental readiness and successful performance as well. Mean physical, technical, and mental readiness factors were rated by athletes as 8.46, 8.44, and 7.88 (respectively) out of a possible 10, in which 10 = 100% ready. Amount of help toward mental readiness from four sources: "other person", sport psychologists, personal coaches, and on-site coaches were rated by athletes as 8.32, 7.85, 7.54, and 6.93 (respectively) out of 10 (Orlick & Partington, 1988, p. 124).

Research which identifies elements of success in mental

readiness and control can be useful to rising athletes who may range anywhere from junior amateurs to elite professionals. Orlick and Partington (1988) demonstrated that there are certain mental aspects of excellence which can be identified in relation to elite performance. The abundance of knowledge and experience that can be found within successful athletes may serve as models to aid future rising stars in all sports.

Less successful golfers who have the potential to become elite athletes in golf could learn from successful professional golfers who already possess sound mental skills. Research by Orlick and Partington (1988) provided a basis for a study conducted by McCaffrey and Orlick (1989) which explored mental readiness strategies used among 23 professional golfers (14 PGA and LPGA touring professionals, and 9 golf club teaching professionals) and how these strategies related to excellence and success in golf. Interviews conducted during the study utilized the Golfer Interview Guide, based on the Athlete Interview Guide used by Orlick and Partington (1988). The interview guide included background information concerning: (a) mental readiness factors; (b) background in mental training; (c) mental states at previous, most, and least successful tournaments; (d) goal setting; (e) precompetition planning; and (f) focusing/refocusing strategies.

Results from qualitative data indicated that common mental factors related to excellence among top touring professionals were

very prevalent in areas of commitment, mental preparation for quality practice, goal setting, various types of imagery training, practice and pre-tournament plans, tournament focus control, distraction control and pressure situations, and tournament evaluation. These elements of excellence found in the mental strategies of touring professionals were more similar to those found in Olympic athletes than golf teaching professionals. Perhaps this was due to the purpose of golf in the lives of touring professionals, Olympians, and golf teaching professionals. Touring professionals and Olympians may spend more time traveling, preparing, and refining their skills as it is their job or quest; golf teaching professionals remain at a permanent site giving instruction and playing less often than their touring counterparts.

The fact that similar results were found by Orlick and Partington (1988) and McCaffrey and Orlick (1989) demonstrates that elite athletes across various sports all utilize common types of mental strategies in preparation for competition. McCaffrey and Orlick (1989) noted that commitment, focusing, and refocusing are elements which appear to be of most importance. By incorporating identified elements of excellence into near-elite athletes' mental strategies, perhaps such knowledge will successfully enhance performance outcomes in a more consistent manner, as appears to be the case among top professional athletes and Olympians.

In summary, the three topics discussed in the literature

review all contained relevant information encountered in the intervention program. The structure of the mental skills program was contrived from a variety of previous studies that had utilized a combination of case studies, junior program-specific ideas, educational procedures, and personal input on the researcher's part. The concept of gaining a consistent preshot routine both behaviorally and mentally was a constant issue during the eight-week program, and obvious experimentation and changes in both participant's routines were noted. In addition, by reading about elite golfers' mental skills and discussing traits of golf heroes, the participants were able to distinguish between characteristics of elite golfers and amateur golfers who had not yet reached an elite status.

Chapter 3

Methodology

The purpose of this study was to determine, through individual case study development and implementation, the effects of a cognitive mental skills intervention program on the performance of two young amateur golfers. An evaluation of the program's success was achieved through subjective feedback from the participants, the participants' parents, and the participants' golf professional, as well as game statistics, self-evaluation manipulation checks, journal entries, and timed behavioral preshot routines in relation to game improvement.

The educational performance enhancement program was initiated after the establishment of past tournament results through game statistics, timed behavioral preshot routines, self-evaluations, and interviews. In addition, areas in each participant's golf game in which personal individual improvement is sought was considered. Periodical articles were given to participants at various points throughout the study as they pertained to mental skill subject matter (Coop, 1991, 1990; Nicklaus, 1993; Rotella, 1992). These articles were given to the participants to read at their own leisure as supplemental material concerning performance enhancement skills.

Data were gathered through: (a) game statistics, i.e., fairways hit, greens in regulation, putts per round, up and downs,

throughout the intervention; (b) daily journals kept by each golfer; (c) timed behavioral preshot routines; (d) self-evaluation manipulation checks; and (e) interviews with the participant prior to, during, and following the eight-week intervention program. Additional input was obtained from each of the participant's parents and teaching professional during separate interviews. These interviews were a means of gathering additional information pertaining to each young golfer and their golf game. The gathering of the data in a subjective manner, through interviews: (a) allowed the researcher to determine in an open-ended fashion which mental skills each golfer could have learned or improved upon; (b) gave the participants an opportunity to discuss ideas, concerns, or problems at any time with the researcher; and (c) allowed for flexibility and adaptability throughout the study.

Participants

The participants for this proposed study were two fourteen-year old amateur golfers (one male and one female) who played golf more than once a week, had a sincere interest to improve, and had the ability to shoot below 50 for nine holes. Participants who still had room for improvement in their scores were used for this study because of the potential for the case study intervention to allow for beneficial improvement.

Participants who have not encountered a ceiling effect and

show promise, as determined by their teaching professional, yet cannot seem to improve in their games, i.e., have good golf skills yet cannot shoot consistently low scores, may in fact have more room for improvement than those who already score well. Case studies may therefore be more effective for athletes of high quality/low consistency than athletes of high quality/high consistency. It was the intention of the researcher to implement the intervention for the benefit of those golfers who had not, for some reason, achieved the next level of individual success.

The participants were students of a Professional Golf Association teaching professional who initially selected several candidates for the study. The selection process required the instructor to identify mature students who would be committed to participating in the eight-week study during both the late summer and early school seasons. This time frame allowed more opportunity for the participants to practice and compete on a consistent basis during the summer vacation, and then utilize the mental strategies in high school golf matches. Participants were identified as golfers who had fundamentally solid swings yet had room for improvement in their games with the help of a mental skills intervention program. Informed consent statements were signed by the participants' instructor, the participants' parents, and the participants themselves (Appendix A) signifying their understanding of what responsibilities were required of the participants and the researcher. Participants were capable of

playing in either local, state, or national competitions. In the case where tournament play could not occur during the intervention time period, simulated competitive rounds were created at a local golf course, i.e., USGA rules in effect and conducting oneself as if playing in actual competition.

Procedures

Rationale for Data Collection Techniques

Data were gathered using both quantitative and qualitative techniques throughout the study. Quantitative techniques included game statistics, self-evaluation manipulation checks and timed preshot routines. Qualitative techniques consisted of personal interviews, field notes and personal daily journals. Interviews conducted during the entire study allowed for the participant to voice personal concerns, perceptions, and/or suggestions in an open-ended manner. Field notes kept by the researcher were reviewed following each session or observation and again before the next meeting with the participant. These notes consisted of ideas, comments, and observations from sessions and nine-hole rounds which were discussed with the participant at the following intervention session.

Although game statistics were of great importance to the study, mental strategies and plans could not be directly measured or observed; therefore, the interview served as a tool for communication on subjective matters. All interviews were audio

taped and transcribed for accuracy. Lengths of interview sessions varied in accordance to subject matter. The journal was designed to be a feedback tool for any athlete, coach, or researcher, in that it allows one to analyze spontaneous free associative comments, descriptions of good or bad feelings of a movement or certain strategies, and which mental and/or physical techniques were successful. Case study research is slowly becoming a more popular method of retrieving data. As noted by Gould (1982), "descriptive research [and not merely statistical data] could also be extremely useful in answering practical problems" (p. 326).

Rationale for Timing Preshot Routines: Although a golfer may use both behavioral *and* mental preshot routines, the only way to detect a mental routine is: (a) by observing the physical routine, or (b) by asking the golfer of what the mental routine is comprised. This researcher timed each participants' preshot routines from the moment the participant had a turn to play (defined below) the shot until the ball was actually struck. Some may debate the fact that timing preshot routines in this manner is inconsistent, yet some organizations have determined when a routine begins for one person as opposed to another.

The Carolinas Golf Association deems a player's turn to hit when the golfer's ball is available to hit, after a playing partner has hit or the golfer him/herself has hit. "Medium-paced players take between 15 and 25 seconds to hit a shot... everyone else begins to identify a player as slow when he averages 30 or more

seconds per shot" (Dann, 1995, p. 2). An excerpt from an interview with Dr. Richard Coop explicates when a golfer may begin a preshot routine, whether behavioral and/or mental:

The slow ones I've seen don't seem to have a routine. A pre-shot routine gives a golfer a structure to use. It may begin with a signal, maybe tapping a shoe with a club. From that point, a golfer goes into a focus [mental routine] until he hits the shot. He doesn't let extraneous stuff get to his mind. The really slow player doesn't seem to have a structure. He doesn't have a systematic way to go about hitting a golf shot... Once someone learns a structure, gets into it, it becomes a skill, like learning to focus.... From the time the routine clocks in for a golfer until he hits the shot, the golfer uses between 18 and 22 seconds. (Dann, 1995, p. 2)

Dann (1995) also mentions, "Anyone can begin his pre-shot routine before it is his turn to play or putt..." (p. 2). Therefore, all preshot routines within the present study were timed from the moment the participant reached the ball and was ready to play from that spot (i.e., had teed up ball, had placed bag down in the fairway next to ball, or had remarked ball on green) until the shot was executed. The researcher noted early in the program certain actions which each participant personally used to begin their respective routines, i.e., placing bag down and choosing a club immediately or remarking a ball and squatting down behind it to

read the line.

Demonstrating an alternative method of marking the beginning of a preshot routine, Cohn et al. (1990) described within their intervention study a participant who began his preshot routines at alignment, i.e., behind the ball, looking at the target. During the preputt routine, this occurred when the participant stood behind the ball to read the line; during other preshot routines, this occurred when the participant stood behind the ball and picked a target. The participant's mental routines began when he imagined a "line from the ball to the hole" during putting, and selected a club during other shots. This denoted that the preshot routine did not begin from the moment the golfer began his backswing.

Prior to Intervention

Before the mental skills enhancement program was in full effect, information was ascertained as to: (a) the type of golfer the participant was, as determined through interviews with the participants, their parents, and the teaching professional; (b) the participant's golfing history, as determined through interviews and noting past tournament scores; (c) participant demographics (Appendix B); and (d) the participant's ambitions relating to golf, as determined through interviews. Initial interviews (Appendix C) with each participant, the participants' parents, and the participants' instructor aided the researcher in establishing the caliber of golfer that each participant represented. Initial

interviews also allowed the researcher to establish a rapport with the golfer and to answer any questions concerning the study.

Participants were also given the opportunity to choose a pseudonym for confidentiality purposes. Each participant initially played two rounds of nine holes in which they kept game statistics. These statistics served as a reference baseline measure from which the researcher identified strengths and weaknesses. A statistics chart (Appendix D) was completed after each of the initial rounds. In the 1990's, numerous collegiate golf teams have used this system of feedback, and it was expected to also be beneficial to young amateur golfers.

Each participant was observed for one of the initial nine hole rounds and timed for behavioral preshot routines on drives, fairway shots, chips, and putts (Appendix E). This allowed the researcher to establish whether a participant had a large or small amount of variation between and within the different types of preshot routines. In addition, each participant completed a set of self-evaluations (Martens, 1987; Rotella, 1981). By completing self-evaluations, the participants expressed various opinions on several issues related to golf, such as body tension, anxiety, distraction, stress, and imagery.

The Intervention

The eight week mental skills program, including follow-up interviews (one month after the conclusion of the last intervention session) with each participant and participants' parents, consisted

of weekly mental skill sessions and bi-weekly collection of game statistics, self-evaluation manipulation checks, and timed preshot routines. Interview sessions occurred on a weekly basis with each participant. This allowed for the researcher to monitor ideas, suggestions, problems, and/or comments during the intervention. In addition, these sessions were used to discuss the creation and execution of a mental skills program which each participant attempted to implement relative to their respective golf games. The educational procedure followed is similar to that described by Boutcher and Rotella (1987).

Vital game statistics were also kept and charted after each competitive or simulated competitive round, which took place at the end of every two weeks, for a total of eight nine-hole rounds including the initial rounds, and in which the participant played one golf ball and did not practice various random shots. This quantitative data enabled the researcher and participants to note any patterns in improvement within certain aspects of their respective golf games. During one of the two bi-weekly nine-hole rounds, the researcher observed one round of play and timed behavioral preshot routines. By analyzing the means and standard deviations of the preshot routine times, any pattern towards or away from consistency was more notable.

In addition, participants completed self-evaluations at the end of every two weeks. These evaluations served as manipulation checks which indicated that improvement may not

have been due to just practice. The researcher kept field notes based on interview sessions and observations during practice and competitive rounds. These notes were examined after each session and again prior to the next meeting.

Finally, participants were asked to keep a daily journal inside their golf bag in which to write goals, statistics for personal reference, and any inspirational ideas, feelings, or revelations encountered during the intervention.

Following the Intervention

A follow-up interview was conducted one month after the conclusion of the program. This session was used to evaluate the success of the mental skills intervention program and obtain subjective feedback from each participant. An interview with each participant's parents was conducted to obtain an opinion as to the success of the program based on observations of and family interaction with their own child. Self-evaluations were completed by each participant and used as a comparison with those completed during the intervention.

Chapter 4

Results and Discussion

The following case studies detail the data obtained from performance statistics, self-evaluations, journal entries, and personal interviews. Each participant chose a pseudonym that was used throughout the program on all written forms and data, as well as in interview transcriptions.

Each case study involved: (a) an initial assessment interview; (b) initial parental and golf instructor interviews; (c) four bi-weekly data collections in the areas of timed preshot routines and game statistics; (d) four periods of self-evaluation manipulation checks; (e) seven intervention sessions; (f) a follow-up interview; and (g) follow-up parental interviews. Table 4.1.1 is included to clarify the order of events during the intervention program.

Mean and standard deviation times (measured in seconds) were used to define preshot routines. The method used to score the distraction, stress, anxiety, and body tension self-evaluations were similar to the scoring method found in Rotella (1981, pp. 46, 55, 86, and 118). The method used to score the imagery self-evaluation was adapted from Martens (1987, p. 69).

Table 4.1.1.

Time Representation of Intervention Events

Week	Event/Session
Week 1	Initial Interviews
	Data Collection 1 (Baseline)
Week 2	Intervention Session 1
Week 3	Intervention Session 2
	Data Collection 2
Week 4	Intervention Session 3
Week 5	Intervention Session 4
	Data Collection 3
Week 6	Intervention Session 5
Week 7	Intervention Session 6
	Data Collection 4
Week 8	Intervention Session 7
Week 12	Follow-up Interviews
	Self-Evaluations

Case 1: Leslie

The Participant. Leslie is a fourteen-year old Caucasian female who has been playing golf since the age of five, but only seriously in the past four months. Her family includes parents who are avid golfers. The participant is a freshman in a new high school and is in the process of making friends with other students she doesn't know. As the oldest sibling among three children in the family, Leslie is an adolescent very active in sports and exhibits a competitive attitude in her demeanor both on and off the golf course.

During the summer prior to entering high school, Leslie participated for the first time in competitive golf tournaments run by the PGA Junior Tour. Her scores during these weekly nine-hole tournaments ranged from 51 to 84, and she had, during the summer months, broken into the 40's in noncompetitive play. Leslie has made some equipment changes during her high school golf career, and she now uses a brand name lightweight carrybag, a carrystrap, a brand name graphite head/graphite shafted driver, nonbrand steel-shafted irons, a nonbrand putter, brand name waterproof shoes, and a nonbrand glove. Certain types of lightweight and waterproof equipment can help a golfer retain some energy during walking rounds; thus Leslie's choice, and availability, of equipment was something that she felt she needed to improve her game.

Data Collection 1 (Baseline). Leslie was initially observed for

nine holes of golf; performance data collected in relation to the round included timed preshot routines and game statistics. Data collection occurred bi-weekly; intervention sessions occurred weekly. She was also given self-evaluations to complete about various issues in her golf game.

In analyzing the performance data, Leslie's timed preshot routines consisted of fairly short mean times during her routine (Table 4.2.1), considering that golfers always have usually 40, sometimes 45 seconds to hit the golf ball from the time it is their turn to play a shot (Dann, 1995). Standard deviations (Table 4.2.1) indicated that the times of Leslie's routines were somewhat consistent, especially her drives and putts. Some inconsistencies were mentally noted by the researcher in regard to the number of practice swings, glances at the hole, or habits.

Game statistics from two separate nine-hole rounds signified that certain areas in Leslie's golf game could be improved (Table 4.2.2). Increasing the percentages of fairways hit, greens hit in regulation, and up and downs, as well as decreasing putts per round would most likely bring Leslie's overall scores down.

Self-evaluation scores suggested, when compared to norms similar to those of Rotella (1981) and Martens (1987), that Leslie had above average (good) imagery skills, average stress and body tension indications, and below average distraction and anxiety levels (Table 4.2.3). These scores implied that there was still some room for improvement in all self-evaluation categories,

Table 4.2.1.

Timed Preshot Routines - Data Collection 1 (Baseline)

Category	Time (seconds)	
	Mean	Standard Deviation
Drives	14.71	1.89
Fairway Shots	15.34	5.33
Chips	11.43	5.53
Putts	10.20	3.78

Table 4.2.2.

Game Statistics - Data Collection 1 (Baseline)

Category	Front Nine	Back Nine	18 hole TOTAL
Fairways Hit	2	3	5
Greens Hit in Regulation	1	0*	1
Up and Downs	0	1	1/2
Sand Saves	0	0	0/0
Total Putts	26	22	48
Putts on Greens in Regulation	4	0	4
Score	58	52	110

*a zero indicates that no statistics were achieved at all

Table 4.2.3.

Self-Evaluation - Data Collection 1 (Baseline)

Category	Score*
Imagery	28
Stress	23
Body Tension	27
Distraction	49
Anxiety	33

*The higher the imagery score (maximum 40) the better. The lower the stress, body tension, distraction, and anxiety scores (minimum 10, except distraction, minimum 13) the better. (Rotella, 1981).

especially in reduction of anxiety and in improvement of distraction control. The categories indicating average to below average scores were areas that could possibly be improved through goal setting and mental skill training, i.e., relaxation and focus control. These timed preshot routines, game statistics, and self-evaluations provided vital quantitative information which allowed for an initial assessment to be made about Leslie's game.

Initial Interview. Leslie expressed that inconsistency in ball flight and directionality were problems in her game. Putting was considered the most inconsistent part of her game. Missing greens in regulation was seen as a minor problem as Leslie said she would have a "great tee shot and then just totally dud the second one". Playing with better (male) players and playing in the afternoons promoted better rounds for Leslie, who described a perfect swing as, "Nothing at all... feels like I'm just swinging through air... hear this little sweet spot sound".

Leslie felt that 80% of her game consisted of emotions and thoughts; her mental preparation for competitive golf included mostly positive self-talk containing negative wording, such as, "Don't keep the past running from the bad shots because it'll just make it go worse". Pregame preparation did not really exist for Leslie, who stated, "I don't really think about my golf game very much... I just take it one step at a time". Frustration and rushing shots when upset seemed to be a prevalent theme in her golf game. No effort was made on Leslie's part to regroup her

thinking. She noted that, "I didn't even take a practice swing... I would go up hitting thinking, 'I'll just do what I've always done' and hit it five yards". She noted that when her game was not going well, she was "so down on myself... I just hit it". Although Leslie also commented that her interferences she could "probably work out... I just have to think, and usually I don't like thinking, I just like to do things".

It seemed that Leslie was very concerned about other's perception of her golf game. She sometimes considered practice "a chore" and believed, "everyone just expects me to go out there and do my job and stuff... work, work, work, practice, practice, practice.... I just like going and playing for fun". Perhaps she practiced just to go through the motions. Her comment, "I just don't want to burn out because my mom would have lost a lot of money and that. She's put me through so many clinics and stuff", indicated that if she didn't keep up her practice, she felt other people would suffer a loss of some kind because of her lack of motivation. Therefore, Leslie's practice habits appeared to stem somewhat from extrinsic motivation.

She also expressed a fear of others watching her play. "I can't play when anyone watches me... mom especially... my dad criticizes me". It often seemed that a lack of focus surfaced for her when she would think about others' perceptions of her game. In fact, the participant commented that she looked forward to playing with golfers she didn't know because, "I didn't really have

to impress them because I'll probably never see them again".

Leslie was not completely satisfied with her golf swing at the onset of the intervention. Rating her swing a seven on a scale from one to ten, she had been seeing her teaching professional and found some of his advice difficult to execute. Once she remarked, "It's the most uncomfortable swing... I don't know what he was doing... I just could not do it". Based on Leslie's comments from the initial interview, it would seem that some fine tuning of her golf game would help alleviate some stress involving ball striking. Perhaps then she could concentrate better on her mental game.

When asked about her preshot routines, Leslie described her physical tee shot routine as:

I'll take maybe one or two practice swings, and I'll line up like I'm hitting the ball, but come back just an inch or so from the ball, and I'll take a tee or a little piece of grass, and I'll try to hit the grass... then I'll get up and I'll just move up that one inch... don't move anything but my feet up just a little bit, and then I'll hit my tee shot.

When asked to describe a mental preshot routine, Leslie stated, "I try to block everything out. I just think about this shot. Usually I say, 'Hit the ball... don't kill it', then I'll hit it". With putting, she commented that:

I don't know what I think about putting. I know I take... the putter and I'll just go back and forth... about five or six

times, and then I'll line up the ball, take it back as far as I did in my practice swing. I'm usually short... I can't really read greens that well.

The participant realized that her putting "made my golf game so high score... because I usually three- or four-putt". She admitted to using imagery before hitting a shot, but noted, "When I do do the putt, it's not anything like it at all". This comment indicated that her imagery might not have been as good as she believed it to be, according to her initial self-evaluation scores (Table 4.2.3, p. 59).

One final issue that seemed to arise during Leslie's golf game was that of tension. Having developed a personal tendency to hold her breath during shots, Leslie admitted to being tense during a round of golf. "I'm always tense, I'm never loose. I'm just trained to be tense, I guess.... I'm tense right now.... I never relax, I don't think." Breathing exercises and relaxation techniques appeared to be possibilities for Leslie. When asked if there was a difference when she did take a breath and release it before shots, she replied: "Sometimes I do take a deep breath and let it out. It just takes me so long to take my stance.... They're actually one of my better shots. They go pretty far". Being able to distinguish good from poor shots based on breathing techniques indicated that Leslie was aware of a difference in shots hit with her breath held or released. If she continued in her practice of personalized relaxation methods, perhaps she would encounter

less tension between shots as well.

Leslie's goals for the length of the intervention were: (a) to shoot in the nineties or high eighties; (b) to hit 5-6 greens in regulation; (c) to one- or two-putt most greens; and (d) to play golf for the boys' high school golf team in the fall season.

Initial Parental and Instructor Interviews. The premise for obtaining opinions from Leslie's parent and instructor was to gain outside feedback concerning her game. Both sources believed that Leslie had the potential skills to be a good golfer in the future, yet needed improvement in certain areas in her game, i.e., temper, motivation, and course management. Her mother believed that presently, Leslie wanted to make the high school team, and later, a college team, and the LPGA Tour. Personally, her mother wanted Leslie to have fun while playing, as well as "get a college scholarship". Leslie's golf instructor also believed that "she would really love to be a Tour player, a college player... a good high school player... she wants to be as good as she can be".

When asked about Leslie's present golfing abilities, her mother indicated that patience was not a factor, and that frustration about her golf game was her biggest weakness. In regard to poor shots, Leslie was "starting to figure out that one's behind her and she can hit another one". This comment might indicate that Leslie was attempting to control certain thoughts and emotions. The differences between Leslie's reactions to her own good and poor shots were "a big smile" and "hitting the club on the

ground".

Her mother believed that Leslie could learn to control her nonverbal behaviors and reactions better, as well as her concentration. "WHAT concentration?" was her mother's response when asked about Leslie's level of concentration. According to her mother, Leslie did not know what to concentrate on. This response was similar to a more general one made by Leslie's golf instructor, who stated that, "Sometimes people have a limited golf knowledge and it doesn't allow them to think the right thoughts, whether their mental capacities are great or not".

Leslie's mother also noted that she was interested in seeing what changes might take place within her daughter's preshot routines. "For me, she takes too many practice swings. If I let her, she would take practice swings until I said, 'Hit the ball' ." The number of practice swings Leslie used throughout the intervention were noted in discussions with her. They ranged from none to four prior to each shot during her experimentation with preshot routines. Leslie's teaching instructor viewed her areas of needed improvement as "more discipline in her practice techniques and... a little more development of... strength." This comment might indicate why Leslie felt as if everyone expected her to work and practice all the time.

Finesse in Leslie's short game was another area that needed developing. Having given Leslie some rhythm exercises, her golf instructor felt that she was still "extremely eager". Leslie's golf

instructor commented that, "Her attention span is not quite what it should be... and she is not really in command of being as dedicated as she really wants to be". Despite these suggestions, the instructor felt that if "she becomes dedicated enough, she can go as far as she wants to go in golf".

With regard to the above, it seemed that Leslie was an eager competitor with rising beginning knowledge about serious competitive golf. Her mother and her golf instructor both felt that if Leslie became more dedicated and focused by directed thinking and concentration, she would improve in her course management and golf scores. Directed focus drills, relaxation techniques, and golf course strategy seemed to be of the greatest immediate importance; one may not learn to concentrate as well without being calm first. The researcher believed that the initial intervention should involve: (a) developing awareness of and consistency within preshot routines; (b) discussing between-shot routines and habits; (c) formulating fun yet specific practice drills, especially for the short game; (d) completing a relaxation exercise; and (e) analyzing sources of distraction and some techniques to overcome them.

Intervention Session 1: This session occurred during the week after a PGA Junior Tour round, some of which the researcher observed. By noting how Leslie competed, the researcher could directly relate experiences from the round within the session. Leslie was fairly quiet and replied in short answers, possibly

because it was during morning hours and she was tired.

Course management skills and between-shot routines/habits were topics discussed. Noting that Leslie did not pace off any yardages during her competitive round, she was asked about her success with club selection and specific yardages. She replied, "I do sometimes [pace off yardages]. Not often. I'm a good guesser". In an effort to reduce variability and uncontrollable situations, a golfer can gain knowledge of specific yardages into a green by looking at yardage markers and stepping them off. It would appear that knowing the exact yardages instead of guessing them would reduce error in club selection, and this was a concept that the researcher relayed to the participant. Leslie thought it would be something that she might want to try at this point.

Leslie's intervention goals were also assessed again, and she believed that she could achieve shooting consistently in the 40's if she made more birdies; she thought this could be done with better chipping, since she didn't hit many greens in regulation. Various types of chips were discussed, i.e., bump and run, lob shots, pitches, flop shots; chipping drills were also discussed in such a manner that would make it fun and nonstrenuous for her. In addition, she decided that her putting should improve, and the goal, by the end of the intervention, of making between 15 and 20 putts per nine holes was set by her.

Short term goals, i.e., putting drills, were discussed for both long and short putts. Leslie's thought process for long putts was

"to get it as close to the hole as I can so I don't... so I can two-putt most of the holes". The practice putting goals were set at making: (a) 25 putts in a row from 3 feet; (b) 8 out of 10 putts from 6 feet; (c) 5 out of 10 putts from 10 feet; and (d) 10 "cross-country" putts in a row, which involved two-putting from across the green.

Much of Leslie's game appeared to involve some unnecessary body tension, and therefore relaxation methods were introduced. Leslie said that, "I usually take a deep breath, if I want to relax, and I let it out. But usually I hold it." Knowing that she had a tendency to tense up, she was willing to try a relaxation method (adapted from Williams, 1993, pp. 185-199). This procedure included the face, shoulders/neck, arms/hands, and legs/feet. Leslie was asked to imagine all of the excess energy draining out of body and into the couch she was lying on. At one point, she noted that "the couch is getting very full [of energy]", which seemed to indicate that the participant was feeling the effects of the relaxation method. A shorter relaxation exercise was discussed that she could try on her own at another time; one that she could do between shots or holes during a competition to alleviate sudden tension.

The participant's consistency of preshot routines was content analyzed, and it appeared that she wasn't sure of some of her actions. She took one or two practice swings, and admitted that sometimes it was "maybe three". Also, she did the routines for "some" shots, and noted that if she did it for every shot, she

"might do a lot better". Similarities were found within the number of glances towards the hole; she took "maybe one, maybe two". It was not the intent of the researcher to achieve paralysis by analysis, yet it appeared that many of these common elements were done without justification and with no set pattern. A more focused and meaningful preshot routine concept was discussed with Leslie, who thought she would attempt to add some consistent structure to her preshot routines, as well as to check detail, i.e., wind direction and degree of grass dew.

Imagery was another topic that Leslie touched on. In describing her mental routine, she stated that:

I get out there and really look for places... toward the flag. Think about the shot and try to hit it like the shot. Kind of picture it; don't necessarily make it look like it's going in the hole because I know that would never happen. I picture it going on the green. The flag is too many steps away.

Some self-defeating aspects seemed to be prevalent in her beliefs, such as imagining that the ball could not go into the hole from the fairway.

In addition, perhaps she felt that she took too much time when she used a mental routine; she executed her behavioral routines fairly quickly (Table 4.2.2, p. 58), and even admitted that "I don't take enough time for myself". She pointed out that, "Sometimes you have to walk kind of fast to keep up the pace;

keep everybody going". However, according to her mother, Leslie seemed to take too much time with her preshot routines. It appeared that Leslie was uncomfortable with changing the time period of her routine, i.e., taking more time and actually thinking more, in order not to be penalized for slow play or because to her, more time might not have been the answer to better scores.

One last issue that surfaced during the session was that of distraction. When asked what she did the last time she had a bad shot, she replied, "Hit my club on the ground". Most of the time, "I'll just take the club, and I'm so mad, I'll just hit the ball". At one point during the session, she randomly jumped from discussing relaxation methods to another golf-unrelated topic. This demonstrated how rapidly her focus shifted. In discussing alternatives to anger and distractions, options that were touched upon included: (a) using cue words as a refocusing tool; (b) postponing a negative thought about a poor shot until a later time; (c) playing one shot at a time; (d) thinking about other thoughts not related the last shot; and (e) realizing that there are other days to do better.

One article (Coop, 1990) regarding concentration and a packet of positive quotes and mental practice ideas from the researcher was given to Leslie to read. These reading materials were thought to be good bases for an introduction to concentration and mental skills practice. Based on the discussion during the first intervention session, the researcher thought that the

following session should involve: (a) a discussion over two articles given to Leslie to read; (b) a review of her preshot routine and relaxation methods; (c) an in-depth discussion of overcoming distractions; and (d) an imagery exercise.

Data Collection 2. The participant was observed for nine out of eighteen holes, preshot routines were timed, and game statistics recorded. Leslie was also asked to complete self-evaluation manipulation checks.

In regard to preshot routine performance data, all mean times had increased except for the putting, and all standard deviations had increased, except for chip shots (Table 4.2.4). It could have been that thinking more about what comprised her preshot routines had caused Leslie to take more time and experiment more with her routines, thereby contributing to more inconsistency within her routines. It was expected that preshot routine times might increase in variability before they decreased, due to Leslie's experimentation with preshot patterns.

Game statistics (Table 4.2.5) did not show any improvement. While fairways hit, greens hit in regulation, putts on greens in regulation, and score were not as good as the baseline statistics (Table 4.2.2, p. 58), putting had decreased from 48 to 34 putts per round.

The self-evaluation scores indicated that imagery was not as good as the baseline score reported (Table 4.2.3, p. 59), yet decreases in stress, body tension, distraction, and anxiety were

Table 4.2.4.

Timed Preshot Routines - Data Collection 2

Category	Times (seconds)	
	Mean	Standard Deviation
Drives	26.44	10.70
Fairway Shots	18.59	10.83
Chips	11.55	4.16
Putts	8.15	4.50

Table 4.2.5.

Game Statistics - Data Collection 2

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	1	0	1
Greens Hit in Regulation	0	0	0
Up and Downs	0	0	0/4
Sand Saves	0	0	0/0
Total Putts	17	17	34
Putts on Greens in Regulation	0	0	0
Score	61	51	112

noted (Table 4.2.6). The participant commented that she had stopped holding her breath during the swing, yet had not seriously practiced the new relaxation exercises. It seemed as if just releasing her breath prior to swinging had reduced some tension in her body already.

Intervention Session 2. This session covered both new and reviewed topics. Leslie had been given two short articles to read at the end of the first session, and she had positive comments concerning their content. She had not thought much about their content previous to reading them, but was impressed by one of the golfers in the articles who "wanted to be an individual... he wanted to have his own style". She agreed when the researcher noted, "He might have a style based on other's, but it's suited to him. He adapted". In an attempt to develop her own style, Leslie had tried to picture her shots throughout the week, and she felt that she did "better when I do that".

The participant had incorporated more environmental awareness into her preshot routines. "Instead of using my six iron, I had to move back to my three iron because of the yardage. I hit the green... in regulation, actually." Three weeks into the program, it appeared that Leslie was beginning to expand on creativity within her preshot routines, whether the new techniques worked or not.

Distraction control was reviewed during the second session. "I could probably work on just concentrating enough to where I

Table 4.2.6.

Self-Evaluation Manipulation Check - Data Collection 2

Category	Score
Imagery	25
Stress	16
Body Tension	19
Distraction	45
Anxiety	26

don't hear anything". Leslie described a distraction as "a noise, people talking on the course". After analyzing when a distraction becomes a distraction, i.e., when one lets it, she mentioned, "It's only when I have to concentrate on the game that it bothers me". At three different instances during the second session, Leslie went off on sudden tangents concerning golf-unrelated issues, such as a radio blaring in the background. These distractions and her reactions to them demonstrated her occasional lack of attentional focus on the session. Her response time to recover from the distraction was noted to be fairly slow.

In trying to identify certain techniques to help her overcome unwanted distractions, various ideas were discussed: (a) tuning out the noises; (b) focusing on a cue word; (c) thinking of a good swing instead of the immediate score she needed to shoot, as it was extremely difficult for her not to think about her score; (d) asking others to give her some time to herself; (e) walking by herself; (f) thinking about something else; and (g) adding up the score at the end of the hole or round, and not after each shot.

Leslie touched on the topic of relaxation techniques, and commented that she did not hold her breath during shots anymore; she released her breath prior to swinging. When asked when she could use these techniques, she stated, "Waiting to tee off... or my turn to putt". It appeared that Leslie had given some thought as to when using relaxation would be most beneficial.

The last portion of the intervention session dealt with an imagery exercise. When asked to describe her bedroom from a few years ago, Leslie could only see "black". However, when asked to describe her present room, she was better able to see and hear various images. Her ability to describe detail was fairly good when probed about the texture, color, and arrangement of particular items. Following this description, Leslie was asked to change scenes and describe the layout of her favorite hole in golf. The participant's images were clear and basic:

Standing on the tee, you'd have what used to be a pond on this side... and then you have trees running through here, and then you have a whole cluster of pine trees running up at the top.... And then you have a fairway going up, and there's a whole lot of sand traps right there. And then you have a little area right here, and then you have sand traps over here, and then it doglegs left, and then you've got... it's kind of straight and then the green's elevated.

When asked more about certain sounds, yardages, undulations, tree formations, smells, and other factors of her image, she was able to give precise answers, yet she probably would not have done so, or would have known to do so, without being probed. This suggested that more detail could have probably been added to her images. Prior to concluding the session, the participant stated that she thought she "could handle" working on image

clarity, as well as her mental routines.

In preparation for the third intervention session, the researcher thought it would be beneficial: (a) to review and discuss the progress of Leslie's distraction techniques; (b) to ascertain the progress of Leslie's preshot routines; and (c) to discuss preparing for the high school qualifying match.

Intervention Session 3: An immediate issue brought up by the participant in this session was the fact that she had now moved from the red (ladies') tees to the white (men's) tees. This was part of her own personal simulation training for high school golf, as try-outs for the team were one week from the third session. The researcher noted that Leslie was concerned with not knowing what to hit from the white tee landing areas, indicating that from the red tees, she had probably not thought about club selection because she knew where the ball would land. Adaptability was mentioned by the researcher as a way to convey the concept that playing at other courses, she would not know what to hit and therefore it might be best to rely on yardages instead of local knowledge.

In preparation for the high school try-outs, Leslie had been working on her preshot routine and had at this point, ceased taking any practice swings prior to hitting her shots. "I take a few, maybe on my shorter irons. I felt as though, 'If that was a good practice swing, why not put my first good practice swing on the ball and have a good shot'." It seemed to be working for

her, as she was "not really tense anymore" from too many practice swings.

One major concern expressed by the participant was nervousness due to team qualifications. Things that made her nervous about the try-outs included "making it and beating the people, not the course". She felt she was confident with her swing; it was "probably all in my head." Leslie believed that she could save some shots on her drives during the qualifying round. To overcome her nerves, Leslie proposed several ideas which consisted of: (a) using positive self-talk; (b) thinking about her game the night before; and (c) trying relaxation exercises, similar to the one introduced in the first intervention session, for the first tee jitters. During practice rounds, she was determined to "think about what I'm doing... think about the game... think about what I need to do... visualize my shots".

It seemed that distraction control, reduction of nervous anxiety, and formulating a comfortable yet consistent preshot routine were major topics that were prevalent in Leslie's golf game. Some mental skill techniques discussed with the participant appeared to be helpful, as indicated in the self-evaluation checks and through comments made during the sessions. Based on the third intervention session, the researcher foresaw the following session as a time to discuss: (a) Leslie's impressions about her high school team qualifying round; (b) which mental skill techniques were helpful during the round; (c)

an intervention for reducing nervous energy; (d) simulation training for possible upcoming high school matches; and (e) what part her temper played in her game, as she had indicated that her temper was a distraction at times.

Data Collection 3. During this week, the participant was once again observed for nine out of eighteen holes of play; preshot routines were timed and game statistics gathered. She was also asked to complete self-evaluations.

Although the performance data indicated that Leslie's mean preshot routines times had increased slightly in all categories of her game, her standard deviations had greatly dropped in drives and fairway shots (Table 4.2.7); the improved standard deviations, however, were not as low as the original baseline standard deviations (Table 4.2.1, p. 57). It appeared as if Leslie was taking more time before hitting the ball and thinking about all possible options and results for her shots. All of Leslie's standard deviation times consistently ranged from 6.15 to 6.90 seconds.

Due to scheduling difficulty, the game statistics in the third data collection were limited to only nine holes, and no data projection could be made for the final nine holes. However, Leslie had already hit five fairways and one green in regulation (Table 4.2.8) on the first nine holes. Leslie's best game statistic for eighteen holes showed her hitting a total of five fairways and one green (Table 4.2.2, p. 58). Although it can't be assumed that her statistics would have improved had she finished the last nine

Table 4.2.7.

Timed Preshot Routines - Data Collection 3

Category	Times (seconds)	
	Means	Standard Deviations
Drives	27.11	6.90
Fairway Shots	20.46	6.33
Chips	14.11	6.15
Putts	13.47	6.39

Table 4.2.8.

Game Statistics - Data Collection 3

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	5	- *	5
Greens Hit in Regulation	1	- *	1
Up and Downs	0	- *	0/4
Sand Saves	0	- *	0/0
Total Putts	22	- *	22
Putts on Greens in Regulation	1	- *	1
Score	57	- *	57

*second nine holes not played due to scheduling conflicts

holes, it might have been that her game statistics could have been bettered in this data collection period. Her putting and up and downs were not as positive, having zero out of four up and downs and 22 putts for the first nine (Table 4.2.8). Chances are that her game statistics for these two categories could have been greater than desired. Finally, her front nine score of 57 was the lowest front nine score from all the three data collections; this may have been due to increased accuracy in driving.

According to the self-evaluation scores, Leslie was still decreasing in her perception of her imagery abilities (Table 4.2.9). Although in the third session she had described a fairly clear image of her favorite golf hole, it appeared that her confidence in her imagery was low. One other score, that of stress, had reverted back to a higher level, indicating that Leslie was experiencing some stress, possibly related to qualifying for the high school golf team and not doing as well as she had hoped. She had indicated that she was "nervous" about try-outs. Body tension, distraction, and anxiety scores had continued to drop to a more desirable level.

Intervention Session 4. This session focused on Leslie's qualifying round and first high school match, as well as simulation training and coping with anger/temper. She initially commented on how her level of play was similar from the white (men's) tees as it used to be from the red (ladies') tees. She seemed pleased that the extra yardage did not affect her scores as much as she

Table 4.2.9.

Self-Evaluation Manipulation Checks- Data Collection 3

Category	Score
Imagery	22
Stress	24
Body Tension	20
Distraction	41
Anxiety	24

had maybe anticipated.

Leslie's high school team qualifying round appeared to be a different experience for her, as she was playing competitively against males her age; her typical competitors had been females her age. Still "asleep" when she began her qualifying round, perhaps she had not planned her precompetition strategy to include complete rest and preparation. Leslie noted that she "... was real nervous... my hands were shaking so bad, and I usually mishit the ball". Struck by the first tee jitters, she took a few holes to decrease her nervous arousal, and was able to become less stressed by: (a) splashing water on her face [to wake up]; (b) "using my brain"; and (c) trying relaxation techniques similar to the one introduced in the first intervention session. At one point early during the round, she incorporated positive self-talk into her thought process.

I said to myself, "Don't really think about it. Just play, because if you shoot bad, that's OK, because you'll still make it. You probably just won't make the playing team", which is OK with me.

Leslie's use of various types of relaxation and focus techniques indicated that the mental strategy in her golf game seemed to be accompanied by more diverse and intended thoughts.

At the following high school match, Leslie indicated that her putting was the main factor in her score; she "three-putted a lot of holes, actually". Yet, it appeared that her imagery skills had

improved in her long game. "At Whittles I tried it... I parred four holes in a row... almost had a birdie... a chip-in birdie, so I was like really happy". The most important learning experience for Leslie in the fourth intervention session was described by her as the ruling she incurred during the match at Whittle Springs. Her journal entry explicated the event:

My first tournament. Played really well, was in 40's till 9th hole, sliced my tee shot, was on in three, putt, got within 3 feet, a girl told me to putt, I wasn't ready, missed, putt, missed it, was on the edge of the cup, my temper let loose. Being stupid I picked it up and walked away. I wasn't DQ'ed [disqualified] but they didn't put my name down. Next time I won't do it again. I was hitting my irons really well and also my driver.

Leslie's sudden lack of patience with her putting had cost her the final score, i.e., not finishing by picking up the ball before holing it out. It seemed that she realized what controlling her temper could beneficially achieve or what it could sacrifice if she didn't learn to control it.

In order to better prepare for the next tournament, Leslie thought that she wouldn't be "as nervous" because she would be playing with her teammates now instead of against them. She did think, however, that she would "be nervous playing against other guys from other teams". Thus, arousal-decreasing methods were discussed including: (a) writing in her journal; (b) whistling a

tune in her head; (c) making up silly words to a song; and (d) taking in and releasing a deep breath before hitting her shot, a relaxation exercise personally adapted from the exercise introduced in the first intervention session. Leslie was reminded that she could use as many of these methods as she felt were necessary.

Simulation training was another topic in the fourth intervention session. Not being able to describe the term at first, Leslie was able to explain simulation training and give some applied examples by the end of the session. In discussing what types of things she could do to simulate competition and better prepare for actual matches, the following ideas were constructed: (a) playing golf with more male golfers; (b) practicing chipping and putting from different areas and lies; and (c) attempting to manipulate emotions to match those encountered in competition and then seeing if she could overcome these emotions through certain mental skill techniques.

One final area that was analyzed was her temper and what types of things made her angry on the golf course. Leslie stated that "not hitting the putts or not hitting a perfect shot... because I didn't think long enough about my swing" were several anger-provoking instances. To overcome or avoid these situations, Leslie suggested that she could think about the opportunity to improve on upcoming holes; also discussed was drawing a red line in front of the poorly executed shot and leaving everything behind that

line. In concluding the fourth intervention session, Leslie believed that if she could "get my nerves and temper gone", she could shoot lower scores. Based on the fourth intervention session and recently collected data, the researcher believed that the following session should involve: (a) discussing her chipping and putting routines to gain more consistency; (b) practicing detailed imagery exercises; (c) reducing nervous energy; and (d) helping Leslie see that she can have complete control of her game.

Intervention Session 5. This session occurred immediately following a less-than-desirable round for Leslie, thus placing her in a negative mind frame. Although she had not had much time to practice in the week prior to this round, it didn't matter to her that she played "terrible.... I was so frustrated... I felt like hitting somebody with a golf club." Although disappointed with her chipping and putting, playing the wrong ball on hole one, and therefore incurring two penalty strokes, contributed to her game going "downhill from there". For Leslie, her focus was narrow enough that she "didn't know there would be any other balls in the fairway". Concentrating on all aspects of golf, i.e., yardages, environmental factors, other golfers, and not just the shot-making, seemed to be something which Leslie could improve in.

In relation to the penalties she incurred for hitting the wrong ball, an ensuing discussion on the rules and marking one's golf ball with a clear and individual mark seemed to be enlightening. Leslie did not know about being able to put an

identifying mark on her golf ball or not being able to tap down spike marks in her putting line. It was also observed that during the round, Leslie could have saved at least four strokes by knowing the rules better; she lost strokes by hitting the wrong ball and also dropping her ball in a disadvantageous area after striking her shot into a regular water hazard. Although she had mentioned in a previous session that she had taken a test on the rules of golf, it didn't appear that her knowledge of the rules was very certain; a review of the most important rules was planned by the researcher for another session.

In addition, it appeared as if she had been putting a great deal of effort into finding a comfortable preshot routine that she could execute with some consistency. She stated that she "had decided on something and... started doing it, and I guess I'm hooked... there was one hole I didn't do it on... I shouldn't have taken one [extra practice swing] because it screwed me all up". Her new procedure was to:

Go back behind the ball, take a practice swing, look at it and pick out something that's towards the flag, come around, take another practice swing, line up the ball with the thing on the ground, and hit. And it seems to work pretty good... I do that every shot, even my putts.

Admitting that she didn't do this procedure with her chipping, she believed that to improve her chips, she should "get them closer to the hole, but not kill them". Ways in which Leslie thought she

could improve her chipping included: (a) keeping the weight towards the front foot; (b) closing the clubface for bump and run shots and opening it for loftier chips; (c) having a nice level swing; (d) keeping the hands in front of the ball; and (e) following the slope of the terrain. Leslie personally reported on the progress of her chipping methods in later sessions.

To understand what Leslie felt regarding her golf game, the researcher asked her what she liked best and least about golf at the present time. Leslie responded that she liked "being around the guys [golf team]" the best, perhaps because of her competitive nature and new friendships, as well as the golfing connection.

What Leslie liked least about golf was:

...the way I'm playing. Today I felt like I wanted to give up right now, right then, just walk off the course, but I didn't. I learned my lesson at Whittle.... Finish out and quit afterwards. But I'm not going to; I'm just mad.

Having postponed her temper to post-round, Leslie's persistence seemed to have paid off, as she achieved the first birdie in her life on the last hole. Although she "just wanted to get it [the round] over with", she still managed to control and deal effectively with her negative emotions until she had finished her round for the day.

Leslie's disbelief at her poor round that day may have also stemmed from the fact that she was being watched by other people. The fact that there were people there to impress or beat

appeared to be a constant worry in her mind. "I can't believe I played that terrible. I guess because everyone was watching me most of the time... the [other] coach... just about everyone that watches me set me off." When asked if the presence of the researcher interfered with her game, she replied, "A little... a lot, you could say. I've been under so much pressure because I've been... bringing you all these good stat sheets and stuff and so I HAD to play good to show you". Even with her peers, the participant did not seem comfortable in relation to golf. "I haven't really told anybody I'm on the golf team. They'll start yelling 'Fore!' or something like that. I'll beat them up if they laugh at me." Perhaps Leslie was wanting to attract attention to the fact that she was a unique competitive female golfer when she received minimal recognition. Asked if she believed in herself, she replied, "Yeah, I guess.... I believe I could have shot better than I did, but I didn't". Leslie seemed to believe that she had the ability to play good golf, yet may not have wanted to accept that someone as competitive as she had scored a high score.

A third factor which arose within the fifth intervention session concerned Leslie's time frame within her thought processes. She frequently mentioned that she thought about winning against people she knew she should defeat. "I felt so confident that I had them beat already... that's probably what messed me up right there. Because I thought I had already won this against them." In response to the researcher's statement, "So

that's not a good thing to do... build the house without starting from the basement", she replied, "No", and had no answer dealing with how to overcome this thought process. Since the time of the initial interview, it appeared that Leslie knew her game could improve, yet her motivation to improve might have been suffocated by the impressions of over- or underachieving in the eyes of others. In relation to this recent feedback, the researcher thought it would be best to next: (a) review the most important rules and their consequences; (b) have Leslie evaluate why she is playing golf, for whom she is playing golf, and what types of things she wants to work on for future success; and (c) analyze positive aspects of golf that are in Leslie's game.

Data Collection 4. With only two weeks remaining in the intervention program, Leslie was once more observed for nine out of eighteen holes and was timed during preshot routines. In analyzing the performance data, no particular pattern was noticed in the mean times of Leslie's preshot routines, yet three out of four standard deviations had decreased since the last recording (Table 4.2.10). Most interesting was the putting standard deviation of 3.52 seconds, indicating that Leslie's putting routines were fairly similar, with less variability than ever before, although they resembled the baseline putting standard deviation (Table 4.2.1, p. 57). This might signify that Leslie had found a routine that she felt more comfortable with on the putting green. The only great increase in preshot routine variability was found in

Table 4.2.10.

Timed Preshot Routines - Data Collection 4

Category	Times (seconds)	
	Mean	Standard Deviation
Drives	23.89	5.73
Fairway Shots	19.72	10.26
Chips	11.13	6.07
Putts	12.0	3.52

fairway shots. All preshot routine mean times had increased since the baseline scores, signifying that the participant was taking more time with her game and, hopefully, incorporating some constructive thinking into most of her shots.

One goal, stated in her initial interview, that Leslie had not achieved was that of greens in regulation (5 to 6 greens per round); Leslie hit 1 green in the fourth game statistic collection (Table 4.2.11). Leslie's game statistics showed improvement in some areas: (a) hitting half the fairways in her round; and (b) scoring 106, the lowest round of the program, for statistic purposes. Leslie's putts had increased to 45 putts for the round, which was not in accordance with her goals of 15-20 putts per nine holes, or a maximum of 40 putts per round.

Intervention Session 6. This was a fairly short session; more hands-on course management situations were created and discussed on the practice field, i.e., what type of chip to hit from this spot, why, and how. Leslie had made some changes in her equipment, indicating that she believed that new clubs or a new bag would be more beneficial to her game. She switched to a new graphite head/graphite shaft driver, as well as a lightweight carrybag with a carrystrap; all of these technological changes lessened her carry weight. When asked if the new equipment gave her more energy when walking the course, she replied, "It does". She hoped that other equipment would follow in the future, such as a putter and new golf shoes.

Table 4.2.11.

Game Statistics - Data Collection 4

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	3	6	9
Greens Hit in Regulation	0	1	1
Up and Downs	0	0	0/2
Sand Saves	0	0	0/1
Total Putts	20	25	45
Putts in Greens in Regulation	0	2	2
Score	57	49	106

In checking with Leslie's long-term goals again after six weeks, she replied that she needed, "To get my scores down.... To be on the LPGA you've got to shoot three or four or five rounds consecutively in the 60's.... I think it's five... in the low 80's to be in college". To further specify her response, she thoughtfully answered, "My chipping and putting are the most part of my game that adds the scores on... I think my long game is getting better". High expectations for her chipping and putting statistics were possible sources of frustration for Leslie; perhaps she believed that she should be achieving her goals despite her heavy class load and less available practice time. She also foresaw a reduction in temper and better visualization skills as key determinants in a successful golf future.

Considering Leslie's low perception of imagery skills, an imagery exercise was conducted in which Leslie was asked to describe all the actions and thoughts that took place on the ninth hole the day she birdied it. She could accurately remember her frustrated feelings which led to two great shots. "I guess I just hit all my anger out on the ball... it's the longest drive I hit on that hole. The second shot I put a grip's length from the hole and birdied it. First birdie in my life". It appeared that Leslie had been able to channel most of her temper into a focused swing; her anger was not a distraction, as it seemed to have been earlier in the intervention. After some questions asked by the researcher concerning small details, i.e., weather, gallery, and how the ball

felt coming off her clubface, Leslie had described a very intricate account of her playing experience from the past week, even with the time that had gone by.

Her description of how the ball felt off the clubface was a negative memory for her. "It hit with a thud... it sounded nice but it didn't feel nice". Leslie agreed that people who can scramble better than others would probably shoot lower scores than those who didn't know how to scramble. This indicated that there was value in being persistent, even in the face of failure or nonperfection.

In closing the intervention session before chipping practice, Leslie conveyed the desire to "play at least one round real good so I can... at least be on the playing five". It appeared that she still believed she could make the team if she could shoot better, and that by concentrating and focusing on her thoughts and actions, she might have a chance. Interpreting the sixth intervention session as a more positive one than the fifth session, the researcher believed the last intervention session should: (a) review the major mental skill strategies that Leslie was involved with; (b) provide Leslie with some positive encouragement to continue thinking about golf in constructive ways; and (c) obtain some general feedback as to Leslie's opinion of the intervention program.

Intervention Session 7. The last intervention session took place immediately following a high school match in which Leslie

played as an alternate against other alternates from her team, but not one of the competing five. She had a good start to her round, but it was obvious that she lost her focus on hole four and "started playing bad every since". It seemed as if her playing partners were unintentionally being distracting, which caused Leslie to mishit one chip and falter with her putting. "I was about to smack them. Sitting there, dancing around the hole... I was going, 'Where's the hole? You pulled the flag out!' I was so mad. I wasn't thinking clearly". Despite these distractions, she was reluctant to confront them on or off the golf course, stating, "I didn't want to say anything right in front of the coach". Her main concern during the round was another player who was apparently cheating. When reminded that she had the right as a golfer to go over his score with him shot by shot, she replied, "I know... but that makes me so mad". She seemed hesitant to give a reason why she didn't report the cheating.

Instead, Leslie spoke of other people and situations she was angry with, such as her coach for putting people "on the team this late in the season". This lessened her chances of making the playing five for each match. Perhaps this anger was even divided against the alternates with whom she played. Her beliefs, that she was good enough to be one of the playing five, led her to imagine victories against others before she even played. She commented:

That knocks me to the alternate spot when I play well enough to be one of the five. [Today] I probably would

have won... most of those triples I had were real true triples... that kid... at the very beginning, he tripled more than I did the whole time.

Towards the end of the seventh intervention session, a few moments were taken: (a) to analyze Leslie's present golf game; and (b) to assess the intervention program with some verbal feedback from the participant. Leslie felt that her chipping, putting, and knowledge of the rules of golf had improved, although she could probably shoot even lower scores because she "wasn't trying very hard out there". Although she liked the "visual stuff and how to try to maintain your head", these mental skills didn't appear to be a part of a consistent training regimen for her.

In addition, her preshot routine, she insisted, was exactly the same as when she began the program. "Go behind the ball, take a practice swing or two, look at it... kind of line it up a bit, come around and take one or two practice swings before I hit the ball, then go up to the ball". Perhaps Leslie forgot the fact that she had fluctuated with her practice swings; encouraged to write down her exact preshot routines but never doing so, her memory of practice swings within routines appeared to overlook the changes she had gone through. Leslie had also ceased to hold her breath, which was a new aspect of her preshot routine. Thus, it may have appeared to Leslie that her routine was exactly the same, yet the minor changes she experimented with did not seem

significant to her.

Although Leslie indicated that she was still not "a real good imaginer", her golf images seemed fairly creative, even when she needed guidance with details. Perhaps Leslie was looking for perfection, or perhaps never having done imagery, she wasn't sure of what to imagine. Emphasis on individual creativity with examples of how to enhance detailed imagery were discussed following past imagery exercises. Leslie found that with her new school schedule, she had less time to work on her physical swing and had not seen her golf instructor since prior to the intervention program. Thus, Leslie had rated her swing, "Zero. No, if you could leave out the putting, I'd rate it a seven. With putting, I'd rate it about a five". Leslie's personal swing rating at the onset of the intervention was also a seven; the ratings of seven may have held different weights due to the fact that the first rating occurred under the tutelage of an instructor, while the last rating occurred under her own instruction.

Overall, the participant believed that the program was beneficial. "I liked the program. I had a good teacher. I thought it was good because I learned some stuff." Improvements Leslie thought should take place involved more physical instruction. "I thought that's what you were going to help me to do; not the mental part but the physical part. That's what I expected. I mean, I'm not disappointed... I like the mental part too." It was previously explained to her, as well as her mother and golf

instructor, that although the researcher was herself a golf instructor, the project only involved working with the mental aspect of the game. Leslie also recommended receiving more reading material on sand shots. "A little more on how to use the sand wedge". She thought some of the articles were "pretty interesting" and would keep the amount of reading "just the same".

In regard to the intervention sessions themselves, "some were too short, some were too long... just depends". She also didn't "like taking those little tests where you had to circle the numbers or anything; those were kind of boring. They reminded me of school... but they were OK". The most beneficial aspect of the intervention which Leslie thought would be useful to her in the future was "the temper part, probably". She agreed when the researcher restated the question as "gaining better control of your emotions". In preparation for the follow-up interview, the researcher believed that the final meetings with both Leslie and her mother should cover the: (a) experience of the regional tournament; (b) opinions and suggestions concerning the intervention program; and (c) impressions of Leslie's personal progress with various mental skills.

Participant/Parental Follow-up Interviews and Self-Evaluation Data. These sessions occurred approximately one month following the last intervention session. During this intermittent period, Leslie had competed in her first high school

regional competition for girls. She was asked to complete self-evaluations regarding her thoughts about her game one month following the intervention.

The results from the self-evaluation questionnaires showed improvement in all categories except stress (Table 4.2.12). Leslie's imagery was at its highest (good) rating, and her distraction, body tension, and anxiety levels were at their lowest (good) ratings. The period of time between the intervention program and the follow-up interview might have given Leslie the opportunity she needed to back away from stressful golf practice and seriously evaluate various aspects of her mental skills. Her high stress score was probably a result of her first appearance at a regional competition, as noted by her mother in the interview.

The follow-up interview involved a variety of topics dealing with Leslie's present golf game and future golf interests. She had played only one round of 18 holes since the seventh intervention session, this round being the high school regional tournament. This indicated that her simulation training or precompetition preparation for her regional match lacked practicing complete rounds of golf, most likely due to her high school class schedule and/or golf burnout.

Golf still seemed to be a part of Leslie's life; when asked if she thought about golf off the golf course, she replied, "We talk about it all the time in school and stuff.... half the people make fun of me, and the other half... make fun of me in a good kind of way".

Table 4.2.12.

Self-Evaluation Manipulation Check - Data Collection 4 (Follow-Up)

Category	Score
Imagery	29
Stress	26
Body Tension	18
Distraction	38
Anxiety	22

In a prior intervention session, Leslie had mentioned that she kept her golfing abilities quiet for fear of being ridiculed, yet it appeared from this statement that a portion of the attention she was receiving did not make her feel all that uncomfortable. Self-evaluation seemed to be more negatively associated with her attitude during the golf season and prior to the follow-up interview. Throughout the course of the program, Leslie never indicated if she played golf for herself or for others, i.e., parents, golf coach, golf instructor, or peers. Although assumed that Leslie was very conscientious about pleasing others, the researcher probably should have directly questioned Leslie about this assumption.

Leslie noted that daydreaming was something she did often in school when bored. Asked if she could control these images, she answered, "No, because I don't even know I'm doing it half the time". This signified her lack of awareness and ability to focus on or control her thoughts. Similar issues had appeared in past intervention sessions when discussing imagery. Although Leslie could adequately describe her images when probed with certain questions, she still had difficulties with controlling her thought creations.

In providing feedback concerning aspects of the mental skills program which were effective to Leslie, she acknowledged that, "It helped me to keep my head; it helped me with a better golf game. It's got my preshot routine... it's got me doing that. It's

helped me out a whole bunch. Can't really explain it". Developing her mental skills was something that she intended to continue in the future, especially next spring when the season would commence. She also expressed an interest in reading more about mental skill training.

A large portion of the follow-up interview was spent analyzing her regional tournament round. Her "drives and long irons.... Felt good, actually. I mean, I couldn't feel it, because I was hitting the sweet spot. My chipping was good". Putting was her nemesis during the regional round. When questioned about what bothered her about her putting, she replied, "I bet I three-putted most of the greens... I four-putted like two... it got me out of whack actually. I didn't keep my head for the last hole". Her lack of finesse with the putter was most likely due to a lack of practice. Despite her short game inaccuracy, Leslie noted in her journal that, "My regional tournament was so much fun. I was really nervous at first but I got in a group of good and nice players.... So I did real well. It was a fun place and I can't wait 'til next year".

To identify what techniques she used to "get back on track", Leslie noted that, "I thought I did get back on track until the last hole... I don't know what I did or anything. I don't even know what I think about... whatever comes to my mind because, I mean, I'm concentrating hard". Concentration would denote a sense of focusing on a certain thought, and if Leslie had no idea about what she was thinking, then her concentration was probably not very

defined. When the researcher brought this issue to light with her comment, "It sounds like you're focusing on something, but you're not even sure what", Leslie simply replied, "Yeah". Practicing: (a) becoming aware of her daydreaming; and (b) controlling her daydreams and intentional images were discussed for personal future mental training.

An ensuing topic of concern for Leslie was her playing status on the boys' high school team based on the coaching decisions. Leslie felt that, as a female, she was "an inconvenience for him or something. He won't take time to... [never finished that statement]". Although she admitted that, "It's nothing he said, no. I guess I kind of got that feeling like that because he won't... he doesn't want to come", she felt that she would not confront the coach on the matter. She preferred to "let it be". When asked if remedying the uncomfortable situation was an option, she replied, "It doesn't bother me.... I'm not really losing out on much.... It's no big deal, really". Choosing not to comment on the situation anymore indicated that she might have possibly been intentionally repressing her feelings. This issue was also discussed with her mother, who brought up the matter in the parental follow-up interview.

The end of the follow-up interview was used to decipher Leslie's data with her and discuss possible mental skills strategies for her future golf training regimen. Realizing how certain aspects of her game fluctuated in regard to time, she indicated, "I want to

get everything... that I've practiced, just get it all consistent". Figures 4.2.1, 4.2.2, and 4.2.3 provide an overall visual presentation of Leslie's preshot routines, times, and self-evaluation ratings, respectively. These representations of the results obtained allowed the researcher to chart progress which may have appeared throughout the program.

In reviewing game statistics with Leslie, she made references to her goals at the onset of the intervention program. Unfortunately, Leslie had lost her first journal, in which she had written all of her goals, both long- and short-term. The second journal contained only a few of the initial goals. Based on the salvaged goals previously created, Leslie noted that she did not achieve: (a) shooting in the nineties or eighties; (b) hitting five to six greens per round; (c) one- and two-putting most greens; and (d) sharpening and attaining her specific putting drills. If Leslie chose to keep using statistics such as these in the future, she was reminded to keep both successful and unsuccessful up and downs. Following the conclusion of the interview, she was given the final self-evaluations to complete.

Parental Follow-up Interview. Leslie's mother provided the researcher with positive feedback about the program, as well as some future concerns for Leslie's golf career. When asked if she had noticed any changes in Leslie's golf game, she replied:

Yes, I have.... She improved in her course management skills to the point that I didn't recognize who she was,

because she had a preshot routine and she acted like she knew what she was doing. Before, it was rather haphazard and just set up to the ball with innumerable practice swings with no purpose. I saw her pace off distances, ask people for distances, think about club selection, which is amazing. Big change.

Leslie's preshot routine appeared to surprise her mother, who actually found them to be "consistent". She noted that Leslie may have used four practice swings before each shot at the regionals as a "tension releaser, because she was so nervous". At the time of the last intervention session, Leslie had only used two practice swings in her routine.

In the future, Leslie's mother believed that "focusing on golf the entire round" would be beneficial, because she "still gets real frustrated; she's still beating the club on the ground occasionally". Admitting that Leslie "has better control", Leslie's mother maintained her belief that Leslie's temper was still an "underlying factor", as she had also noted at the onset of the intervention.

A portion of the interview was spent discussing Leslie's chances of playing next year on the boy's high school team. Leslie's mother was upset about the coaching and would take action to get Leslie playing more often, if needed. As high school golf seemed to be a major concern in Leslie's life, so was her new social life, according to her mother. These factors of, (a) a new level of golf competition, and (b) a new social atmosphere, had

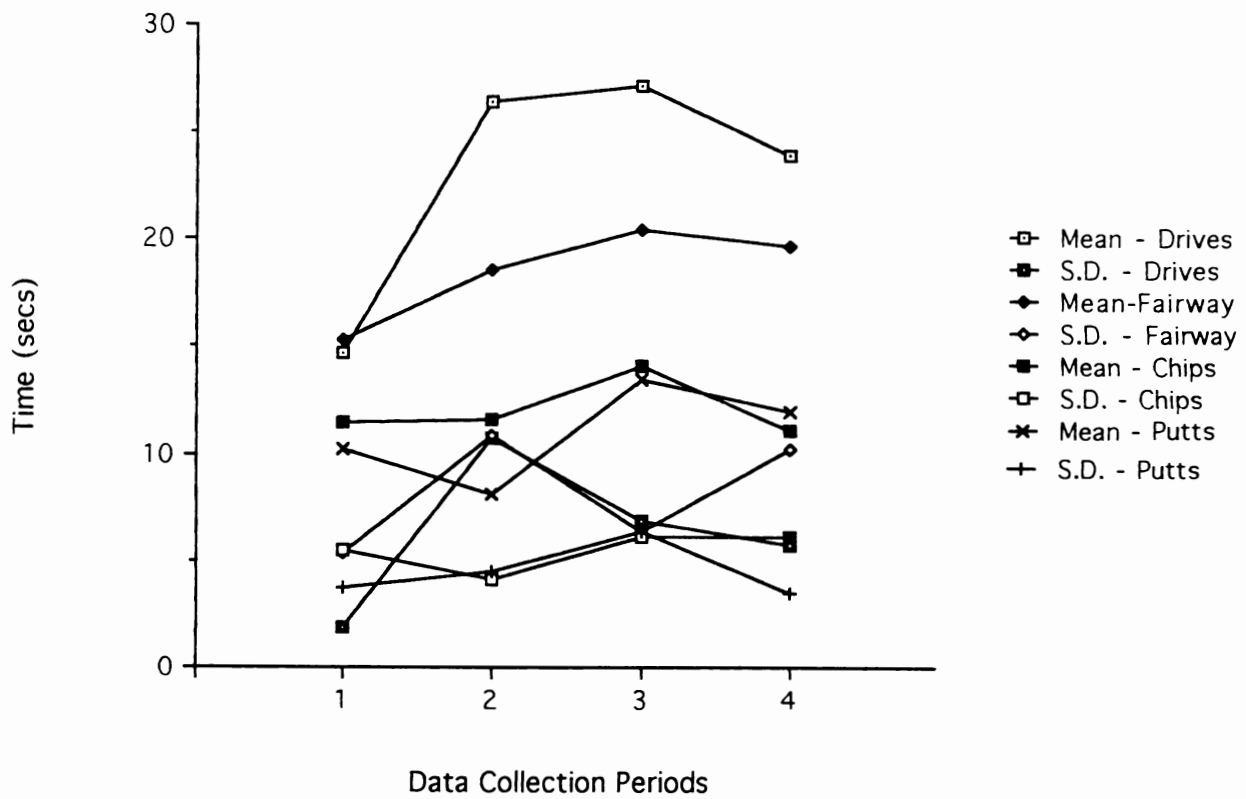


Figure 4.2.1. Leslie's timed preshot routines.

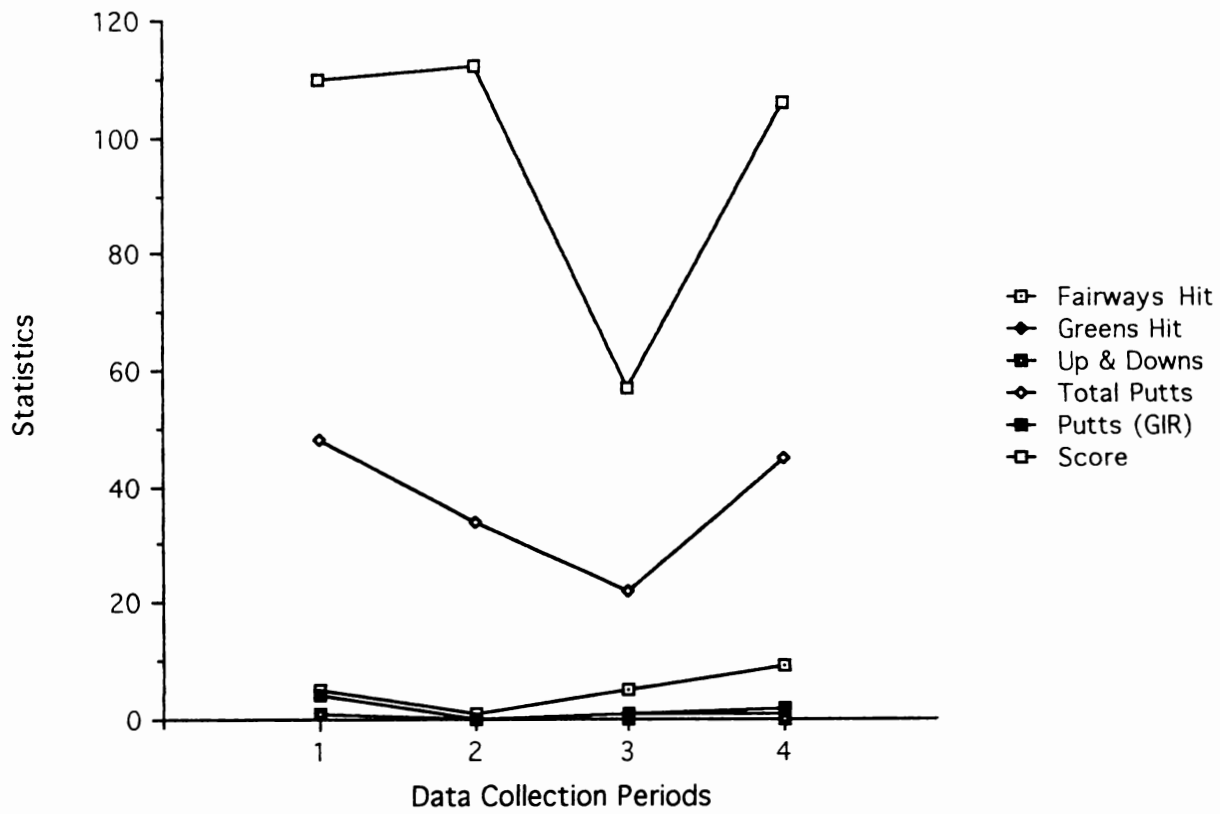


Figure 4.2.2. Leslie's game statistics.

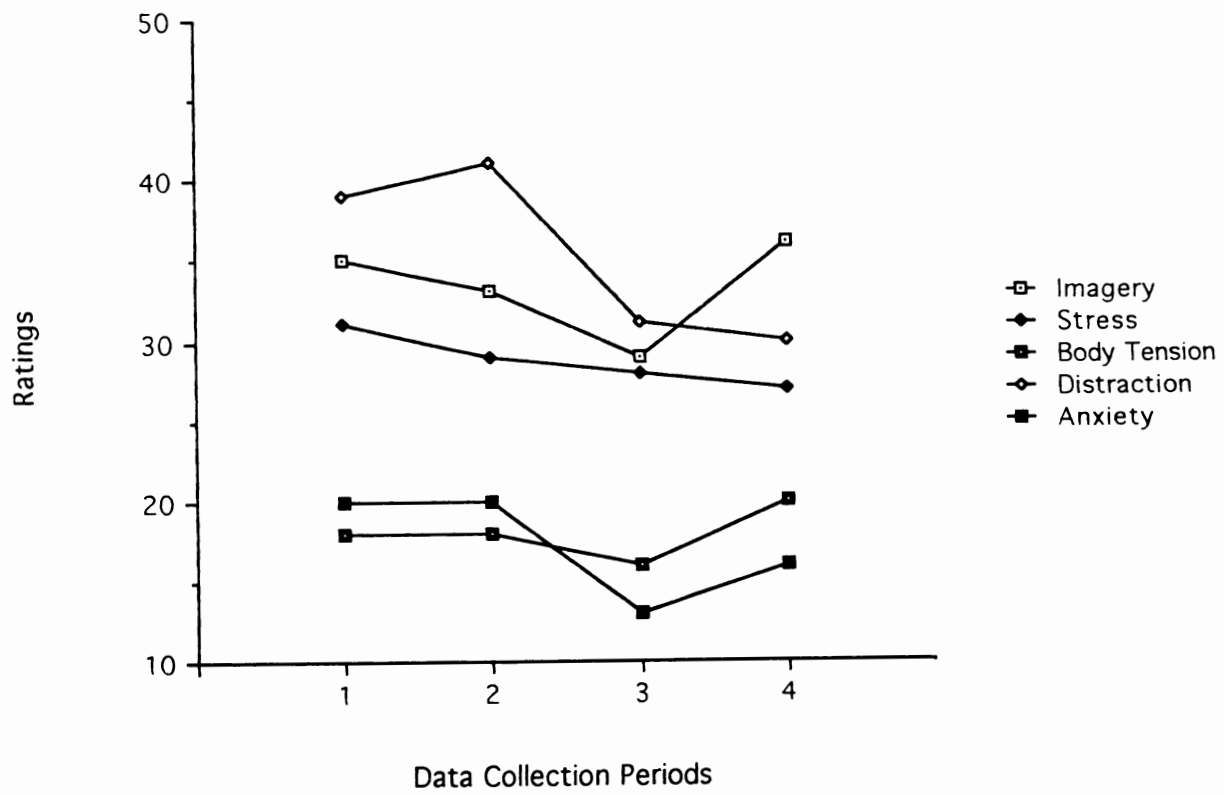


Figure 4.2.3. Leslie's self-evaluation ratings.

caused "drastic changes" in Leslie, as noted by her mother. Despite Leslie's busier lifestyle, her mother commented that there was a:

Drastic improvement in Leslie, in her attitude about golf, her ability to kind of channel her emotions in the game. Even though I can still see her temper, I see times when she has it more under control, and she can kind of slough it off and focus back.

Agreeing with the researcher that maturity would play a large role in the development of Leslie's game in future years, Leslie's mother thought that her daughter had changed in some very positive ways, these being manifested in her personality on the golf course. Her impressions of the mental skills program from what she saw and heard through interacting with Leslie were favorable.

Case 2: John

The Participant. John is a fourteen-year old Caucasian male who has been playing golf for ten years, but only competitively within the last three years. Avid golfers in his family include his father and uncles. The previous year was John's first experience in a large county tournament, and this past summer he played on the PGA Junior Tour. The participant is a freshman in high school and prior to entering the school year, had advocated his desire to play high school golf. The oldest of three children in his family,

John is an extremely ambitious and hard-working adolescent with intentions to achieve success in school and in his golf game (at the amateur and professional levels).

John plays with high technology and brand name equipment. He is comfortable with his choice of clubs, bag, shoes, golf balls, and glove, and seems to believe that a mixture of talent *and* equipment comprise a successful golfer, not merely the equipment. John's personality and mannerisms indicate that he is a reserved yet observant individual who possesses a great deal of motivation and thoughtfulness in his actions and words.

Data Collection 1 (Baseline). John was initially observed for nine out of eighteen holes, during which time the observer timed his preshot routines and kept game statistics. He was also asked to complete self-evaluations.

The performance data suggested that his preshot routines were somewhat consistent, with standard deviations ranging from 3.67 to 7.40 seconds; mean times ranged from 17.0 to 27.67 seconds, with the most time given to putting (Table 4.3.1). The most consistent preshot routines of his game were his drives, but it appeared that John's game could improve in consistency with his fairway shots, followed by his chipping, and then putting routines. The initial interview session was intended to pinpoint John's existent physical and mental routines.

John had acquired some fairly strong game statistics during the first nine-holes (Table 4.3.2). His score of 37 was enhanced by

Table 4.3.1.

Timed Preshot Routines - Data Collection 1 (Baseline)

Category	Time (seconds)	
	Mean	Standard Deviation
Drives	17.0	3.67
Fairway Shots	24.24	7.40
Chips	20.50	6.35
Putts	27.67	5.07

Table 4.3.2.

Game Statistics - Data Collection 1 (Baseline)

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	5	6	11
Greens Hit in Regulation	4	2	6
Up and Downs	3	4	7/12
Sand Saves	0	0	0/0
Total Putts	13	14	27
Putts on Greens in Regulation	7	4	11
Score	37	39	76

the fact that he hit 5 greens in regulation and had only 13 putts. For the overall 18-hole score of 76, he had achieved 11 greens in regulation and a total of 27 putts, with 11 putts on greens hit in regulation. Only hitting a total of 6 greens in regulation and making 7 of his 12 up and down possibilities indicated room for improvement on approach shots and chipping.

John's self-evaluation scores depicted a wide range of flexibility within his mental techniques (Table 4.3.3). Scoring above average (good) in imagery, anxiety, and body tension, average in distraction, and below average in stress showed that there were some areas for improvement in how John thought about his golf game. Being a rather reserved and quiet adolescent, perhaps John's stress score was high because he kept his thoughts and concerns within himself, thus not allowing for any cathartic techniques to take place.

Initial Interview Session. John signified that he had achieved a very competitive level of golf but was concerned about fine-tuning some aspects of his game in order to shoot around even-par more consistently. John believed that the most inconsistent part of his game was his scores, more specifically, his short game. Everything seemed to "depend on how good I'm hitting the ball that week". John struck the ball better when under pressure because, "It'll make me work harder at it; just hope everything works out for me". When not under pressure, he would "try to do the best I can, whether it's a tournament or

Table 4.3.3.

Self-Evaluation - Data Collection 1 (Baseline)

Category	Score
Imagery	35
Stress	29
Body Tension	18
Distraction	39
Anxiety	20

practicing".

One observation made by the researcher concerned John's responses to questions about himself; many times he generalized his answers with "you" instead of "I" or "me". For example, in answer to the question, "Do you feel different when you're playing for fun and when you're playing in a tournament?", John stated, "Most people feel nervous when they first go out... you won't feel as bad or as nervous as you are, when you first start". Perhaps he had meant to personalize the statement at some time, but many times he spoke in a very general manner.

John liked "to be aggressive", yet he also tried to "keep a clear mind" when he struck a shot poorly. He seemed to be well aware of his emotions and what role they played in his golf game. Observing him think about responses to certain questions was like watching a chess player decide over the next move. Everything John said or did was done after deliberate thinking, thus implying that most of his words and actions were executed with some set purpose. In preparation for competition, he would always try to play a course prior to a tournament to become acquainted with the layout.

Any performance problems in John's game he attributed to, "Either not making a good swing on it or not getting enough sleep or something like that". In an effort to reduce poor performance, John would "try to take my time and think about each shot, where I'm going to hit it". At the time of the first interview, John rated

his swing a seven on a scale of one to ten, ten being best. Due to a recent weaker grip change, he gave himself "about six weeks... [to be] about a ten". John believed that the grip change caused some inconsistency in his game, stating that "some of them [shots] are solid, some of them aren't". If he had been hitting it poorly on the driving range prior to a round, John would "try to just put all the bad things... out of my mind before I start hitting the first ball off the tee. Just concentrate on my game". It appeared that in negative or distracting situations, i.e., not hitting the ball solidly, John had a game plan that he used to regain his focus.

Although he didn't mind people watching him play at all, he stated that, "I don't like to play with people with bad attitudes... the way somebody else acts could affect you... it might frustrate you.... If you're playing with somebody bad, then you'll play bad too, I guess". This statement was a common theme for John throughout the mental skills program, and it appeared to be one of the only external factors that bothered him. In overcoming such a situation, he would usually, "Just try to ignore them as much as I can... don't let anybody or nothing... get you down". John professed a general rebounding technique in his game plan, one which could be used whether he was hitting a ball poorly or was being distracted by someone. Gaining more specific insight into this plan was an objective during the eight-week program.

As with many people who attempt to describe their feelings of a peak experience, John had a difficult time pinpointing what

made that experience so great:

I can't really describe the feeling. It just, I mean, you know when you're playing good, you're playing good. That's a hard question.... You just practiced enough and prepared enough for the tournament and know which shots to hit when you're familiar with the course.... Some of it just happened naturally because I'm... familiar with it. I just knew what kind of shot to hit and when I needed to hit it.

John attributed a peak experience to getting "enough rest" and just feeling "better when you're playing good", in addition to precompetition preparation. Sometimes, playing in the rain created a positive environment conducive to low scores, although John couldn't explain why it was so. His first experience with striking the ball well was his second or third tournament on the PGA Junior Tour. He commented that, "I felt that I was swinging better at it.... It just felt, everything just fell into sync that day, and I just felt comfortable playing".

In distinguishing a peak experience from a slump, John stated that:

I was a little disappointed in myself. I mean, it's like Johnny Bench. You know, he went through a bad slump through baseball, and everytime he went through his slump, he hit golf balls. And it's the same way with golf, you know, but you don't go out and hit baseballs.... You'll

get through them if you just keep practicing.

Apparently, John's cure to poor golf was practice; no mention was made of restructuring mental thoughts. John "just kept hitting ball after ball until I got out of it".

When asked about his mental and physical preshot routines, he noted, "I don't really have a mental one, I just try and make a good swing on every shot I have". Finding out what his thought processes were when putting a good swing on the ball was another objective of the mental skills program. John was able to describe his physical routine with ease:

I just take about two or three practice swings before I step up to the ball and then I'll just... try to hit the ball solid.... I'll pick a target to aim at, whether it be something behind the green or in front of the green or something. And just try to aim at that. Put it on the green. Try to hit the green in regulation.

His description seemed fairly general; if he did have a more structured routine, perhaps he didn't know how to relate it or wasn't aware that more was actually going on. His routine for putting was similar. "I always look at my putt at least two or three times before I try and putt it. I just try to put a solid stroke on my putt, try to two-putt the greens too". Again, a fairly general statement. Gaining more awareness of certain aspects of his routines, i.e., where he took his practice swings, and where he teed the ball up between the markers, would be discussed in

future sessions.

John did admit that he checked the course layout when surveying his shot, such as trees and water. He didn't seem as concerned about wind, lie, elevation, or yardages. In answer to the question, "Do you pace your shots off?", he commented, "Not unless I'm like on the exact yardage marker... most of the time I can just tell from where my ball lies, how far I am". Perhaps this added specificity of yardages and environmental conditions would help John fine-tune his game.

Towards the end of the interview, John's short- and long-term goals were established. His immediate short-term goal was to "place good in the... county tournament". John also wanted to play on the high school golf team. No mention was made of how to do that, i.e., number of fairways or greens hit during practice. Long-term goals included playing for a college golf team on scholarship. It was noted that John placed heavy emphasis on academics, as he remarked, "Grades come before golf. I do believe that... if you don't keep your grades up, you're in trouble". In a general sense, he sought improvement in his "short game, chipping... 90% of golf is the short game. That's where most people need to practice".

Initial Parental and Instructor Interviews. Interviews with both John's father and his golf instructor revealed good impressions about John's golf game, yet both suggested that there was room for improvement. Noting that John "wants to be good or

the best", it appeared to his father that he didn't "work at it enough". Being a rather reserved individual, perhaps John's focus was not externally observable to others such as his family.

John's golf instructor rated John's golfing abilities a seven on a scale of one to ten, ten being best. The instructor related this to a lack of "better quality competition, fields of competition, challenges of golf". More exposure to a higher level of golf seemed to John's instructor a key aspect in the growth of his student's game. According to his instructor, John was "consistent... the quality of his swing is relatively consistent in relationship to the fact that he's constantly trying to improve it, trying constantly to grow". In this growth, it appeared that John's "mental capabilities are very good... he concentrates pretty well for his age". In an overall sense, John's instructor believed, "He has an excellent attitude and an excellent temperament... he is very, very well mannered, he is very considerate, he is extremely kind. Not many young men can do that". Even noted by his father as "a little bit better than average", John appeared to possess some very advantageous qualities that could perhaps lead to success at higher levels of competitive golf.

John was not perceived without golfing weaknesses, however. His father noted that criticism over swing mechanics would occasionally anger John, who might have been working on fixing an aspect of his swing, such as his grip. In addition, John apparently also indicated through nonverbal behaviors how he

had struck a shot. His father commented that when John hit a bad shot, "He walks with his head down. He talks to himself. He hits a bad shot. And if he hits a good shot... he's got his head up, walking".

John's father believed that his son, "Needs to learn how to concentrate more on the golf course. Especially, he worries about other peoples' scores, especially mine. He needs to get his mind set on his game. He's worrying about winning, not John". His father thought that John could use some more diversity within his course management, as he commented:

He doesn't know how to lag them [putts].... He's got to learn how to use an 8 iron, 7 [iron], you know, around the green. Or a 9 [iron]. He thinks the wedge, the sand wedge, is all you're supposed to use around the green. In addition to more creativity around the course, development of "a better physical strength" was mentioned by his instructor.

Both John's father and golf instructor had similar conceptions concerning John's short- and long-term goals. Goals in the near future included playing for the high school team and playing the upcoming county tournament. His golf instructor stated, "I believe that...his utmost objective in life right now, is to be an outstanding college and amateur player, and develop into the very best professional golfer that he can be". Amateur collegiate golf and professional golf were common responses from both John's father and golf instructor regarding his long-term

goals, and John's father expressed the desire to see his son play in college and on the PGA Tour.

Based on the above, the following goals were set for the first intervention session: (a) discussing how to perform better when not under pressure through tournament preparation; (b) analyzing various individual mental preparation activities; (c) identifying specific distraction control techniques; (d) instilling more creativity within course management, this to be done during a noncompetitive round; and (e) examining certain aspects of all preshot routines.

Intervention Session 1. In discussing ways to prepare for a tournament and how to play well when not under pressure (John had indicated playing better when under pressure), some ideas came to his mind. Besides "eat the right foods... try and keep yourself healthy" and "try not to get sick... take care of yourself", John believed he could, "Do better at my short game... it just all goes back to concentrating on your short game.... When you're under pressure, you don't feel as much tension. You're just kind of like, just feel free". Perhaps this added challenge of having to do better or face the consequences was a type of threshold for John's more successful performances. When not under pressure, it would appear that putting *some* pressure on himself to do well would increase his success; yet, when asked if he ever challenged himself to hit the best shots he could, he replied, "If it's in a tournament, you know, I mean, I don't force myself. I just try to

make the best shot I can". This statement might have indicated that by not forcing himself, or not putting any pressure on himself, he relied on trying his best (internal) initiatives, and not on added (external) pressures of having to beat someone or beat the course.

In order to mentally prepare for competition, John indicated that, "I try and concentrate on every shot. Just try and visualize every shot you try and make on the golf course". The night before a tournament, he would "try to think about the things I've heard about it [the course].... There's really not much you can do". His course management included recognizing tricky pin placements; in this situation, he would "try to hit it toward the center of the green and try to two-putt it". John's practice and preparation habits for competition seemed to be very present-oriented, i.e., confronting each shot as it is encountered, and not thinking much about other future or past shots. Some discussion took place regarding inserting good swing images as well as course management into visualization prior to competition.

Issues relating to distractions and distraction control were introduced. A discussion occurred for the remainder of the session concerning what a distraction is and when a distraction becomes one, i.e., when one allows it to. According to John, if "you're concentrating on your game and visually imagining the course, it shouldn't bother you at all". This concept of taking control seemed very familiar to John; his sense of focus *appeared*

under control. However, what happened when he scored poorly on a hole; was it lack of concentration or poor shots? It was suggested that he might "relax and focus on something else when distracted". His reply, "Yeah. Try and focus on each shot you hit", signified that relaxation was not a significant part of his mental golf game.

Observing that he never indicated *how* he focused, the researcher attempted to help him explore his mental processes used in focusing when distracted. When asked how he focused when someone with a bad attitude played with him, he seemed to miss the point again as he answered, "If you're trying to help him out a little bit... I'd speak to him.... If he's acting out of the ordinary and being hateful to everybody, just try to ignore him".

Ignoring a distraction was certainly one technique to control distractions, yet he also seemed to imply through his statement that his concentration extended into the realm of helping another competitor with their mental game during a round. Benevolently assisting others with their problems during the course of a round could potentially be seen as a distraction from John's own concentration and golf game. After bringing this observation out in the open, some techniques which he could try in the future to overcome distractions were discussed: (a) use cue words to regain focus; (b) concentrate on hitting the fairway, green, or putt; (c) think about the factors involved with the execution of the next shot following a poorly-struck shot; (d) don't guide every shot; (e)

play the game and don't think about personal score or others' scores; (f) realize there are other rounds; and (g) don't get discouraged by one display of golf.

John had given some thought to his preshot routine since the last meeting. He described his routine as follows:

I try and make about two or three practice swings before I hit a shot. I just try and think about where I'm going to try and place the ball on the green, or wherever, and look at the pin, where it's placed, and everything.

From his description, John appeared to be incorporating both mental and physical aspects into his routine simultaneously. Most importantly, he knew why he used a preshot routine; his response to the purpose of his routines was, "So I can get the kind of feel for what kind of shot I'm going to hit. It just helps me hit the shot better".

In conclusion, John mentioned that he was still "trying to get down my chipping. My putting's been pretty good", as indicated by a journal entry which noted, "Today my putting went very well. I struck the ball very solidly with my irons and woods". Apparently this putting success was in a state of flux, because his next journal entry, only two days later, stated, "Today was a rough day for my whole game. I guess it was just too hot!". Based on John's wish to practice and learn new types of chips, i.e., bump-and-runs with various clubs, hillside chips, and chipping out of different types of grass, the mental skills session adjourned to the

chipping area.

The researcher believed that the following intervention session should: (a) assess John's actual imagery process through completing an imagery exercise; (b) follow-up on the distraction control techniques; (c) help John relax his mind through the use of a relaxation exercise; and (d) discuss how he would prepare for the upcoming county tournament.

Data Collection 2. A second observation of nine holes including timed preshot routines and recorded game statistics occurred two weeks after the baseline data were gathered. John was also asked to complete self-evaluations.

Performance data indicated that while the mean times on some preshot routines decreased, i.e., fairway shots and putting, others increased, i.e., drives and chipping. All standard deviations increased for the timed preshot routines. These times (Table 4.3.4) might have represented the refining of some preshot routines and the creative expansion of others. The increased standard deviations, especially for chipping and putting, could have pointed to an increase in John's awareness of what his preshot routines actually consisted of, thereby resulting in some inconsistency during his experimentation.

Both increases and decreases in certain game statistics were noted (Table 4.3.5). Fairways hit merely dropped to 10 from a previous 11, greens hit in regulation improved from 6 to 10, and successful chips occurred 50% of the time. Total putts increased

Table 4.3.4.

Timed Preshot Routines - Data Collection 2

Category	Time (seconds)	
	Mean	Standard Deviation
Drives	18.56	6.02
Fairway Shots	21.11	9.10
Chips	23.33	10.60
Putts	24.92	11.81

Table 4.3.5.

Game Statistics - Data Collection 2

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	7	3	10
Greens Hit in Regulation	4	6	10
Up and Downs	3	1	4/8
Sand Saves	0	0	0/0
Total Putts	14	18	32
Putts on Greens in Regulation	8	13	21
Score	36	39	75

from 27 to 32, 21 putts were achieved on greens hit in regulation, and John's score dropped from 76 to 75 (Table 4.3.5). The most remarkable increase was the number of greens hit in regulation. In golf, it sometimes seems that the more greens one hits, the more putts are accumulated (perhaps due to the distance of the first putt from the flag). John's putting average had increased slightly. No sand shots occurred during this data collection.

Scores from John's self-evaluations denoted improvement in some mental skills, regression in others, and consistency in yet others (Table 4.3.6). Although still above average, John's imagery score dropped slightly, signifying less confidence with his visualization abilities. Only increasing by two points was distraction, suggesting that John was more distracted by events or people surrounding his golf game. Perhaps his distraction rating was higher due to the fact that it had been discussed in the last intervention session. John's stress score improved by two points while his anxiety and body tension scores remained the same.

Intervention Session 2. John was asked to rate his visualization abilities on a scale of one to ten, ten being best. His rating was a six, and he believed that he could "try and concentrate more" to bring that score up to a ten. In order to assess the clarity and detail of his images, a visualization exercise was conducted. He was first asked to describe his current bedroom and then his favorite golf hole. While needing prompting for detail from the researcher for the former image, his

Table 4.3.6.

Self-Evaluations - Data Collection 2

Category	Score
Imagery	33
Stress	29
Body Tension	18
Distraction	41
Anxiety	20

account of his favorite golf hole was more elaborate and free-flowing. John seemed to possess clear images embellished with sound and smell.

In continuing the previous discussion on distractions and techniques to aid in overcoming them, John appeared to be somewhat more specific in his answers. When presented with various situations, phrases such as "don't let it interfere" or "think about it going on the green [instead of into the water]" were used by John. Agreeing with the statement, "So you're imagining the positive results instead of the negative", suggested that John was visualizing results he wanted to have happen, and not those that he didn't want to have happen. John also suggested the words "smooth" and "flow" as cue words that might help him out in certain situations.

As an introduction to relaxation techniques, John was asked to comment on what types of things he did to relax before he teed off. He would either "hit practice balls" or "close my eyes and think about positive things... just concentrate on one hole at a time". He even admitted to holding his breath during most of his swings. Based on this subjective information, a relaxation technique (adapted from Williams, 1993, pp. 185-199) was conducted which focused on relaxing his face, shoulders/arms/hands, and legs/feet. A shorter version of the exercise was discussed that he could try on his own at another time, and John admitted to using something similar when "on the driving range,

when I'm out there by myself hitting". It was suggested that he might practice this before the county tournament. To John, this seemed feasible. It was noted later in observations of John during high school competition that he frequently immersed himself in a quiet area to mentally prepare, and he seemed to be the only person on his team doing this, despite his freshman status.

One final topic was preparing for the upcoming county tournament. John suggested that his preparations for this important tournament could include: (a) practicing his game; (b) not worrying about the course; (c) eating a good breakfast; (d) replenishing energy at the nine-hole turn with food and drink; and (e) visualizing each hole the night before and where he wanted his shots to land.

The researcher believed that based on the recent data collection and personal feedback, the following intervention session should include: (a) analyzing how John's mental skills fared during the course of the tournament; (b) introducing simulation training as a way to enhance and structure practice; (c) obtaining more specifics in John's answers; (d) discussing the upcoming high school season; and (e) updating John's preshot routine.

Intervention Session 3. The county tournament that John participated in over four days was not as successful as he had hoped it would be, yet it had been a positive learning experience for him. The first day was the toughest for him, and he believed

that he, "Just couldn't putt the first day. Nothing went right. Don't know why... guess it's just nerves". John felt that it was "hard to think because I was too nervous and stuff... the next three days I calmed down a little". One reason he gave for being nervous was not knowing who the participants were and "how good they were and everything. I didn't know a lot of people". After admitting that one should play the course and not other people, he strongly believed that his nerves were still an underlying factor. The last three days he "fell into place... was able to think a lot better, and play a lot better too".

To overcome his nervousness, John attempted to use some relaxation techniques "in some spots", yet he thought his nerves were too overpowering on the first day. After being encouraged for trying to incorporate relaxation into competition, John also mentioned that the speed of the practice green and the speed of the course greens was not consistent, which he believed caused him some trouble. Had he prepared for the tournament on both slow and fast greens, perhaps he would have been able to adjust more quickly. In regard to this thought, the concept simulation training was introduced into the discussion.

Not being able to define 'simulation training', yet being able to provide examples, John thought of some situations which he might practice to diversify his knowledge of various course conditions and lies: (a) practice in the rain; (b) chip from different lies; (c) adjust to the heat; (d) watch the weather; (e) hit a wider

variety of shots with the same club; and (f) drop a practice ball in areas never expected to be encountered during play. John's understanding of simulation training was expressed in his statement: "Try and practice all the shots you can on the range, so if you have a situation where you have to use one of them, you'd be ready for it".

Also discussed was the possibility of John manipulating his emotions during practice; could he make himself feel nervous, excited, stressed, or tired and then recover from these feelings with certain mental skill techniques? Developing a greater assortment of "If-Then" plans would perhaps ease John's nervousness when it did arise, as he would have something to combat it with. An example of an "If-Then" plan in this context is, "*If I begin to feel the first-tee jitters, then I will... [sit on my golfbag and think of my cue word]*".

John expressed an interest in beginning high school and playing for the boys' team when he remarked, "I've been waiting a long time". His specific goals for this upcoming high school golf season included: (a) making it to the state tournament as a freshman, as his cousin had done previously; and (b) playing second or third man on the team. A future goal included being the team captain, but he did not think he could achieve that position during his freshman season because of another team member who he believed had the first position secured. Prior to playing on the team, he thought that being able to play second

man on the team was partially due to luck. There appeared to be some credit given to external factors, perhaps due to John's freshman status on the team.

Regarding his preshot routines, John commented that he had, "... been trying to practice it [preshot routine] a lot more than I have been. Try and take two or three swings every time... just pretty consistent right now". A small concern was noted by the researcher in relation to practice swings and fatigue; John acknowledged the fact that three practice swings before each shot, approximately 72 to 80 shots/round, might increase his fatigue.

John's journal entries dated during the county tournament provided some pertinent feedback regarding his thoughts and concerns throughout the four rounds. The initial tournament entry depicted his frustration as he wrote, "... I shot a 90 and my confidence was shot! I couldn't putt. I was missing 3 and 4 footers for pars". Apparently, John believed his thoughts were hindering his performance. John's second entry during the competition went as follows: "Today my score was better... I shot a 78 and putted better. I kept my head straight today and had a solid round".

Fluctuating in his third entry, John commented that, "I played solid on the back nine, but toward the end of the round I felt tired, and everything went down from there". Not being used to participating in such long tournaments, i.e., four days, the competition appeared to wear on John. If it did during the third

round, it didn't show on the last day, as his journal entry noted, "Today I played excellent golf. I shot even par on the back nine... only had one three-putt all day. I shot a 77 today!"

In addition to the interview session, John played nine practice holes while the researcher walked along, discussing with him: (a) various strategies he was considering or didn't even consider; (b) reasons behind his club selections; and (c) how he would execute shots if he was in a competitive situation; as well as (d) pacing off putts and chips; and (e) walking up to or on the green to analyze its undulations before chipping or putting, i.e., walking on the green and "feeling it with the feet".

Based on personal feedback from John and upcoming events with the high school, the researcher believed the next intervention session should include: (a) discussing competition at the high school level; (b) analyzing short game strategies and progress; (c) updating progress on mental skills development, i.e., imagery, relaxation, distraction control; and (d) finding ways to decrease John's nervousness during competition.

Data Collection 3. John was once again observed for nine out of eighteen holes; preshot routines were timed for consistency and game statistics were recorded. Self-evaluations were also completed by John.

Times for John's preshot routines found in the performance data indicated a desirable decrease in three mean times from the previous data collection, i.e., fairway shots, chips, and putts;

consistency improved in all preshot routine categories, as indicated by decreased standard deviations (Table 4.3.7). While the mean time for John's preputt routine denoted the greatest drop, it was still fairly inconsistent with a standard deviation of 11.38 seconds. The most improved preshot routine category was found within fairway shots, with a standard deviation of 2.37 seconds. It appeared that John had become somewhat more settled with his preshot routines, except for his putting. This improved consistency most likely contributed to John's amazing game statistics, especially the 33 he had recently scored for nine holes.

Game statistics for the third data collection noted an improvement in all categories except fairways hit (Table 4.3.8). John's greens hit in regulation increased to 11; he had 5 successful chips and only two unsuccessful chips for up and downs. He recorded 12 putts on the front nine, with a total of 29 putts for 18 holes, and his overall 18-hole score was 71. Obviously, hitting only 7 fairways during his round did not affect his performance. As indicated by the game statistics, John had certainly improved in his short game to an extent that he could rely on his chipping and putting to help decrease his scores. No sand saves were recorded as John did not hit any bunkers.

John's self-evaluation scores showed an improvement in all mental skills categories except imagery (Table 4.3.9). It appeared as if John had fairly good images, as indicated in the imagery

Table 4.3.7.

Timed Preshot Routines - Data Collection 3

Category	Time (seconds)	
	Mean	Standard Deviation
Drives	21.78	3.35
Fairway Shots	20.0	2.37
Chips	21.83	4.25
Putts	23.27	11.38

Table 4.3.8.

Game Statistics - Data Collection 3

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	2	5	7
Greens Hit in Regulation	4	7	11
Up and Downs	4	1	5/7
Sand Saves	0	0	0/0
Total Putts	12	17	29
Putts on Greens in Regulation	8	14	22
Score	33	38	71

Table 4.3.9.

Self-Evaluation Scores - Data Collection 3

Category	Score
Imagery	29
Stress	28
Body Tension	16
Distraction	31
Anxiety	13

exercise, yet he seemed to lack satisfaction with his images that he produced on the golf course. It also seemed that speaking about distractions and causes for nervousness might have contributed to lower levels of stress, anxiety, and body tension. Perhaps the relaxation exercises had played a role in these improvements. The fourth intervention session should include determining why John had felt improvements in the areas of stress, body tension, anxiety, and distraction.

Intervention Session 4. This session began immediately with a discussion of John's career nine-hole round, a 33. John's journal entry pointed out his elation regarding his achievement. "Today was the best nine holes I ever played. I recorded a -2, 33 on the front nine.... My putting was just awesome." In personally describing his recent peak experience, he stated:

I hit most of the greens and the fairways in regulation.... Main thing that day was probably my putting; I putted probably the best I've ever putted... and got lucky on some of them, but you've got to have some luck.... I felt more relaxed than most of my other rounds because I was just feeling real good that day I guess. And probably because school wasn't as hard that day... It just all fell in sync that day... the tempo was there.

Most importantly, John had started pacing off and getting a feel for the greens before putting and chipping.

It helped me on one hole, because I wasn't sure what

kind of shot I was going to hit and that's when I walked around and looked at it. I got a better idea of what kind of shot I was going to hit.

In response to the researcher's comment, "So walking the green helps you plan for better options", he replied, "Yeah". This addition to his course management appeared to be of great assistance to his concentration, awareness, and overall game.

John was also very pleased with the development of his swing. He could now feel when the club was at a comfortable position at the top of the backswing, and his grip was "coming to me better now". These changes were discovered on his own. John had not been to see his golf instructor for several months.

It seemed that John was enjoying high school golf. He indicated a preference for playing team golf instead of individual golf and looked forward to playing a variety of different golf courses. Playing with adolescents his age eased his nervousness, as noted when he remarked, "In high school matches, you feel more relaxed because you're playing with people more your age than you are in the [county tournament]... you know most of the people and stuff".

In discussing how using mental skills had helped him cope with high school competition, John commented that he had been practicing various techniques and was able to give more specific answers and examples with certain skills. When distracted by score or people with bad attitudes, John remarked

that remaining in the present, i.e., not thinking about future score, and ignoring these distractions worked best for him. Before, when missing two- or three-footers in putting, his "mind gets real messed up". But recently, "everything just seems to be following here, lately, and I'm feeling real good about it".

In regard to relaxation, John stated that, "During some of these tournaments, or before, I've been loosening up my muscles, just like tightening up [and then relaxing]; I found that's been working pretty good." And although he was only using imagery with his putting, he credited his "real good" short game to visualization.

My putting, I know, has improved a lot. My chipping has too, really. I just imagine all my putts going in the hole... most of them will start dropping... you feel more confident, I guess. I just see them going in, really.

Amazing things!

Considering that things seemed to be going well for John, it was suggested that he write down in his journal how he felt and why. The next time he didn't feel as confident, he could relate back to his entry and perhaps remember something that he had been forgetting.

Various journal entries described John's positive mind frame throughout the next week. Some of his comments appeared to be very outcome oriented. Phrases such as "shot well, firing a 39" and "our team ended up winning" indicated an excitement in

John's golf game. Closer to the time of the next intervention session, however, John's confidence in his game (or perhaps confidence in his streak) appeared to deflate. Although he shot a 38 during one high school match, he wrote, "I should have shot -1 [one under par]. I didn't putt up to my normal [or perhaps new] standards and just had an off day. Next week we have three straight road trips". Putting poorly for one day, in John's mind, seemed to make him believe that he had an "off day". Although some days the ball is not struck with the best feel, scrambling can become just as much of a scoring force as perfect shots can be; the scorecard does not say how the hole was played.

The fourth intervention session did not cover reducing nervous arousal because the session had been so positively focused on John's career round and confident frame of mind. The following session would include: (a) checking on John's short game progress; (b) conducting an imagery exercise, to try to find out why he had rated his imagery lower; and (c) discussing techniques to help John reduce his occasional nervousness.

Intervention Session 5. At the beginning of this session, John had admitted that practice time for golf had been cut back to concentrate more on homework. Although he had been "working on... chipping and putting, like late in the day... homework's been real tough". He agreed with phrases such as "learning to balance your time" and "pacing yourself".

When asked about issues John wanted to discuss, he felt the

need to relate his improvement in chipping. Having discussed and practiced various types of chip shots in a previous session, John noted that, "I remember the shots... you showed me, like around the greens, you know. Those have helped me a lot... I can tell that my chipping's improved a whole lot". On the average, that may have appeared to be so, yet he was asked to elaborate on a recent round during which he "chili-dipped" or "chunked" a chip, i.e., mishit a shot heavily, on the last hole of a high school match. Asked to incorporate his explanation into an imagery exercise, John recalled with clarity the last hole of the particular match. Apparently, missing the chip was not frustrating to him; missing the two-foot downhill putt "kind of aggravated" him. Having felt that he had given his full attention to his chip, he stated:

I think I chipped pretty well. I can tell my chipping's improved because I started using different clubs... instead of one or two, because I learned there is a lot of different shots you can use with each club.

For future reference, John believed that to make the PGA Tour, it would take "a lot of hard work and practice... lot of perseverance... good grades... how bad you want it". John thought that using imagery in conjunction with putting would be a factor of success in the years to come. He stated, "My philosophy is that if you can imagine more putts falling in, then more will go in". The importance of belief and in confidence in himself seemed to be foremost in his mind, and mental skills, such as visualization,

were stressed as vital ingredients in his future golf game.

The largest portion of the session involved discussing some of the most relevant rules of golf with their proper penalties and options. Knowing what to do in regard to the rules may sometimes be stressful, due to the many intricate parts of each rule; thus, questioning John on his knowledge of the rules was purposeful in verifying that he did in fact know all of his options and could apply them with ease in competition. Out-of-bounds, water hazards, lost ball, unplayable ball, cartpath drops, spike marks, and hitting the wrong ball were some of the major rules covered during the session. His responses indicated that he was uncertain on some of the rules. After discussing the rules of golf, John was presented with some ruling situations to see if he understood how to apply certain rules.

In observing that John was happy with his swing and appeared content with his golf game, the researcher believed that the following issues should be included in the next session: (a) an overview of John's entire golf game; (b) John's preshot routines and where he used them; (c) John's impression regarding two articles given to him; (d) a presentation of various golfing situations and how John would confront them; and (e) the use of control in hitting knock-down approach shots.

Data Collection 4. With two sessions remaining in the mental skills program, John was once more observed for one nine-hole round that involved timing preshot routines and recording game

statistics. Performance data denoted some changes in John's preshot routines (Table 4.3.10). Although drives, fairway shots, and chips all decreased desirably in their mean times from the last recording, only fairway shots and chips were at their lowest time ever since the onset of the intervention program. Drive, fairway shot, and chip mean preshot routine times never increased beyond 7 seconds during the program. All standard deviations, with the exception of putting, increased in the last data collection, with drives increasing only .03 seconds from the last recording. Apparently, John was fairly consistent in his drive preshot routines and more inconsistent in his fairway shot and chip routines.

Preputt routines still varied approximately 7 seconds from the mean time, yet it had improved remarkably from the second and third recordings, indicating that while John seemed to be taking more time with his preputt routine, he was gaining more consistency toward the end of the intervention program. An observation regarding timed preshot routines noted that within the third data collection (Table 4.3.7, p. 142), all mean preshot routine times were within 3 seconds of each other; in the fourth data collection (Table 4.3.10, p. 152), all mean preshot routine times (except putting) were within 1 second of each other, signifying more mean-time similarity across preshot routines.

Table 4.3.11 indicated John's game statistics, most of which were positive at this recording. Total putts and overall score had

Table 4.3.10.

Timed Preshot Routines - Data Collection 4

Category	Times (seconds)	
	Mean	Standard Deviation
Drives	19.22	3.38
Fairway Shots	18.11	6.90
Chips	18.50	9.19
Putts	33.38	7.71

Table 4.3.11.

Game Statistics - Data Collection 4

Category	Front Nine	Back Nine	18 Hole TOTAL
Fairways Hit	6	5	11
Greens Hit in Regulation	5	7	12
Up and Downs	1	2	3/5
Sand Saves	0	0	0/0
Total Putts	17	19	36
Putts on Greens in Regulation	10	14	24
Score	41	39	80

increased in a slightly undesirable manner. As noted earlier, hitting more greens in regulation may increase the number of total putts accumulated in a round of golf; John's statistics showed this occurrence. Desirable statistics were achieved in approach shots (greens hit) and chipping (up and downs), indicating perhaps a better accuracy and confidence in shots involving green-play. As usual, John's drives were fairly accurate, hitting 11 out of 14 fairways. Perhaps the increased score could have been related to John's schoolwork and a busy high school golf schedule, thus presenting fewer opportunities for him to practice. The higher score may also have resulted from changing environmental factors in the fall season, i.e., aerated greens, colder temperatures, wind, etc.

Intervention Session 6. This session covered a wide variety of topics, yet began with an overview of John's life both in school and golf. For John, things had been going "pretty good" because he had been "playing well lately and just keeping my concentration more". He felt as if certain short game drills for focusing had "been helping me a lot". Acknowledging that practice was limited due to the amount of schoolwork, his time for golf practice would have to be focused and of good quality, not quantity.

John rated his current golf game at an eight on a scale of one to ten, ten being best, and he believed that putting had made a difference because he could "tell a difference in my putting... real well". At the beginning of the intervention program,

John (and his golf instructor) had rated his game a seven; apparently John felt that he had improved overall at least one point on the scale, and that his short game was partially responsible. Overall, John noted that his scores had "dropped tremendously" and agreed that he had shaved nearly three strokes from his nine-hole average score since the summer, a fact that he seemed very proud of, and rightfully so with his dedication to constantly improve.

Imagery had been a mental skill that John was practicing, "mostly in my putting". He noted that imagery was becoming an increasingly integral aspect of his shots "on the tee... like where I want to hit it off the tee". When asked to comment on his preshot routine patterns, he replied:

When I look up, I first step up to the drive, and then, well, once I hit the fairway, then I'll... most of the time I try to imagine myself hitting it towards the green, or the middle of the green.

Although this description of his preshot routine still lacked detail, i.e., thoughts, practice swings, glances, and cues, John was aware that he was incorporating more concentration into his routines:

It's [preputt routine] probably a little longer now because I'm starting to concentrate a little more. I try to take my time as much as I could because I know each shot counts... you don't want to waste a shot, just by not looking it over or something. You don't just get up and putt it; you have to

look it over. That's probably one of the ways I've improved mostly.

When asked if his preputt routine was done out of necessity or because it actually helped, he answered, "It's really helping me a lot. Sometimes if it's like for a tournament win or a match win, I feel like I have to do it most of the time". This statement suggested that for the majority of the time, John's motivation to execute his routines was intrinsically-based; he did it for himself because he wanted to. In certain pressure situations, this habit seemed to have become a cue or a comfort zone which he executed to ensure that he gave himself enough time and didn't rush an important putt.

In looking over John's self-evaluations from the third data collection (Table 4.3.9, p. 144), it appeared that John was stressed about certain situations that required patience, such as waiting for a group to clear the green so he could hit. A few scenarios were constructed by the researcher to probe John's mental skill strategies in handling these situations. When asked what distracted him, John answered that people with bad attitudes and loud golfers were the only distractions to him, and his distraction control technique were to ignore them and refocus on the task at hand.

In situations requiring patience, John commented that he was eager to hit shots during practice rounds, but "if it's an important shot, I'd say no" to hitting a quick shot. John's

technique to control his eagerness was to visualize his next shot or think about his options. He indicated that sometimes he felt like yelling at the slow group to speed up play, but most of the time he would, "Just basically sit there and wait on them... sometimes I'm eager to get done, like I'm in a hurry or have to be somewhere, but you can't help that". Techniques he thought he could use to overcome these hurried feelings included relaxing and "keeping your muscles stretched... try to walk around". Refocusing and pacing his walk to the ball were discussed as other options.

John was also asked to recall positive situations on the golf course, i.e., what made him smile during a round of golf. He indicated feeling happy when "somebody congratulates me for something I did, like say, 'Good shot!'... and I like it when my coach comes over and says I'm doing a good job... and when my Dad... when he's there". John's description of positive moments in golf indicated that golf was rewarding to him in many ways.

The last portion of the session involved discussing the knock-down approach shot. This shot, which is defined by somewhat of a shorter yet very controlled swing, was one which John thought would be very beneficial to his game but that he could not execute very well. Situations in which he thought he could use the shot were: (a) for fifty yard shots; (b) as a windcheater, i.e., with or against the wind; and (c) if he was in-between club selection and he chose to tone down the longer club. Parameters of the swing used to hit this shot were discussed and

differentiated from a normal swing. Key words describing how the knock-down shot felt or should feel to John were created, i.e., crisp, controlled, and three-quarter swing. John later practiced these into a green from approximately 60-70 yards out.

In closing, John remarked, "I just hope I can keep it up. Don't try nothing new or anything". Apparently pleased with his lower scores and more diversified short game, it also appeared that John maybe felt as if this success that he had been looking for would somehow disappear. Based on the latest performance data and personal feedback, the seventh and last intervention session would include: (a) reviewing the mental skills strategies used during the intervention; (b) providing John with positive encouragement to continue developing his mental golf game; and (c) obtaining some general feedback from John regarding various aspects of the intervention program.

Intervention Session 7. The last session began with John feeling "pretty good" about his golf game. He had, apparently been playing "pretty well". Most improved in his game, according to John, were his tee shots and his putting. He had been "hitting more fairways" and hadn't been "slicing it as much".

For explicative purposes, the researcher asked John to describe one hole which had gone very poorly for him in a tournament. He had been observed by the researcher during this high school match, and although he was observed for his overt actions, his covert processes needed verbalization. John had lost

two shots after an unlucky break off the tee, hitting a lone branch which knocked his ball into thick grass in a hazard. Frustration had seemed to dominate his every rushed slash through the extremely thick grass on a very steep hillside lie. Recalling the incident, he noted:

I was kind of frustrated... I think I could have saved two shots there; I know I could have... taken a more lofted club instead of hitting a three iron out of there... I just felt like I could probably get it up, that was my mistake right there; just a mental error.

John's quest for more distance instead of the much-needed loft on that specific trouble shot had cost him vital shots, yet it appeared that he had learned from his mistake.

The second hole could have continued to be a distraction for John, yet he recovered from the triple bogey with birdie attempts, pars, and an occasional bogey. The researcher questioned John about his thoughts on the third tee. He replied:

Just try to keep hitting it straight and try and hit the greens in regulation. Just try and two-putt. Don't try nothing real fancy, you know. Because I knew I was playing bad after the second hole, so I figured that if I just keep making a bunch of pars, just keep on playing, it'll turn out pretty well.

John's positive self-talk aided him in overcoming his distraction; he still shot a 41 with a triple bogey and two other bogeys. Had

he made his three or four putts for birdie from within 10 feet, his score would have dropped. Although it seemed as if he put good strokes on his putts, the aerified greens kept his golf ball out of the cup. In regard to the conditions of the greens, he noted, "It [the ball] hit about four or five of those aerated holes right there, and I thought it'd drop but it started hopping. Couldn't do nothing... about that". Despite a devastating hole in the early part of the round that day, John was able to stay mentally tough and take control of his game.

In relation to John's thought processes, he was asked to comment on any differences he had noticed in them in the past few months; how had he grown in his thinking? He stated that he felt his thought processes were:

A little bit more detailed now. I believe that helped a little bit... that imagery exercise. And that and tee shots, I think, have really improved, because when I start imagining them hitting the green or going in the hole, most of them do that, and I think that helps a lot.... That thought was going through my mind as I was going through my backswing. I was going right at it and I was like, 'YES!'. It's really improved since the summer.

Although the quantitative data throughout the study had indicated various improvement in John's golf game, these pieces of covert information relating to John's strategies and thinking processes allowed the researcher the opportunity to better

understand why John was improving.

Toward the end of the last intervention session, general feedback on the program was obtained. It seemed that John thought it was beneficial to his game, especially his short game, and a combination of both mental preparation and swing practice was a key factor. He commented:

I've been very pleased with it. I think it's helped my game a lot. Lot of different exercises you can do to help your game... it's taken a lot of mental errors out of my game.... My putting has improved dramatically. I've been making a whole lot more putts than I did this summer.

Asked how comfortable he would be playing high school golf without having gone through the intervention program, he believed, "I think it would probably be a little worse.... I wasn't used to any of that before, and it's really helped a lot".

The researcher also inquired about any changes which John would recommend for future programs. He replied:

No, all of it was about what I imagined it to be. I think what it does is it helps you to concentrate more on your shots and what you thought about your shots.... If you can cut down on a lot of mental errors... you can play pretty decent.

The statistics and journal were also beneficial to John, as they allowed him to "keep up with a lot of... scores", and he could "look back and see why" he scored as he did on certain days. John

announced an intention to continue using statistic sheets and the journal in the future. One final quote from John summed up his overall impressions of what the program provided him:

You asked a lot of different questions, you know, and some of them I've never been asked before, and it allowed me to express what I thought about it... a lot of people don't ask these types of questions, and I guess I just got a chance to tell what I thought about it.

In preparation for the final meeting, the researcher believed that the follow-up interview should explore: (a) John's experience at the state high school championship; (b) opinions and suggestions regarding the intervention program; and (c) impressions of John's personal mental skills progress.

Participant/Parental Follow-up Interviews and Self-Evaluations. These interviews occurred approximately one month after the last intervention session. During this intermittent period of time, John had competed in his first high school state competition. He participated as an individual from his team, as only he and another teammate qualified for this level. He was also asked to complete self-evaluations regarding his thoughts about his game at this time.

John's self-evaluation results indicated improvements in the categories of imagery, stress, and distraction; body tension and anxiety scores had undesirably increased slightly, perhaps due to the state championship (Table 4.3.12). John's imagery score was

Table 4.3.12.

Self-Evaluations - Data Collection 4 (Follow Up)

Category	Score
Imagery	36
Stress	27
Body Tension	20
Distraction	30
Anxiety	16

at its highest mark ever, suggesting that he was fairly confident with his images. Stress and distraction categories were at their lowest marks ever; it appeared that John felt less worried in certain situations during his golf round and was less bothered by potential distractors. Although increasing in body tension and anxiety categories, John's scores indicated that he was still above average (good) in these areas.

In discussing the state championship with John in the follow-up interview, he admitted to being "a little nervous... there were a bunch of real good players". Believing he did well for his first state championship appearance, his main goal was "just to get experience". Although indicating that he felt "pretty comfortable" playing there, he didn't hit solid shots the second day, which contributed to a less than desirable round. Despite his higher-than-normal scores, he was "just happy to be there".

John thought that overall, his scores had "dropped tremendously", after figuring that his stroke average for the high school season was 39. Being pleased with that number, John commented that to get back into shooting good scores next year, it would just "take some time to get back in rhythm". This he intended to do through extensive short game practice and concentration on his swing. In addition, he believed he could, "Try and get my mental game down... do some exercises, try and think a little bit more when I'm out there playing, especially around the greens". Specifically, John intended to work on not thinking about

his score:

I think a big problem of mine is thinking too much about my score. I think I'll figure out ways to try and... concentrate on something else; not to think about what I should shoot. Just go out there and have a good time.

It seemed as if John had a winter practice plan set in his mind, and it included actual swing practice as well as mental skills exercises.

The results from John's performance data were briefly discussed with him. No questions or comments were noted from John concerning the data. Figures 4.3.1, 4.3.2, and 4.3.3 represent a cumulative visual presentation of John's timed preshot routines, game statistics, and self-evaluation ratings, respectively.

John expressed satisfaction with the mental skills program when he stated, "I liked the exercises, the mental exercises that you taught me... especially where you tense up and then relax". It appeared that his future golf training regimen would follow some structure-format that intended to achieve certain goals. Goal windows were discussed as a potential tool for next year when he redefined his goals prior to the spring season. In conclusion, John advocated positive feelings concerning the intervention program and had felt that his golf game had, thus far, benefitted from what the program had to offer.

The parental follow-up interview with John's father discussed a great deal of John's experience at the state

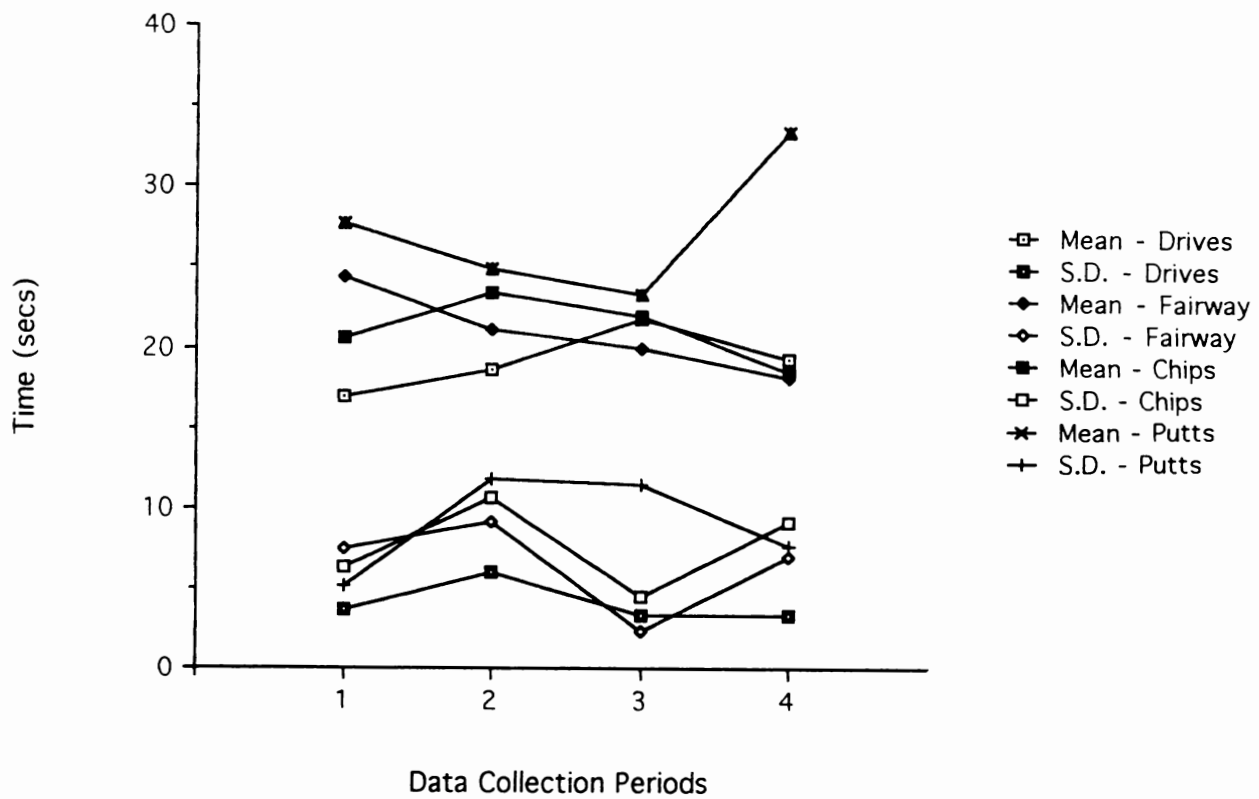


Figure 4.3.1. John's timed preshot routines.

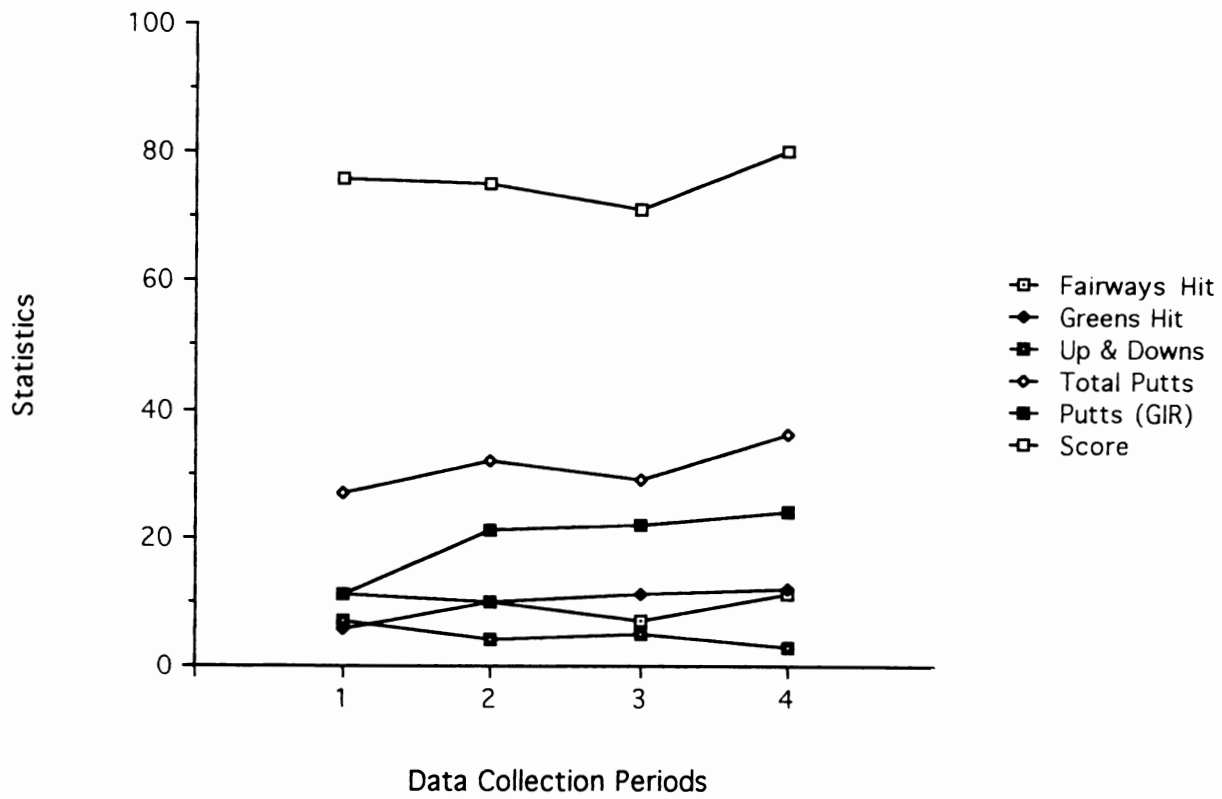


Figure 4.3.2. John's game statistics.

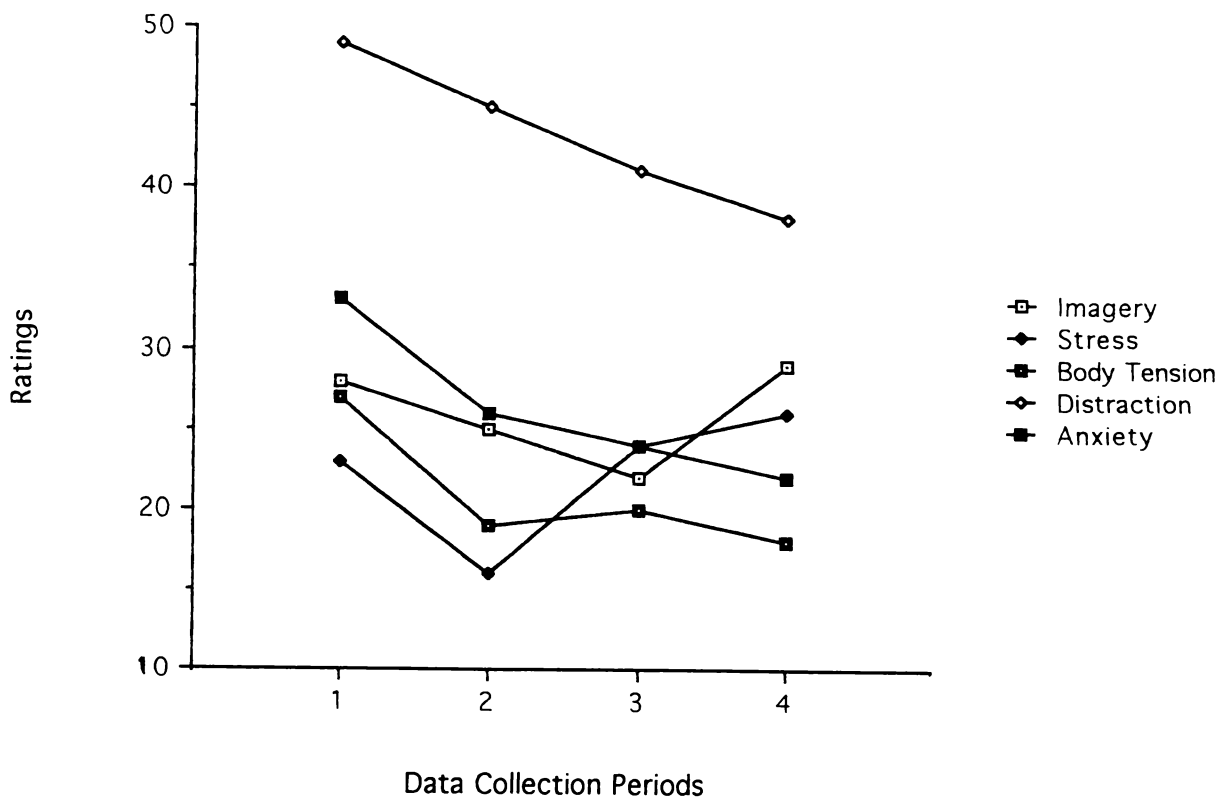


Figure 4.3.3. John's self-evaluation ratings.

championship. Admitting to some nervousness at times when watching his son, he believed that the program "helped him a lot, especially in his putting, short game. He stays more focused on what he's doing". When asked how he could tell that this was happening, John's father replied:

By just watching, when he would play with me, I could tell, you know, he didn't really care that much; he doesn't talk hardly now, when he plays golf. He's more focused on his game. And his short game has really improved. I was very surprised.

John's father did notice that his son looked very tired and "worn out" during some of the state tournament and did not appear to want to rest when waiting. John also seemed to be very quiet on the course, and his father didn't "know why... keeps it all in or what".

Despite these observations, John's father felt that maintenance of a mental skills training program would assist John in becoming an even better golfer in the future; physical strength was another factor named. With these parental concerns for John's future physical and mental growth in golf in mind, it appeared that John's father believed that the intervention program had been beneficial to his son's golf game.

Discussion

After reviewing the qualitative and quantitative data in

their entirety, some main issues regarding case study interventions were noted. First and foremost, the importance of individualizing interventions is clearly a vital concern when structuring a mental skills program for any type of athlete. Leslie and John would not have benefitted from the exact same programs based on their levels of golf and personalities. Leslie was outspoken and more diverse in her focus of golf while John was reserved and intent on refining certain aspects of his golf game. In addition, Leslie was exploring a new level of competition by competing as a freshman against males her age; John competed as a freshman against other males who he already knew. Individualization of mental skills programs has been stressed in previous research (Boutcher & Rotella, 1987; Johnston & McCabe, 1993; Ravizza & Rotella, 1982; Terry, 1994) and should be considered a main factor when developing personal mental skills interventions, as no two athletes are exactly alike.

Maturity and lifestyle are two issues which are also a part of any athlete's total being. Athletes should be able to bear the responsibilities of commitment to mental skills programs. In certain cases, some athletes are more mature for their ages than others, and this must be considered during individual assessment of each athlete. Li-Wei et al. (1992) demonstrated that children as young as seven years old have the capabilities to benefit from mental skills training. At various ages, athletes may have other life issues to be concerned with as well, whether these are school

homework, financial security, or romantic relationships. Terry (1994) and Davis (1991) describe tennis programs developed for two different age groups. These programs may revolve around similar concepts, but the age-specific content within each intervention varies. Understanding how an athlete reacts to various situations, both inside and outside their sport, should be a determining factor when implementing a mental skills training program.

In seeking to improve performance, consistency becomes a key concept during the training. Reducing variability in desired behaviors may allow an athlete to achieve an optimal state or performance more quickly. For instance, if golfers reduce the variability of their preshot routines in time and in specific actions, they may be more at ease with their in-grained routines than opponents who are constantly trying to find a comfortable niche during competition. Previous research has suggested that performance outcomes seem to be result of structured preperformance behaviors (Boutcher & Crews, 1987; Cohn et al., 1990; Crews & Boutcher, 1986a, 1986b). Consistency may eventually increase confidence, which may in turn lead to improved performance, an ideal occurrence for any athlete.

During the intervention sessions, Leslie and John showed knowledge of elite golfers' mental skills abilities. As heroes and heroines to these young golfers, PGA and LPGA Tour players appear to serve as models for rising golfers. Becoming aware of

how to apply these elite athletes' traits to an amateur mindframe may speed up an assimilation process into a professional or Olympic status. Research exploring qualities of elite athletes (McCaffrey & Orlick, 1989; Orlick & Partington, 1988) appears to be recognized by those athletes who have not achieved an elite status.

Finally, although never written in stone, goals should be a specific aspect of every mental skills program and should be discussed early in the intervention. Keeping goals allows one to note progress and may become a source of confidence as this progress is charted. Boutcher and Rotella (1987) stressed goal setting as a vital step in the educative process of developing mental skills on the way to improved performance. In the present study, John never defined (or didn't know how to define) specific goals, such as Leslie did with putting drills and certain game statistics. Although the researcher did not want to continually nag and aggravate John by insisting that he write down his goals when he hadn't, a clearly defined written list of goals would have helped him monitor and compare his progress better. Goals windows and general goals may provide some information regarding an athlete's progress, yet specific goals demand a certain level of focus and attention to training.

Based on these main issues derived from the results of this study, it seems that while many mental skills interventions exist, not every program is suitable for all athletes alike. Individual

personality, goals, and present achievement level must be considered before constructing an intervention that will reap the most benefits for a certain athlete.

Chapter 5

Summary, Conclusions, and Implications

This chapter presents an overall summary of the findings and conclusions about the case studies. Implications for future research are also listed.

Summary

The purpose of this study was to determine the effects of an individualized cognitive mental skills intervention program on the performance of two young amateur golfers. The use of both quantitative and qualitative data collecting methods allowed the researcher to observe overt and covert changes in the participants' golf games. One fourteen-year old female and one fourteen-year old male participated within the eight-week intervention program and the follow-up interview.

In light of the participants' goals for themselves, it appeared that the respective individualized intervention program was more successful for John than for Leslie. John had: (a) achieved playing in the county tournament; (b) played number two- and three-man on the high school team; (c) competed in the high school state championship as a freshman; and (d) improved his short game. Performance data and self-evaluation findings indicated that Leslie did not achieve: (a) shooting in the low 90's or high 80's; (b) hitting 5 to 6 greens in regulation per round; and (c) only one-

and two-putting greens. Leslie had achieved playing on the high school team, but not consistently within the playing five for every tournament. This was due to internal and/or external factors.

Performance data involving timed preshot routines for both participants denoted some improvement in preshot routine consistency (Figure 4.2.1, p. 109; Figure 4.3.1, p. 165). As indicated by standard deviations, John had improved the consistency of his drive and fairway shot preshot routines since the baseline recording, while Leslie had increased her preputt consistency. Both participants fluctuated in their preshot routines times during the program due to experimentation and increasing awareness of their actions and thoughts. Although not all categories of preshot routine had improved in their consistency, the participants had expressed becoming more aware of their routines and would continue to practice refining them in the future.

Game statistics, as defined by the performance data, indicated that overall, participants had both improved their games in some aspects (Figure 4.2.2, p. 110; Figure 4.3.2, p. 166). John had increased both the number of greens hit in regulation and his percentages of up and downs. Although progressively achieving lower scores for the first three data collection periods, his last score was the highest recorded. Leslie had increased her number of fairways hit and had lowered her overall score. Due to the third data collection, in which there were only nine holes played,

no other implications can be made about Leslie's improvement based on game statistics.

For the most part, self-evaluation ratings by the participants indicated improvement in their perceptions of various mental skill abilities (Figure 4.2.3, p. 111; Figure 4.3.3, p. 167). Indications of John's confidence in his mental skills included desirable increases in his imagery rating and desirable decreases in his stress and distraction control ratings. Leslie's confidence in her imagery, relaxation, distraction control, and anxiety-reduction skills had improved since the initial baseline data. These results suggest that improvement noted within performance data may not be due exclusively to physical swing practice, but also to implementation and development of various mental skills.

Nonparticipant opinions of the intervention also supported participants' positive impressions of the eight-week program. Both John's father and Leslie's mother provided examples of their own child's improvements in their golf games, based on observations of summer tournaments and then high school state and regional matches.

Conclusions

In support of the cumulative performance data, self-evaluation ratings, journal entries, and participant and parental follow-up interviews, the following conclusions are presented.

1. The individualized mental skills intervention programs increased the awareness and usage of certain mental skills techniques among the participants, as noted through subjective feedback.
2. Performance outcomes and specific aspects of the golf game were facilitated and occurred more frequently during the intervention program, as observed in game statistics and career scores.
3. Through timed preshot routine, researcher observations, parental observations, personal feedback, and journal entries, refinement of and enhanced creativity in course management skills and strategies became a more integral aspect of the young golfers' games.
4. Self-evaluation manipulation check results from this investigation suggested that improved performance outcome, i.e., golf scores, was positively affected not only by practice, but also by increased confidence in certain mental skills.

Implications for Future Research

The following suggestions are derived from the results of this study.

1. The use of video equipment with early adolescent golfers may assist in pinpointing preshot routine components during practice rounds or on practice facilities, as utilized with collegiate golfers by Cohn et al. (1990).

2. Based on prior research with 7-to-10-year old table-tennis athletes (Li-Wei et al., 1992), an exploration of potential mental skills intervention programs may aid preadolescent golfers with the early development of their golf games.

3. Future studies of mental skills interventions may investigate how high school and collegiate golfers can more easily overcome burnout.

4. Extending such a mental skills program into other closed-skill sports for junior athletes could prove to be beneficial to certain individuals

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Appendices

Appendix A

Informed Consent

Golf Professional Informed Consent

Purpose of Study

The purpose of this study is to determine the effects (through an individual case study) of a cognitive mental skills intervention program on the performance of young amateur golfers. Each intervention program will be based on the individual needs of the participants. The intervention program will consist of evaluating the participant's present performances and then developing a mental training program for each individual; programs may include relaxation techniques, imagery, goal setting, focus control training, distraction control, or other similar intervention strategies. All information used in the intervention will be gathered through personal interviews and game statistics.

Description of Study

I will be asking amateur golfers between the ages of 12 and 17 to voluntarily participate in this eight-week study. It is their option to terminate participation in the program at any time without prejudice to them or your facility. The study will involve an initial interview, periodic meetings throughout the intervention when necessary, and a follow-up interview between you and the researcher. Participants will also follow a similar interview schedule, with meetings on a weekly basis throughout the study in order to discuss any necessary modifications or comment on the progress of the intervention. Assessment of each participant's golf games will be achieved by observing game statistics and by interviewing subjects, their parents, and you. Evaluation of the individual programs will be based on interviews, daily journal entries, and game statistics. All interviews will be audio taped for accuracy, and will be locked in a secure location (Room 338 in the HPER Building) until the conclusion of the study, at which time they will be erased. You will have access upon request to any of your audio taped interviews with the researcher. Participants will be given a pseudonym for confidentiality purposes. The researcher will not interfere with participant's golf lessons or physical swing corrections.

Permission

I, _____, professional golf teaching instructor to
_____ give Nicole J. Dorthé permission to work with my
student in the development of a mental skills enhancement golf program,
and agree to the initial and follow-up interviews about
_____'s golf game.

Contact for Information:

Nicole J. Dorthé or Dr. Patricia Beitel, Advisor
Cultural Studies Unit
1914 Andy Holt Ave.
University of Tennessee
Knoxville, TN 37996-2700
(615) 974-5111

PARTICIPANT INFORMED CONSENT

Purpose of Study

The purpose of this study is to determine the effects (through an individual case study) of a cognitive mental skills intervention program on the performance of young amateur golfers. The intervention program will be based on the individual needs of the participant. The intervention will consist of evaluating the participant's present performance and then developing a mental training program for that individual; the program may include relaxation techniques, imagery, goal setting, focus control training, distraction control, or other similar intervention strategies. All information used in this research will be gathered through personal interviews and game statistics.

Description of Study

The program will consist of an initial interview to discuss and evaluate your present golf game, weekly meetings that will allow you to comment on new mental skill strategies and their progress, and a follow-up interview. These informal and conversational interviews will last approximately one hour. All interviews will be audio taped for accuracy, and you will have access to these secured tapes at any time by request. The audio tapes will be erased at the conclusion of the program. You will also be asked to keep a sport journal in which you record comments, feelings, etc. after each practice or round of golf. In addition, statistics will be recorded prior to the start of the program, after every two weeks, and at the conclusion of the program in either tournament or simulated competitive rounds of golf.

Potential Risks and Discomforts

Your participation in this study entails no physical risks or discomforts. No psychological discomfort is anticipated. You have the right to stop this program at any time.

Benefits of Study

Possible benefits from this intervention include a better understanding of mental skill strategies for young amateur golfers and other athletes. In addition, this intervention is significant in that it examines the effectiveness of such a program on a golfer's physical game, as evident through tournament scores and game statistics.

Participant's Rights

As a volunteer subject in this study, you have the right to stop your participation at any time without penalty or prejudice to you. All interviews and sessions will be audio taped for accuracy. These tapes will be kept in a locked filing cabinet in a secure location (Room 338 in the HPER Building) and erased upon the completion of the study. To ensure confidentiality, you will be given the opportunity to select a pseudonym (i.e., false name) which only you and the researcher will be familiar with. It is your right to listen to your tape recordings, read the transcribed information, and make corrections and/or additional comments at a mutually agreed upon time and place.

I have read the statement above and understand my role in the research and the potential risks involved. In addition, I am aware that:

1. My name, audio tapes, and interview information will remain confidential.
2. I am entitled to have further inquiries answered regarding the procedures.
3. I may withdraw my consent and discontinue my participation at any time without penalty or prejudice toward me.
4. My participation involves a commitment of time and effort during the intervention.

Date:_____

Signature:_____

Contact for Information: Nicole J. Dorthé or Dr. Patricia Beitel, University of Tennessee, Cultural Studies Unit, 1914 Andy Holt Ave., Knoxville, TN 37996-2700 (615)974-5111

PARENTAL CONSENT

Purpose of Study

The purpose of the study is to determine the effects (through an individual case study) of a cognitive mental skills intervention program on the performance of young amateur golfers. Each intervention will be based on individual needs of the participants. The intervention will consist of evaluating the participant's present performance and then developing a mental training program for that individual; the program may include relaxation techniques, imagery, goal setting, focus control training, distraction control, or other similar intervention strategies. All information used in the program will be gathered through personal interviews and game statistics.

Description of Study

I will be asking your son/daughter to voluntarily participate in this eight-week study. It is his option to terminate participation at any time in the program without prejudice to him or you. The study will involve an initial interview with you to assess the present golf game of your son. Your son will participate in an initial interview, weekly meetings to discuss progress, comments, or modification to individual programs, and a follow-up interview. All interviews will be audio taped and transcribed for accuracy, and will later be erased upon completion of the study. Each participant, parent, and teaching instructor will have access to their respective tapes (which will be kept in a secure location in Room 338 in the HPER Building) at a mutually agreed upon time and place to listen to, read, and make changes to audio tapes or transcriptions. Interview sessions will last approximately one hour. Participants will be given the opportunity to select a pseudonym (i.e., a false name) for confidentiality purposes. Evaluation of the mental skills program will be based on interviews, daily sport journal entries, and game statistics.

Permission

I, _____, parent of _____ have read the above statement and give Nicole J. Dorthé permission to work with my son/daughter in the development of a mental skills enhancement golf program, and I agree to the initial audio taped interview about my son/daughter's golf game.

Contact for Information:

Nicole J. Dorthé

or

Dr. Patricia Beitel, Advisor

Cultural Studies Unit
1914 Andy Holt Ave.
University of Tennessee
Knoxville, TN 37996-2700
(615) 974-5111

Appendix B

GOLFER'S DEMOGRAPHIC INFORMATION

Pseudonym_____

Year of Birth_____

Grade in School_____

Years Playing Golf_____

Years Competing in Golf_____

Family Involvement in Golf _____

Golf Equipment_____

Past Experience in Golf (may include past competitive
achievements):

APPENDIX C

INITIAL GOLF ASSESSMENT QUESTIONS - PARTICIPANTS*

1. Description of involvement with golf.
 - > How long have you been playing?
 - > How long have you been competing?
 - > What do you find most consistent or inconsistent about your game?
 - > Describe situations in which you tend to perform better at certain times.
 - > How are you mentally and physically preparing yourself for your golf game?
 - > How does your swing feel when you perform well?
 - > How does your swing feel when you perform poorly?
 - > What roles do your emotions, thoughts, and feelings play in your game? Can you provide an example?
 - > Do you have fun playing and/or practicing golf? What do you like most about them?
2. Description of past problems.
 - > When you have performance problems, what do you think is interfering with your ability to perform maximally?
 - > On a scale of 1-10 (10 being best), how satisfied are you with your swing? What could make it a 10?
 - > How comfortable are you with being able to transfer to the course what you practiced on the range or green?
3. Seriousness of the problem.
 - > Are there certain people that cause you to get uptight? Who?
 - > How well do you adjust to other courses?
 - > How do you relate to your competition and audience? Do you get nervous, or does it provide you with confidence?
 - > How do you feel about certain holes which appear very difficult or have given you problems in the past?
 - > What kinds of things distract you during play? Can you give me an example and tell me more about it?
4. Description of past peak performances.
 - > What do you think you did right when you hit the ball well?
 - > How were they different from when you hit the ball poorly?
 - > What were you thinking prior to, during, and following these peak experiences?
 - > How does it differ from your thoughts and feelings when you perform poorly?
 - > What types of equipment, courses, or tournament (conditions) help you to play better?
 - > What is it that makes you more comfortable in these situations?
 - > Do you engage in casual conversation with your playing partners during rounds?

5. Comparison of problems and peak performances.
 - > What do you think are the differences between problems and peak performances?
 - > Try to recall the last time you hit the ball poorly or were in a slump. What were you saying/thinking prior to, during, and following your shots?
 - > Try to recall how your body felt in these situations. How do they compare with your feelings of great shots?
6. Description of preshot routine and course management techniques.
 - > Describe your (mental and physical) preshot routine for an iron, wood, chip, or bunker shot. Also describe your preputt routine.
 - > How does it differ (do you ease up on it) before a difficult, easy, or threatening shot?
 - > What types of things do you look for on the course before you hit a shot(i.e., wind, teeing position, pin placement, lie, elevation, grass texture, etc.)
 - > Do you keep a yardage notebook with notes on the course during a tournament?
8. Intervention
 - > Today was an important first step in *helping yourself*. Are you ready to work on improving your game through yourself?
 - > What types of things might be done to accomplish this?
 - > I will interview your parents and golf instructor about how they perceive your golf game to be and ask if they have any comments. During the next meeting, we will begin to outline a program to help you. In the meantime, when you practice or play, write down in your journal your reactions, feelings and thoughts about certain shots and ideas that come to mind.

*adapted from:

Ravizza, K., & Rotella, R. (1982). Cognitive somatic behavioral interventions in gymnastics. In L. Zaichkowsky & W. Sime (Eds.), Stress management for sport (pp. 25-35). Reston, VA: AAHPERD.

INITIAL ASSESSMENT QUESTIONS - PARENTS

1. How long has _____ been playing golf? What age was this?
2. How long has _____ been competing in golf tournaments?
3. What types of goals or ambitions do you think _____ has in golf?
4. What would you like to see _____ achieve in golf?
5. Describe _____ 's behaviors after a poor round of golf.
6. Describe _____ 's behaviors after a good round of golf.
7. Describe _____ 's behaviors after a bad shot.
8. Describe _____ 's behaviors after a successful shot.
9. How would you describe _____ 's concentration during a round of golf? How can you tell whether s/he is concentrating well? Poorly? How does her/his body language on the course show this?
10. How long does _____ dedicate to practicing golf (on the average) per day or per week?
11. What are _____ 's aspirations for a college scholarship or the Tour?
12. Do you have any other comments or remarks concerning _____ 's golf game?

INITIAL ASSESSMENT QUESTIONS - GOLF PROFESSIONAL

1. How long has your student been taking lessons from you? What age was this?
2. On a scale of 1-10, 10 being elite, how would you rate your student as an overall golfer? In which areas could s/he improve?
3. How would you describe both the consistency and quality of your student's physical swing (irons, woods, chipping, putting)?
4. How would you describe your student's mental capabilities for her/his golf game?
5. How would you describe your student's ability to concentrate?
6. What is your perception of your student's interest in playing for a college or on Tour? What are her/his chances of achieving any of these? What would it take to get her/him there?

Appendix D

Game Statistics

Name: _____ Date: _____ Course: _____

Hole	FAIRWAY	GREEN	UP&DOWN	SAND	SAVE	PUTTS	PUTTS (GIR)	SCORE
1								
2								
3								
4								
5								
6								
7								
8								
9								
total								
mean								
s								
10								
11								
12								
13								
14								
15								
16								
17								
18								
total								
mean								
s								
TOTAL								
MEAN								
s								

Appendix E

Timed Behavioral Preshot Routines

Name:_____ Score:_____ Date:_____

Course:_____

DRIVES:

M =

S =

FAIRWAYS:

M =

S =

CHIPS:

M =

S =

PUTTS:

M =

S =

VITA

Nicole Jacqueline Dorthé was born to European parents on June 25, 1972 in Freehold, New Jersey. Spending most of her childhood and adolescence in Lakeville, Massachusetts, she attended both elementary and middle schools there and graduated from Coyle & Cassidy High School, in Taunton, Massachusetts, in May, 1990. Beginning her golfing career at age 4, she played on the boys' high school golf team and continued competing as she attended and played for Wake Forest University, in Winston-Salem, North Carolina, from 1990 to 1994. There, she received a Bachelor of Arts in Psychology in May, 1994. Continuing her education at the University of Tennessee, Knoxville, while fulfilling a graduate teaching associateship position, Nicole will receive a Master of Science degree with a major in Human Performance and Sport Studies in December, 1995. In the near future, she intends to gain certification as a golf club professional while continuing to pursue her interests in mental skills training with golfers and junior athletes.