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I am submitting here with a dissertation written by Robert J. Bell entitled "'Pick it Up, It's Good' Utilizing Solution-Focused Guided Imagery with Golfers Experiencing the Yips: A Single-Subject Research Design." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Education.

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“PICK IT UP, IT’S GOOD’ UTILIZING SOLUTION-FOCUSED GUIDED IMAGERY
WITH GOLFERS EXPERIENCING THE YIPS: A SINGLE-SUBJECT RESEARCH
DESIGN”

A Dissertation

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Robert John Bell

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DEDICATION

I would like to specially dedicate this project to Dr. Charles Thompson. His contribution to my development was paramount and I learned so much from him and in such a short period of time. There are people in everyone's lives who are universally better people because they were a part of it and Chuck T. was one of those people. Your passing is another lesson which I have learned; "live each day for all its worth."

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ABSTRACT

A multiple-baseline across-subjects design was used to test the efficacy of solution-focused guided imagery (SFGI) with four yip-affected golfers ($M = 51$ years of age) and an average of 33 years playing experience. Yips are defined as jerks, tremors, or a freezing of the putting stroke and in the least can add several strokes per round of golf (Smith et al., 2003). Existing research suggests that the yips are a task-specific dystonia that is prompted and/or exacerbated by psychological factors (e.g., anxiety). Each golfer in this study participated in at least five SFGI sessions, designed to guide the individual to create vivid images of themselves thinking, feeling, and behaving in ways devoid of their problem. Visual analysis of the data revealed an immediate and sustained decrease for all participants in reducing the number of yips and the percentage of yips within 5 feet between baseline and intervention phases. Maintenance data also revealed no instances of the yips.

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CHAPTER 1

INTRODUCTION

The sport of golf provides an excellent opportunity to test assumptions concerning motor control and performance, due in part to the psychological and physiological demands placed upon the athlete. In particular, the skill of putting requires precise distance, accuracy, and mental discipline for successful execution. Putting is crucial to scoring because it accounts for 42% of all the strokes in golf (Palmer & Dobereiner, 1986). Tomasi and Midland (2002) suggest that short putts resemble free throws, they are easy to learn, but become more difficult as pressure increases.

Unfortunately, a condition called the “yips” can interfere with the successful completion of the putting stroke. Researchers have defined the “yips” as an interruption in the putting stroke, usually occurring during short putts (Smith, Adler, Crews, Wharren, Laskowski, Barnes, Bell, Pelz, Brennan, Smith, Sorenson, & Kaufman, 2003). This interruption emerges with symptoms such as jerks, tremors, or a “freezing” of the stroke (Smith, Malo, Laskowski, Sabick, Cooney, Finnie, Crews, Eischen, Hay, Detling, & Kaufman, 2000). Researchers have demonstrated that many yip-affected golfers have considerable playing experience and are accomplished performers (McDaniel, Cummings & Shain, 1989; Sachdev, 1992; Smith et al., 2000). In fact, notable professional golfers who have suffered with this affliction at some point in their career include Harry Vardon, Bobby Jones, Ben Hogan, Sam Snead, Bernhard Langer, Sam Torrance, and Mark O’Meara (Achenbach, 2004; Palmer & Dobereiner, 1986). The yips can emerge in other facets of the game as well, ranging from chipping and bunker shots to driving

(Achenbach, 2004; Haney, 2004). Moreover, golfers who suffer from the yips appear to share some common elements and symptoms with other types of professionals who engage in activities requiring fine motor control, these include musicians, dentists, and surgeons (Smith et al., 2003).

Significance of the Research

A gap in the literature exists concerning potential psychological interventions for yip-affected golfers. Effectively treating the yips could prove valuable to a large population of individuals. Symptoms of the yips affect an estimated 30% of experienced golfers and may lead some to maladaptive behaviors to alleviate the symptoms, such as alcohol and non-prescription drug abuse (Smith et al., 2003).

Existing research suggests that the yips are a task-specific dystonia that is prompted and/or exacerbated by psychological factors (e.g., anxiety). That the yips are a form of dystonia is supported by the symptoms of a jerk, tremor, or freezing of the putting stroke (Smith et al., 2000; Smith et al., 2003). Differences in putting behavior have also been observed between yip and non yip-affected golfers. This is similar to those found for individuals in other activities involving repetitive hand movements such as musicians, dentists, and surgeons (Smith et al., 2003). Additional evidence that the yips are a form of dystonia comes from studies showing that the condition is acquired over time and experienced during the performance of specific tasks. Clinical research has indicated that adult forms of dystonia begin after the age of 26 (Brin & Comella, 2004) which coincides age-wise with the emergence of the yips in golfers (McDaniel et al., 1989; Sachdev, 1992; Smith et al., 2000; Smith et al., 2003.) Thus, the etiology of the

yips as a neurological disorder is consistent with the late onset of physical symptoms detrimental to performance. Additionally, highly skilled golfers with extensive playing experience appear to be susceptible.

Related research has also revealed that anxiety is a contributing agent to focal dystonia and the yips (Byl, 2004; Cook, 1993; McDaniel et al., 1989; Sachdev, 1992; Smith et al., 2000; Smith et al., 2003). Psychological factors such as stress and anxiety have been shown to impact individuals who experience a focal hand dystonia (Grafman, Cohen, & Hallet, 1991; Kolle, 2000). In addition, psychological factors such as choking, disrupted attention, and diminished self-efficacy have been shown to negatively influence performance (Bandura, 1977; Baumeister, 1984, Baumeister & Showers, 1986; Krane & Williams, 1992; Linder, Lutz, & Crews, 1999; Wang, Merchants, & Gibbs, 2004) and may have potential implications for yip-affected golfers. Case studies examining the influence of mental training and psychological interventions with yip-affected golfers suggest that symptoms common to a focal dystonia and the yips have the potential to be alleviated (Bell & Thompson, 2005; Byl & McKenzie, 2000). Therefore, there is a need for more in-depth studies related to psychological interventions that can successfully reduce the yips.

A significant aspect of the current study is the inclusion of solution-focused guided imagery (SFGI). Solution-focused brief counseling (SFBC) has emerged as a model of counseling and its potential as an effective approach has been well documented (Sklare, 2000, 2005). Sklare (1997) designed solution-focused guided imagery (SFGI) using the philosophy and assumptions of SFBC. Solution-focused guided imagery allows

the skilled facilitator to lead participants through a process of utilizing their creative imagination by allowing these images to bypass the rational mind. This, in turn, allows participants to face potentially troublesome scenes (Yip, 2003). Sklare, Sabella, and Petrosko (2003) indicate that SFGI consists of the same steps as SFBC and is designed to guide the individual in creating vivid images of themselves thinking, feeling, and behaving in ways devoid of their problem. However, SFBC has just recently emerged in the sport psychology literature as a potentially effective counseling technique (Gutkind, 2004; Hoigaard & Johansen, 2004).

Statement of the Problem

The yips or focal hand dystonia is a relatively common occurrence for skilled performers whose task requires repetitive fine motor movements. Few studies have been undertaken that have examined this occurrence in athletes. Even fewer studies have determined which intervention may be appropriate for decreasing yip occurrences.

Purpose of the Study

The purpose of this study was to determine the effectiveness of SFGI in reducing the yips for yip-affected golfers. Specifically, this intervention was designed to reduce the number of yips a golfer may experience during a round. Thus, psychological components which accompany the yips may enhance prospects for diagnoses, and more importantly, serve as rationale for treatment.

Research Hypothesis

Despite the exploratory nature of this study, the following hypothesis was tested:

1. The number of yips would be reduced for each participant successfully completing this study solely by exposure to solution-focused guided imagery via a trained sport psychology student consultant.

Assumptions

The following assumptions were made for the present study:

1. The participants attempted to putt to the best of their ability.
2. All participants demonstrated an observable symptom of the yips.

Delimitations

The following were delimitations in this study:

1. The participants were accomplished golfers (handicap <10).
2. This study was limited to golfers in the southeast United States.
3. The golfers in this study were Caucasian males.

Limitations

The following limitations were present in this study:

1. Some participants may not have been as proficient as others in learning and using guided imagery.
2. One participant did not complete the entire study.

3. Some extraneous variable(s), such as weather, may have interfered with the intervention phase of the study.

Definition of Terms

The following terms are used in this study.

Baseline phase: The dependent variable served as each participant's own baseline phase. Baselines were staggered and ranged from four and five rounds of golf (Barlow & Hersen, 1984).

Birdie: A score of one under par for a particular hole (Kuhn & Garner, 2004).

Bogey: A score of one over par for a particular hole (Kuhn & Garner, 2004).

Handicap: An official United States Golf Association (USGA) handicap is one way to measure the proficiency of a golfer and a means of equalizing competition among golfers. Handicaps range from best: Scratch (0) to worst: 36.4 for men to 40.4 for women (Kuhn & Garner, 2004).

Maintenance phase: Conducted three weeks post- intervention to assess retention (Bolton, Lalli, Belfiore, & Skinner, 1994).

Par: The average number of golf strokes a skilled player should take to complete a hole (Kuhn & Garner, 2004).

Solution-focused brief counseling (SFBC): This method of brief counseling is designed to have the individual focus on solutions rather than problems or shift the focus from the problem to solutions (Sklare, 2000).

Solution-focused guided imagery (SFGI): This guided imagery script is a component of SFBC and was used as the intervention for this study (Sklare, 1997).

Yips: Any flinch, jerk, twitch, spasm, or freezing of the putting stroke during execution that occurs on putts of 5 feet and closer (Smith et al., 2003).

The next chapter focuses on literature which serves as the foundation for this study.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to investigate the effectiveness of solution-focused guided imagery with yip-affected golfers. The yips have been a topic of research in various performance-related fields. However, there is a dearth of information regarding effective interventions for yip-affected golfers. The following review is designed to integrate existing yip-related research with research examining similar phenomena (i.e., writer's cramp and musician's cramp). In subsequent sections, the counseling technique of solution-focused brief counseling (SFBC) and solution-focused guided imagery (SFGI) are discussed followed by a discussion of single-subject methodology.

Definitions of the Yips

Researchers have defined the "yips" as an interruption in the putting stroke, usually occurring during short putts (Smith et al., 2003). This interruption emerges with symptoms such as jerks, tremors, or a "freezing" of the stroke (Smith et al., 2000).

Numerous studies have examined the phenomenon of the yips (Blundell, 1990; Cook, 1993; McDaniel, et al., 1989; & Sabick, Smith, & Laskowski, 1998). One issue some researchers have addressed concerns the types of people who are susceptible to the yips. In perhaps the most extensive survey study to date, Smith and colleagues (2000) used questionnaire responses from 889 tournament golfers and found that 52% perceived they suffered from the yips. Demographic information from both yip and non yip-affected golfers was taken from 43 women and 843 men. These self-report data revealed

some interesting similarities of yip-affected golfers. Their average age was 45.2 years, playing experience was 30 years on average, and average handicap was 4.5. Results also revealed that most yip-affected golfers were previously accomplished putters (<10 handicap), that the yips had added approximately 4.7 strokes per round, and that they had experienced symptoms for approximately 6 years.

McDaniel and colleagues (1989) distributed questionnaires to golf professionals concerning the etiology of the yips. Because 42% of male golfers responded compared to 10% for women, only data from men were reported. Of the 360 male respondents, 93 reported having experienced the yips with two similarities related to the Smith et al (2000) study emerging; the factors of age (50.5 years) and playing experience (35.6 years) for yip-affected golfers. In another study, Sachdev (1992) obtained questionnaire responses from 20 yip-affected male golfers whose mean age was approximately 54 years, mean handicap was 10.7, and playing experience averaged 16 years.

The results of these investigations provide evidence that yip-affected golfers share some certain similarities. Thus, among golfers, the yips occur frequently in middle-aged persons, those with considerable playing experience, and those who are accomplished performers. While the research does not provide an indication about why some golfers acquire the yips while others do not, it does point to some common characteristics of yip-affected golfers.

Etiology of the Yips

In a recent study, Smith and colleagues (2003) obtained questionnaire responses from 72 yip-affected golfers, 69 males (mean handicap 6.7) and 3 females (mean handicap 13.1). Using a triangulation process to classify responses as either neurological or psychological in nature, the researchers found that approximately 55% of the respondents demonstrated neurological symptoms (e.g. dystonia) which they classified as Type I yips. These symptoms included definitions of a physical characteristic such as “an involuntary spasm or nervous reaction” (Smith, et al., 2003 p.24). Approximately 22% of the respondents reported psychological symptoms and were classified as Type II yip-affected golfers. An example of symptoms of psychological distress included an “inability to make short putts when [I] need to, as if paralyzed” (p. 26). The remaining 22% of golfers’ responses could not be categorized as either Type I or Type II because respondents’ descriptions contained both neurological and psychological characteristics.

Dystonia

Dystonia is the neurological disorder that has been associated most frequently with the yips. Dystonia is characterized by sustained involuntary muscle contractions resulting in twisting, spasms, or flexing of a body part (Brin & Comella, 2004). Dystonia can range from generalized (multiple body part contractions) to focal (single body part contractions) to task-specific (e.g. writer’s cramp, yips). Task-specific dystonia is a type of focal dystonia that is more sporadic than the other forms of dystonia and is primarily associated with the execution of certain types of movements. Types of task-specific dystonia common in hand movements include writer’s cramp, musician’s cramp, and

keyboarder's cramp (Byl, 2004). Marsden and Sheehy (1990) found that prolonged use and the execution of awkward, repetitive movements predisposed instrumental musicians to a focal dystonia. Of relevance to the present study are the apparent similarities in hand movements of accomplished musicians and those involved in golf putting, such as: (a) repetitive movements, (b) high level of motor precision and feedback mediation, and (c) successive execution of a specified motor plan (Smith et al., 2003).

Most of the existing research has examined the yips and putting behavior as a form of dystonia (McDaniel et al., 1989, Smith et al., 2000; Smith et al., 2003). It is thought that individuals with the yips have degraded nerve pathways which control fine motor movements leading to symptoms of the yips (Lomangino, 2003). Both Cook (1993) and Smith et al. (2000) utilized a battery of physiological measures to assess the etiology of yip-related behavior. In one of the first studies examining the yips, Cook (1993) analyzed electromyogram (EMG) activity in 34 golf students (17 with yips, 17 without; 29 were males, with an average age of 24 years and 5 were females with an average age of 25 years). They assessed exerted force and changes in force of specific muscle groups during the putting stroke. Results revealed that increased overall forearm EMG activity occurred more frequently in yip-affected golfers than in non-yip affected golfers. These findings appear consistent with earlier research examining dystonia of the limbs, which implicates co-contraction of agonist and antagonist muscles as a symptom of a focal dystonia (Ghez, Gordon, & Hening, 1988).

More recently, Smith and colleagues (2000) examined heart rate (HR), grip force (GF) and electromyogram (EMG) activity for four yip-affected and three non yip-

affected golfers during several putting scenarios. Scenarios included four foot uphill putts, four-foot downhill putts, and five-foot flat putts. Those with the yips made fewer first putts, had longer distances from the hole on missed putts, had higher HR, and greater GF and EMG activity during putting execution than non-yip affected golfers. Together, the results of observable physiological symptoms suggest that the yips are some sort of muscular dysfunction. However, the data do not reveal if the movements are solely due to a neurological issue.

Interestingly, dystonia is frequently misdiagnosed as a neurological disorder (Brin & Comella, 2004). Uncertainty regarding the etiology and pathophysiology of dystonia adds confusion to understanding this problem. Thus, the identification of psychological components in the yips may enhance prospects of diagnoses, and more importantly, serve as rationale for treatment. For instance, research indicates that psychological factors such as stress, phobia, and/or anxiety may contribute to or exacerbate a focal hand dystonia (Byl, 2004). Kolle (2000) found that musicians who experienced a hand dystonia and/or fine motor control problems also reported higher levels of stress, anxiety, and persistent attention to improving their work. Thus, it appears that the emergence of a focal dystonia may be accompanied by perceived threats to security, personal stress, and/or psychosocial components. Grafman and colleagues (1991) examined people with focal hand dystonia using a battery of psychological inventories and found that trait anxiety scores tended to be higher than state anxiety scores. These results suggest that the emergence of a focal dystonia is not likely due to a single agent or event, but rather to a

combination of factors, which may allow for the perception of stress on the nervous system beyond normal functioning (Byl, 2004; Smith et al., 2003)

Psychological Factors

The earliest yip research reported a positive albeit ambiguous relationship between the yips and anxiety (Cook, 1993; McDaniel et al., 1989; Sachdev, 1992). For example, Cook (1993) examined physiological and psychological elements of anxiety in yip-affected and non yip-affected golfers. Cook manipulated low to high anxiety situations for two groups of 17 golfers by requesting five successful consecutive putts. Although manipulation checks regarding the anxiety-producing scenarios were not reported, results revealed that yip-affected golfers scored higher on trait anxiety measures than did non yip-affected golfers (i.e., Cook, 1993). These results provide an indication that anxiety may be a factor with the yips.

In support of this notion, McDaniel and colleagues (1989) also utilized questionnaires to assess anxiety in yip and non yip-affected golfers. The results revealed a positive relationship between anxiety and the severity of the yips for 77% of yip-affected golfers. However, no significant differences in the frequency and severity of anxiety levels were found between the two groups of golfers. Sachdev (1992) compared 20 yip-affected with 20 non yip-affected golfers on a battery of psychological questionnaires and found no significant differences in anxiety as well. However, questionnaire responses revealed that “stress” and “perceived pressure to win” exacerbated the yips with yip-affected golfers and that more acute yip-affected golfers who subjectively rated the yips as “severe” also rated themselves as more anxious

compared to “mild” yip-affected golfers. Although these early studies are not conclusive about the significance of anxiety as a cause, they do suggest that anxiety levels are associated in some way with the manifestation and exacerbation of the yips.

More recent research suggests that the yips are more prevalent in specific situations. For instance, Smith et al. (2000) obtained 1,031 questionnaire responses from professional golfers and found that yip-affected golfers experienced increased anxiety: (a) when leading a tournament, (b) attempting a difficult putt (e.g. downhill), (c) facing specific competitors, and (d) feeling the need to make the putt. These results suggest that anxiety may be episodic and that these episodes may exacerbate the condition of the yips.

Research in the field of sport psychology has shown that extreme levels of anxiety can impair sport performances requiring fine muscle control and coordinated movements (Cook, 1993). A multidimensional approach to the examination of the anxiety-performance relationship indicates that anxiety consists of both a cognitive component (i.e., coping skills and/or concentration) and a somatic component (i.e., autonomic symptoms, and/or perceived somatic arousal) (Martens, Vealey, & Burton, 1990). Generally, somatic anxiety appears to have a curvilinear relationship with performance while cognitive anxiety and performance are negatively related (Craft, Magyar, Becker, & Feltz, 2003). Nonetheless, research in golf has revealed support for anxiety as an effective predictor of performance (Krane & Williams, 1992). Krane and Williams (1992) found a reciprocal relationship between state confidence and cognitive and somatic anxiety in collegiate golfers. They also found that previous performance was a significant predictor of subsequent tournament scores.

Another psychological consideration involving the yips is the phenomenon of “choking” (Smith et al., 2000; Smith et al., 2003). Smith and colleagues (2003) classified 22% of yip-affected golfers in their study as Type II, which was defined as “choking.” The authors used a popular definition of choking as the suboptimal performance of a person under pressure conditions that include incentives to perform well (Baumeister, 1984). Smith and colleagues (2003) found that characteristics of Type II yip-affected golfers included “symptoms of a self-focused awareness that led to generalized muscle tension” (Smith et al., 2003, P. 19). These characteristics of a self-focused awareness appear to be consistent with additional studies.

Baumeister and Showers (1986) found that the four factors most closely associated with perceived pressure are: Audience presence, competition, performance-contingent awards and/or punishments, and ego relevance of the task. For example, research on choking has revealed that pressure interferes with a performer’s attentional focus leading to suboptimal performance (Baumeister et al., 1986). Baumeister (1984) found that as pressure increases, the performer’s attention becomes internally focused on the process of performing (i.e., self-focus) thus resulting in decreased performance. This notion is supported by Beilock, Carr, MacMahon, and Starkes (2002) who found that skilled golfers performed worse while attending to the process of their putting stroke compared to those who attended to an external stimulus. Due to the preciseness of the task of putting, an internal focus during specific anxiety-producing situations would appear to exacerbate the problem with yip-affected golfers.

Lewis and Linder (1997) attempted to examine participants' performance with the task of putting under different pressure scenarios. Participants either became adapted to self-awareness or were part of the non-adapted control group. Those in the adaptation group became aware of videotaping equipment and were told that their performance would be analyzed by experts during practice putting sessions. The non-adapted group was observed under a distraction condition in which each participant attended to an outside factor. Higher pressure conditions were manipulated by instructing participants they would receive rewards contingent upon putting performance. Results revealed that participants who were not adapted to self-awareness performed worse under higher pressure conditions than those who were adapted to self-awareness. These results suggest that if one is not adapted to self-awareness, then a self-focused attention is detrimental to performance (i.e., choking) as pressure increases (See Linder, Lutz & Crews, 1999 for more discussion). The previous findings seem to indicate that as pressure increases, putters who experience anxiety either become distracted from the task at hand or turn their focus inward (i.e. self-consciousness), diminishing performance execution and lowering performance scores. These results could relate to yip-affected golfers because the self-awareness of experiencing anxiety would be expected to increase during pressure scenarios and perhaps manifest as the yips.

Wang and colleagues (2004) examined the free throw performance of 66 competitive basketball players under high and low pressure conditions. They attempted to determine if increased self-consciousness and anxiety were effective predictors of choking. They used Baumeister's (1984) definition of choking as decreased performance

under pressure circumstances. Pressure conditions were manipulated from low to high by including contingent performance rewards, audiences, and video-recording. A battery of anxiety inventories were used to assess participants' state anxiety and self-consciousness. Results revealed that as pressure increased, performers with increased self-consciousness and somatic anxiety performed worse than those with lower levels of self-consciousness and somatic anxiety. Specifically, higher levels of self-consciousness and increased somatic trait anxiety accounted for 35% of the variance in performance, suggesting that both variables were effective predictors of choking. Thus, performers with increased self-focus under higher pressure conditions were limited in their thinking, which is an indicator of being distracted.

Taken together, the results of these studies suggest that as pressure and anxiety increase, participants' attention becomes self-focused and performance declines (Lewis & Linder, 1997; Wang et al., 2004). This notion may be especially important in well-learned tasks such as putting where conscious control over the movement might hinder performance.

Another important psychological consideration is self-efficacy. Bandura (1977) defined self-efficacy as one's perceived expectancy of success at a specific task. Bandura presumed there to be four factors that influence self-efficacy beliefs: Vicarious experiences, verbal persuasion, physiological arousal, and past performances. In putting specifically, a golfer could watch another player successfully execute a putt (vicarious experience), could be told that s/he is a good putter or coach her/himself on technique (verbal persuasion), could become relaxed and calm before executing a putt

(physiological arousal), and/or assess similar past experiences before the execution of a putt (previous performances). Bandura (1997) thought that previous performances were the most reliable measure of self-efficacy because they reflected the actual successful completion of a task. Research in sport supports this contention in that previous performances are the primary source of self-efficacy (Chase, Magyar, & Drake, 2005; Feltz & Lirgg, 2001). In fact, it appears that repeatable successful execution of a skill provides a truer sense of an athlete's self-efficacy more so than a few successful performances (Chase et al., 2005).

Perhaps more specific to yip-affected golfers is the aspect of self-regulatory efficacy, which is one's efficacy for a successful behavior in spite of challenges (Maddux, 1995). Self-regulatory efficacy has surfaced as a topic of interest concerning people with chronic pain performing physical movements (Feltz & Payment, 2005). Whereas a person can perform the task, s/he may have difficulty when faced with pressure demands. Thus, a yip-affected golfer may be able to successfully execute a putt, but physical symptoms of the yips may emerge under times of duress.

It is also possible that higher levels of anxiety are analogous with decreased self-efficacy (Bandura, 1989; Krane & Williams, 1987), suggesting that psychological factors can also play a significant role in the yips. Although self-efficacy has not been specifically addressed in studies of golfers with the yips, it appears that this factor could mediate anxiety levels and should be investigated with yip-affected golfers in the future.

Interventions

While there have been few studies examining possible treatments for the yips, Byl and McKenzie (2000) examined treatments for twelve individuals suffering from a focal hand dystonia. Interventions consisted of sensory training and mental imagery designed to facilitate normal hand movements. Sensory training sessions were conducted two times per week for a period of 3 months and consisted of biofeedback of hand contractions until involuntary movements were controlled. Sensory training also consisted of identifying sensory stimuli, shapes, and objects. The mental imagery component consisted of the participants imaging successful, normal execution of target tasks. Post-treatment measures revealed that all but one participant achieved significant gains in sensory discrimination, motor control and range of motion compared with the unaffected hand. This study provides evidence that sensory training accompanied by psychological interventions can improve the perceptual and motor performance of those with focal hand dystonia. In conjunction with these results, Byl (2004) suggests that effective intervention strategies for people with a focal dystonia should incorporate minimizing stressors, enhancing self-esteem, and building self-confidence. Byl (2004) also endorses mental imagery which focuses on positive thinking, successful recovery, and successfully performing the target task.

In one of the few published records, Blundell (1990) reported a case study of an individual who experienced the yips. While this study is promising concerning a possible approach to helping golfers with the yips, it lacks any supporting data, and therefore, is not conclusive. Blundell (1990) identified the yips as an uncontrollable twitching of the

right thumb and index finger during putting execution. Blundell (1990) also reported that the technical and psychological profiles of the golfer revealed the yips to be primarily due to psychological factors. Subsequent educational interventions included goal setting, breathing techniques, and additional relaxation strategies. Although no timetable for the interventions or recovery was presented, Blundell (1990) indicated that the three simultaneous interventions were “lengthy” in duration. Blundell (1990) also reported that the individual displayed no signs of the yips after numerous interventions.

More recently, Bell and Thompson (2005) utilized a case-study approach with yip-affected golfers. The yips were defined and observed as any flinch of the right hand during any 4 foot putt or closer. The intervention consisted of five sessions of solution focused guided imagery (SFGI) between a sport psychology student consultant and an experienced golfer (handicap <5) who had been suffering from the yips for approximately 3 years. The results revealed a near immediate decrease in occurrences of the yips following the intervention and showed a reduction in the yips from 9.2 per round to .2 per round. These two case studies suggest that psychological interventions can be effective with golfers suffering from the yips. Combined, these results suggest that addressing psychological components may help alleviate suffering for those experiencing a focal hand dystonia and the yips (Bell & Thompson, 2005; Blundell, 1990; Byl & McKenzie, 2000).

Some research has examined the effects of utilizing only physical interventions with yip-affected golfers. One such intervention involves “sensory tricks.” A “sensory trick” is a change in tactile or proprioceptive sensory input (Berardelli, Kaji, & Curra,

2004). Examples of effective sensory tricks cited in the popular golf literature include changes in grip, putter, stance or stroke (Achenbach, 2004). Smith and colleagues (2003) reported that of the 200 golfers they examined retrospectively, all had changed at least one sensory component of their putting behavior (e.g., long putter, claw grip). Sachdev (1992) also stated that 90% of golfers he surveyed reported at least partial success from using a “trick” or compensatory strategy such as a change in grip, visual fixation, and/or their stance to overcome the yips. However, these studies do not report how long the sensory strategies were effective.

More recently, Zeuner, Shill, Sohn, Molloy, Thornton, Dambosia, and Hallet (2004) utilized specific sensorimotor training as an intervention for participants suffering with writer’s cramp. The training involved the splinting of all but the affected fingers in order to force their use. After eight weeks of training, the results were not conclusive, revealing that only five out of the ten participants experienced improved performance. In conjunction with golf research (Sachdev, 1992; Smith et al., 2003), it appears that physical interventions only demonstrate partial success. Thus interventions should incorporate psychological components as well.

Solution-Focused Brief Counseling

Solution-focused therapy surfaced from the work of deShazer at the Brief Family Therapy center in Milwaukee, Wisconsin. Solution-focused brief counseling (SFBC) emerged as a model of counseling from that early work. SFBC’s potential as an effective approach has been well documented (Sklare, 2000, 2005) and this form of brief therapy has been utilized effectively in a wide variety of settings, including education, parenting,

mental illness, and certain forms of abuse treatment (O'Connell, 1998). SFBC has also recently emerged in the field of sport psychology as an effective intervention (Gutkind, 2004; Hoigaard & Johansen, 2004).

Previous models in counseling have presupposed that solutions had to match patterns of the problem and that a deep understanding of the problem was required (Walter & Peller, 1992). In short, traditional theories of counseling sought to answer the questions: "What is the cause of the problem?" and "What maintains the problem?" The solution-focused approach surfaced as a major paradigm shift and sought to answer the question: "What are possible solutions?" Thus, practitioners began to focus on possible solutions rather than on clients' problems (de Shazer, 1985).

The paradigm shift toward SFBC shortened the number of sessions needed for counseling due to the reduced need to explore clients' problems. Ekert (1993) suggests that brief therapy can be defined as any psychological intervention which produces change in a timely fashion, regardless of pre-set time frames. Although it is not apparent whether solution-focused therapy is brief because it works or it works because it is brief, research has demonstrated that brief therapy is equally as effective as long-term counseling (O'Connell, 1998). In addition, different brief counseling models vary concerning what exactly constitutes brief therapy and the number of sessions can range greatly from as little as one to as many as twenty sessions (O'Connell, 1998). For example, research has shown that clients of solution-focused therapy attend between four and six sessions (Miller 1994) and de Shazer (1991) suggests the average length of treatment is five sessions.

Walter and Peller (1992) identified key assumptions underlying solution-focused brief counseling. These assumptions provide theoretical guidance and support for applying solution-focused techniques. First, focusing on solutions can result in beneficial changes; addressing what is working in a client's life can facilitate other instances of success. Second, every problem has exceptions that can be identified and turned into solutions. In SFBC, exceptions also provide the counselor and client means of assessing progress even in the first session. For instance, Weiner-Davis, de Shazer, and Gingerich (1987) found that clients reported positive change almost immediately, caused by a de-emphasis on problems and noticing exceptions. Third, small changes can have a ripple effect that expands into greater change. This assumption means that all problems are first solved a little bit at a time. Approaching change in this manner also breaks down larger goals into more reachable goals. Manageable goals may provide the client confidence and serve as a catalyst for change. Fourth, clients are assumed to be the expert in their own lives and assumed to have the needed skills to resolve their differences. This assumption places responsibility on clients themselves to determine what they want to work on. Also, philosophically viewing all people as resourceful coincides with having a positive orientation toward people in general. Thus, the practitioner should convey to clients that they possess the needed skills to improve their own situation. Fifth, goals should be viewed in positive terms and should mirror what the client wants to do as opposed to something the client wants to stop doing.

Solution-Focused Methods

Solution-focused brief counseling consists of five distinct steps (Sklare, 2005). The first and second steps consist of identifying the problem and developing positive goals. Traditional “problem” talk should be facilitated in “solution” talk, which empowers individuals to assist themselves (Sklare et al., 2003). Establishing goals provides direction and opportunities for clients to discover new steps toward life without the problem. Sklare (2005) suggests that goals should be stated in positive, observable actions and in terms of small steps. Goals should be phrased in “what the individual wants to do” as opposed to “what the individual wants to stop doing.” Walter and Peller (1992) suggest that having the client state goals in positive terms develops a representation of the actual goal. Forming a representation requires that a goal has to be some thought or action rather than the absence of doing something.

De Shazer (1990) discovered a strategy called the “miracle question” for assisting individuals with uncovering their goals. The miracle question helps focus clients’ attention on what life would be like free of the problem. The effectiveness of the miracle question is that it enables clients to recognize a specific behavioral goal, this reinforces the concepts of facilitating small change, enhancing the ripple effect, and fostering positive goals. An example of the miracle question is the following:

Suppose when you go to sleep tonight, a miracle occurs, and because you were sleeping, you didn’t know it happened. The miracle solved the problem that brought you here. When you woke in the morning, what clues will you see that lead you to discover that this miracle has taken place? (Sklare, 1997, p.31).

The third step of SFBC involves having clients recognize times devoid of their problem and identify how they were able to make this exception happen. Hoigaard and Johansen (2004) suggest framing two important reasons for helping the client discover exceptions to the problem. First, they suggest that individuals may be often overcome by the problem and feel that finding solutions are difficult. Second, finding exceptions to the problem can give individuals motivation based on something that has previously worked. While finding exceptions is an assumption of solution-focused counseling, it also empowers individuals to recognize specifics regarding how the exceptions happened.

In relation to the third step, Sklare (2005) suggests having clients identify a small sign that they are reaching their goal. This type of follow-up question is often related to the miracle question and is designed to have clients think about the first small steps of exceptions to the problem. An example of this type of question includes: “What will be the first small sign that you will notice that this miracle began to happen?” and “Tell me about a time when this miracle has already happened-even just a little bit” (Sklare, 1997, p. 68).

Sklare (2005) also suggests mind-mapping as a process of discovering exceptions to the problem. Mind-mapping reinforces small successes by helping clients recognize specific resources they used to bring about change. Specific mind-mapping questions include: “How did you manage to do that?” “What was different about that time?”

In the fourth step, clients are asked to scale the severity of the problem from 0 (best) to 10 (worst). This step is crucial for identifying where individuals currently rate their problem and also for exploring the scale in relation to the goal. Scaling also

provides insight about how they arrived at a particular number and what feedback should be used. For instance, ratings above zero indicate that the situation has previously been worse and feedback should be solicited concerning what has specifically improved. Scaling also establishes a baseline for measuring potential outcomes and provides the practitioner a means of assessing such outcomes.

The fifth step consists of two components of providing feedback and establishing forthcoming goal-related behavior. Feedback usually consists of a message for the client and should be comprised of tasks to be accomplished (Sklare, 2005). The philosophy of goal-setting helps clients remain clear about what they want and recognize when goals are met. Thus, such tasks should help the individual behave and think in a different manner. Tasks should encompass what client's do that is successful and also caution for potential obstacles so that individuals don't become discouraged and surprised with a difficult situation.

Solution-Focused Guided Imagery

Sklare (1997) designed solution focused guided imagery (SFGI) using the philosophy and assumptions of SFBC. SFGI was designed as a way to facilitate the goals of SFBC. Guided imagery allows the skilled facilitator to lead participants through a process of utilizing their creative imagination and allows these images to bypass the rational mind. This allows participants to face potentially troublesome scenes (Yip, 2003).

Sklare and colleagues (2003) state that SFGI is designed to guide the individual in creating vivid images of themselves thinking, feeling, and behaving in ways devoid of

their problem. SFGI essentially consists of the same steps of SFBC through the use of guided imagery. For example: (a) clients establish a baseline rating (0-10) concerning the severity of the problem, (b) clients visualize themselves in situations when the problem does not occur and with people who would notice this improved performance, (c) clients notice and explore exceptions to the problem situation when the problem does not occur, d) clients imagine that a miracle occurred and describe changes that have occurred without the problem, e) clients write a message describing a behavioral goal, f) clients rate the severity of the problem (0-10) after each session is concluded.

Coinciding with the Solution-Focused Methods is the aspect of guided imagery. Perhaps the most often used performance enhancement technique in sport psychology is mental imagery and numerous studies have revealed that imagery has been used effectively by performers in various sports (Martin, Moritz, & Hall, 1999). Martin and colleagues (1999) recommended that motivational imagery be used for competitive sport situations to increase one's self-confidence and efficacy. Some researchers have suggested that imagery is most effective when it is used to address situational purposes specific to the respective sport or activity in question (Hall, Mack, Pavio, & Hausenblaus, 1998). Taken together, these results suggest that imagery combined with solution-focused methods may be a good fit for managing the yips.

Effectiveness of Solution-Focused Methods

Limited research has been conducted using SFGI, but Sklare and colleagues (2003) have conducted the most extensive study to date involving solution-focused guided imagery. Forty-four participants defined a recurring problem that each wanted to

overcome. Participants were assessed via the scaling technique at the beginning, mid-point, and post-intervention. Results revealed that a significant decrease in the rating of the problem was achieved. Although these results provide evidence concerning the reliability of SFGI, actual behavioral measures were not collected. For instance, only one session was conducted with participants and no data were collected regarding any behavioral change. While this study is promising, future research using SFGI should obtain data consistent with actual behavioral change.

Additional research has revealed support for the efficacy of SFBC in school settings. For instance, LaFountain and Gardener (1996) examined the efficacy of SFBC with high, middle, and elementary school students. Group sessions involving SFBC were conducted weekly for 8 consecutive weeks and students were rated on a five-point scale regarding whether they met their goals. Results indicated that 81% of individuals achieved moderate to high attainment of their established goals. Yarbrough (2004) utilized SFBC methods with six elementary school students, conducting separate SFBC sessions using a multiple baseline design for five weeks. Results indicated that assignment completion percentage and accuracy scores were significantly improved for five out of six participants.

Recently, literature within the arena of sport has addressed the use of SFBC methods (Gutkind, 2004; Hoigaard & Johansen, 2004). Gutkind (2004) outlined using SFBC as an approach with an injured athlete. She suggested that SFBC is well-suited as a theoretical framework for injured athletes due to its emphasis on focusing on solutions and improving an athlete's self-efficacy. Hoigaard & Johansen (2004) discussed using

SFBC in the field of sport psychology, particularly with various types of athletes. They emphasize the benefit of SFBC as a means of emphasizing growth and improvement with an athlete. Together, these articles provide an overview of the benefits of SFBC in sporting environments. However, neither provides empirical evidence supporting their claims. Thus, research within sport psychology is needed that empirically tests the effectiveness of the basic tenets of SFBC.

Single-Subject Design

The main objective of single-subject research is to investigate the relationship between treatment and behavioral change with individual participants (Berryman & Cooper, 1982). Four elements must be included: (a) multiple data points; (b) stable baselines; (c) repeated measures; and (d) controlling for threats to internal validity (Holcombe, Wolery, & Gast, 1994).

First, multiple data points are needed under various phases (e.g. baseline A and intervention B) to determine changes in performance or behavior. Methods should ensure that measurements are not only accurate but are also applied as designed. One strategy for ensuring correct measurement is interobserver agreement (IOA). IOA consists of using at least two separate observers or recorders of the data to ensure consistency (Barlow & Hersen, 1984; Berryman & Cooper, 1982; Cashwell, Skinner, & Smith, 2001; Winn, Skinner, Allin, & Hawkins, 2004). Similar measures can be used to assess treatment integrity (Hryciako & Martin, 1996).

Second, each participant serves as his/her own control as performance is compared across baseline and intervention phases. The assumption behind this is that

behavior change bears little meaning at the group level and in most natural and applied settings, changes are evaluated on an individual basis (Morgan & Morgan, 2001). When each participant serves as his/her own control, stable baselines and non-overlapping data points are needed to assess individual behavioral changes and determine causality (Bryan, 1987). Stable baselines should be established through a minimum of three separate observations and consist of a stable or worsening performance trend (Barlow & Hersen, 1984).

Third, testing for the existence of intervention effects requires replication. (Holcombe, Wolery, & Gast, 1994). Thus, any single-subject design must account for repeated measures of a participant's effect across conditions. Repeated measurement of the behavior or dependent variable is a prime source of identifying variability (Barlow & Hersen, 1984). Morgan and Morgan (2001) add that repeated measures conceptualize behavior as a naturally occurring phenomenon and allow observations to be scientifically viable. Finally, single-subject designs are dynamic and certain variables may need to be identified post-hoc (Holcombe, et al., 1994).

Controlling for possible threats to internal validity (i.e. testing, history, fatigue, instrumentation) in single-subject design research is paramount (Winn, et al., 2004). For example, the researcher must be aware of variables that cannot be controlled in the research design (Campbell, Stanley & Gage, 1963). Experimental designs that cannot control for rival hypotheses risk having unwarranted outcomes, and effects that can be discounted. As Campbell and colleagues (1963) indicate, designs that control for threats, render rival hypotheses implausible. Research within performance-related fields such as

sport psychology relies on the potential application of findings and the effective evaluation of intervention outcomes (Bryan, 1987; Hrycaiko & Martin, 1996). Careful methods of evaluation rest upon being able to demonstrate that results are repeatable and due to effective interventions (Bryan, 1987).

Summary

The yips appear to be a form of task-specific dystonia that is prompted and/or exacerbated by psychological factors such as stress and/or anxiety (Grafman, Cohen, & Hallet, 1991; Kolle, 2000; Smith et al., 2003). Psychological interventions appear to have potential for those suffering from a focal hand dystonia (Byl & McKenzie, 2000) and those experiencing the yips (Blundell, 1990). SFGI is designed to guide the individual to create vivid images of themselves thinking, feeling, and behaving in ways devoid of their problem. However, SFBC has only recently emerged as a potentially effective intervention technique in the field of sport psychology.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the effectiveness of solution-focused guided imagery with yip-affected golfers using a single-subject design. In this chapter, a description of the participants and settings are presented. Research design issues addressing baseline and intervention phases, data analysis, and controlling threats to internal validity are also discussed.

Procedures

Approval of Human Subjects Committee

Prior to conducting the study, approval was obtained by the Institutional Review Board (IRB). Participants were asked to sign informed consent forms describing the purpose of this study, that they were free to withdraw at any time and that all information would be confidential (see Appendix A). All participants chose a pseudonym to be used for the study and contacted the researcher after discovering about the study.

Participants

Four Caucasian male golfers ($X = 51$ years of age) from the Southeast United States participated in this study. Each golfer met the following two criteria: (a) he had experienced an observable symptom of the yips, operationally defined as a “twitch, jerk, freezing, or flinch” of the putting stroke (Smith et al., 2003, p. 14); and (b) he was an experienced (>10 years) and accomplished golfer (<10 handicap). Each golfer was right-

handed and played golf at least twice a week in the same playing format. A detailed biography of each golfer is presented next.

Storm

Storm contacted the researcher through electronic mail after he found a posting and expressed interest in participating in the study. Storm is a 43 year-old Caucasian male and has played golf for approximately 25 years. He is a current PGA professional and has a USGA handicap rating of 3. Storm first experienced the yips 20 years ago during a tournament. During the intake interview, he stated that he had attempted to relieve the yips through different grips (i.e. claw, left hand low), different putters (i.e. long putter, belly putter) and different visual focus techniques (i.e. looking at the hole). However, Storm found that each technique would only temporarily relieve the yips for no longer than a round or two. Storm admitted that his interest in playing competitive golf had declined in the past years due to his experience with the yips. He had not been diagnosed with any neurological or medical disorder, although he felt he sometimes experienced yip-related symptoms during “lay-ups” in basketball while in high-school. He described the yip- related symptoms in basketball as a flinch of his right arm on easy or routine lay-ups.

Storm putted with a conventional grip and used the same putter throughout this study. Storm played nine holes at his regular golf course twice a week with two or three other players. The format always consisted of a monetary bet in a modified stroke or match play event. The symptoms of the yips emerged as a flinch of the right hand during the execution of the putting stroke and occurred on putts of approximately 5 feet or less.

Commish

Commish contacted the researcher after he read a newspaper article describing the purpose of the study. He is a 51 year-old Caucasian male, has played golf for 32 years and his current USGA handicap rating is 6. He first experienced the yips 2 ½ years ago and stated that he had previously used the “claw” grip to alleviate the symptoms. However, he felt that he was not as accurate on longer putts. Commish stated that he had not experienced similar yip-related symptoms outside of putting. His only known medical condition was arthritis in his left shoulder and hand.

Throughout the study, Commish played nine holes of golf twice a week. The format consisted of a match play event with approximately 15 to 20 golfers per round. Each player would contribute weekly money and playing partners would vary according to a blind draw. Commish putted with a conventional grip and used the same putter throughout the study. The symptoms of the yips emerged as a twitch of the right hand during the execution of the putt. He also described feeling the wrist “turn over” at the moment of execution. The yips occurred on putts from a distance of 5 feet or less.

Struts

Struts contacted the researcher after reading a newspaper article describing the purpose of the study. He is a 53-year-old Caucasian male, has played golf for 40 years and currently has a USGA handicap rating of 4. During the intake interview, he stated that he first experienced the yips 1 year ago. He attempted to solve this problem by changing putters and admitted that positive results were temporary. Struts stated that he

had not experienced similar symptoms of the yips outside of golf and had not been diagnosed with any neurological disorder.

Throughout the study, Struts played nine holes of golf twice a week. The format consisted of the same three playing partners in a match play format and monetary wagers. Struts putted with a conventional grip and used the same putter throughout the study. The yips would emerge as a flinch of the right hand during the execution of the putt. The yips would most often occur at putting distances of 5 feet or less, but occasionally occurred on putts ranging from 5 to 10 feet.

Paris

Paris contacted the researcher after reading a newspaper article describing the purpose of the study. He is a 57-year-old Caucasian male, has played golf for approximately 38 years, and has a current USGA handicap rating of 10. During the intake interview, Paris stated that he first experienced the yips 8 years ago. Paris has used the “claw” grip for the past 2 years and claims to have had some success with it. Paris stated that he did not have yip-related symptoms outside of golf and had never been diagnosed with any neurological disorder or physical ailment.

Paris putted with the claw grip and used the same putter for the entire study. He played with Storm in the same format and the same monetary wagers. The yips would emerge as a flinch of the right hand during the execution of the putt. Paris would also occasionally “stab” at the ball and would not complete a follow-through with the putting stroke. The yips would occur most often on putting distances of 5 feet or less and sometimes during putts outside of 10 feet.

Setting

The study took place at the participants' regular golf courses in the greater metropolitan area. One course was an 18-hole public golf course, while two courses were 18-hole private courses. Participants were asked to play at least nine holes of golf twice a week under the same format each time. The specific conditions of the playing format were discretionary, but all consisted of some sort of wager, as per their "typical" playing routine.

Design

Data were collected during the fall of 2005. Prior to baseline data collection and the introduction of the solution-focused guided imagery, an intake interview was conducted with each participant. The intake interview consisted of prior experience with the yips. Baseline data collection began in September while the intervention and maintenance phases lasted until mid-December. The intervention was conducted for a half-hour prior to play in a private room at the participant's respective course.

Interobserver Agreement

Two of the independent observers were undergraduate psychology students and one independent observer was a graduate student in sport psychology. Prior to data collection, all independent observers were trained regarding the nature of the yips and were also asked to sign a confidentiality agreement form (see Appendix B). Preliminary data collection consisted of the independent observer being assigned to a participant and recording instances of a yip during the putting stroke, distance from the hole, and number

of total putts. During this preliminary data collection, 100 % of yip occurrences and putting statistics were confirmed with the primary researcher.

Putting data were confirmed across participants through interobserver agreement during 48% of all putting rounds. That is during 48% of rounds, two observers recorded data. Across all rounds where two observers recorded putts, interobserver agreement averaged 99% accuracy. Only one disagreement emerged between observers regarding an occurrence of the yips and this event was not recorded. Interobserver agreement was calculated for each nine-hole round by dividing the number of agreements of yip occurrences by the number of agreement plus disagreements and multiplying by 100.

Baseline Phase

The present study followed a concurrent multiple baseline across-subjects (M-B A-S) design described by Bolton and colleagues (1994). To help control for the threat to internal validity, baseline phases ranged from four to seven rounds of golf. The dependent variables in this study were number of yips and percentage of yips within 5 feet. Data were also recorded for the categories of number of total putts and percentage of made putts within 5 feet and closer. These data were recorded by a researcher trained in recording these statistics.

Data collection procedures consisted of the primary researcher standing approximately 10-15 feet away from the participant during putting scenarios. This observation procedure consisted of acting as another playing partner and tending the flagstick when needed. All data recording was conducted after the hole was completed on the way to the next tee box.

Intervention Phase

After a baseline period of four rounds of golf, the first participant began the intervention phase. The second and third participants completed the baseline phase of five rounds of golf. The fourth participant completed seven rounds of golf before beginning the intervention phase. Data collection methods occurred at various times across three weeks.

Intervention Procedures

Each participant took part in solution-focused guided imagery with the primary researcher (See Appendix C). The interventions consisted of having the participant image and verbalize responses to each question of a SFGI script. The primary researcher wrote out participants' responses with each SFGI session taking place prior to the round of golf and lasting approximately 20 minutes. Each was asked to participate in five intervention sessions to determine the effectiveness of SFGI.

Treatment Integrity

Having the participants verbalize their responses to each SFGI also helped ensure treatment integrity of the intervention. Participant responses were checked to make sure answers correlated with each question and followed the correct protocol. For instance, the primary researcher emphasized that each participant follow the instruction of "do not describe something you would not be doing."

Maintenance Phase

Maintenance data collection was conducted three weeks after the interventions were completed and consisted of the primary researcher observing each golfer during one round of golf.

Treatment Acceptability

At the conclusion of all data collection, participants were given a treatment acceptability form (See tables 1-3 in appendices). This measure was utilized to help assess the participant's overall experience. Participants found the intervention methods with solution-focused guided imagery to be "useful", "easy to apply", and felt it helped with their "problem".

Data Analysis

Data analysis consisted of graphing the dependent variables of yips per round and percentage of yips within 5 feet. Putts per round and percentage of made putts within 5 feet were also graphed. Due to the applied nature of single-subject design research, visual inspection of the data is conducted to determine if the intervention was effective (Barlow & Hersen, 1984). Effective interventions should reveal abrupt changes in means and/or slopes between phases as the intervention is introduced. Although only marked effects are regarded as reliable through visual analyses, statistical analyses can reveal smaller changes in performance (Barlow & Hersen, 1984). Thus, effect size for each category was also computed to help gain an understanding of the data.

Effect size was conducted using mean baseline reduction (MBLR) recommended by Campbell (2004). MBLR is calculated by subtracting the mean of the baseline phase by treatment phase, dividing the mean of the baseline phase and multiplying by 100. Effect size measures the index of how much impact a treatment has on the dependent variables (Murphy & Myors, 1998). The effect size of a treatment can range from small (.20), moderate (.50), to large (.80) (Murphy & Myors, 1998). For instance, an effect size of .20 would mean that the average effect of a treatment is 20% greater than the variability that might occur with no treatment. Alternatively, a larger effect size would provide evidence that change occurred even with a small sample.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the effectiveness of solution-focused guided imagery (Sklare, 1997) with yip-affected golfers. A multiple-baseline across-subjects design (M-B A-S) was used to control for possible threats to internal validity (Bolton et al., 1994). Data were interpreted using visual and statistical analysis. In this chapter, the results of the study are presented.

Participant Results

Number of Yips Across Participants

Figure 1 displays the data on number of yips per nine holes of golf for each participant across all phases. Figure 1 shows an immediate decrease in yips per round across all participants following the application of the intervention. Additionally, no reduction in yips occurred for participants in the baseline phase when the intervention was introduced to other golfers. Visual analysis of Figure 1 also shows that relative to baseline, yips per round were reduced throughout both the intervention and maintenance phases. Visual analysis of Figure 1 provides three demonstrations of a treatment effect (i.e., experimental control) across three participants and at three different locations. This design controlled for threats to internal validity and suggests that the intervention and not some extraneous variable caused changes in the golfers' behavior.

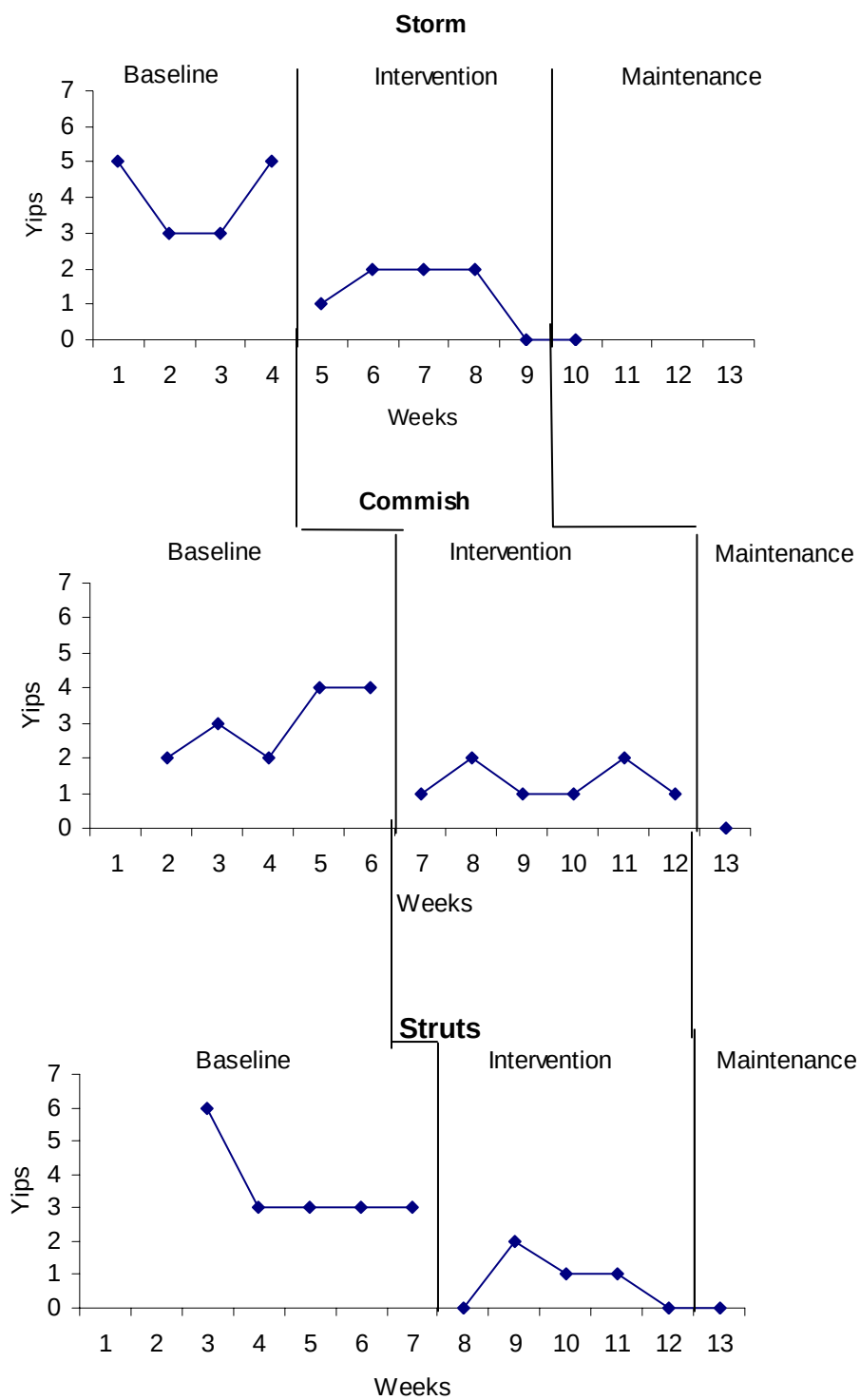


Figure 1. Number of Total Yips

Paris's results were excluded from the analysis because of a low frequency of yip occurrences and a mortality effect. Paris was unable to complete the study due to worsening weather conditions and personal time constraints. Yip occurrences were difficult to confirm for Paris because his putting stroke was often choppy, resulting in a stabbing motion at the ball. This created an extended baseline phase due to the lack of yip occurrences and may have been due to the fact that Paris was the least experienced golfer in the study (handicap 10). Nonetheless, it was difficult to introduce an intervention with his unstable baseline.

Storm. Figure 1 reveals that during four rounds of the baseline phase, Storm's data ranged between three and five ($X = 4$) yips per round. Throughout the intervention phase of the study (five rounds), Storm's yips ranged between zero and two per round ($X = 1.4$). Visual analysis of the yips per round revealed an immediate decrease to one occurrence when the intervention was applied. Visual analysis of Figure 1 shows no clear baseline phase or intervention phase trend. Figure 1 also shows no overlapping data points across baseline and intervention phases. Thus, for all intervention data, Storm did not experience the yips as often post intervention as during his best round in the baseline phase. Effect size data comparing Storm's baseline and intervention phase on the number of yips was moderate at .65. Finally, one round of maintenance data showed no yip occurrences.

Commish. Figure 1 shows that during five rounds of the baseline phase, Commish's data ranged between two and four ($X = 3$) yips per round. During the six rounds of the intervention phase of the study, Commish showed an overall decrease in

yips between one and two occurrences ($X = 1.3$) per round. Visual analysis revealed an immediate decrease to one occurrence of the yips when the intervention was introduced. Examining overlapping data points revealed that total yips during the intervention phase were not greater than during the baseline phase. Effect size between baseline and intervention phases for yips per round was moderate at .55. Lastly, maintenance data revealed no occurrences of the yips.

Struts. Figure 1 shows that Struts established a baseline phase during five rounds of golf and the number of yips ranged between three and six ($X = 3.6$) putts per round. During the intervention phase (five rounds), Struts' yips decreased and ranged between zero and two ($X = .8$) putts per round. Visual analysis of the data revealed an immediate decrease in yips between baseline (three) and intervention phase (zero). In addition, no overlapping data points were revealed for total number of yips. The highest number of yips per round (six) occurred during the first round of data collection; this initial data point may have been caused by initial observer reactivity (Barlow & Hersen, 1984). Therefore, two separate effect sizes (one with the data point and one without) were conducted to help determine the true effectiveness of the intervention. Incorporating the first data point, a moderate effect size of .77 was revealed; removal of the first data point also indicated a moderate effect size of .73 for yips per round. Lastly, no yips per round were revealed during the maintenance phase.

Summary of Yips Per Round

Visual analysis of Figure 1 shows an immediate decrease in yips per round across all participants. Additionally, no data points in the baseline phase were greater than

during the intervention phase. Thus, visual analysis suggests that the intervention caused the decrease in occurrences of the yips. Visual analysis was confirmed by effect size calculations that showed a moderate decrease in the number of yips across participants. Also, no yips were observed during the maintenance phase across participants.

Percentage of Yips Within Five Feet

Figure 2 displays the data for the percentage of yips within 5 feet for each participant across all phases. Figure 2 shows an immediate decrease in percentage of yips across all participants following the application of the intervention. Similar to Figure 1, no reduction in yips occurred for participants in the baseline phase when the intervention was introduced with other golfers. Lastly, visual analysis shows that relative to baseline, percentage of yips within 5 feet was reduced throughout the intervention and maintenance phases.

Storm. Figure 2 shows that baseline data of percentage of yips within 5 feet ranged between 25% and 50% ($X = 35.5\%$). During the intervention phase, percentage of yips within 5 feet ranged between 0% and 25% ($X = 15.5\%$). Visual analysis of percentage of yips within 5 feet also revealed an immediate decrease when the intervention was introduced. The fact that there were no overlapping data points showed that overall baseline phase data was not less than the intervention phase. Effect size comparison between baseline and intervention phases for percentage of yips within 5 feet was moderate at .57.

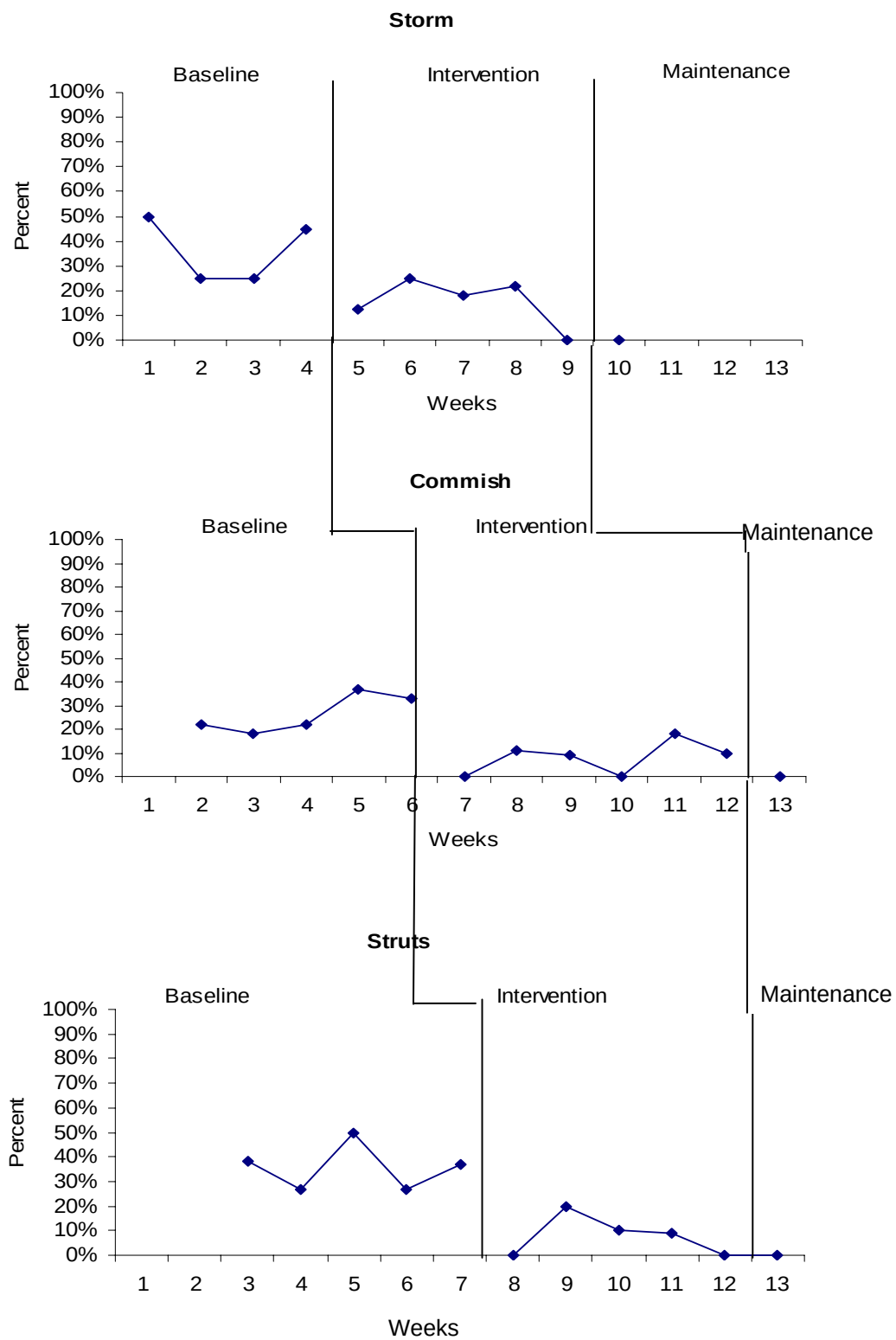


Figure 2. Percentage of Yips within Five Feet

Commish. Visual analysis of Figure 2 reveals that during baseline phase, Commish's percentage of yips within 5 feet ranged between 18% and 37% ($X = 30.6\%$). Throughout the intervention, percentage of yips within 5 feet ranged from 0% and 18% ($X = 12.9\%$). Visual analysis of Figure 2 shows an overall and immediate decrease of percentage of yips within 5 feet when the intervention was introduced. No overlapping data points showed that overall baseline phase data were not less than the intervention phase. Effect size comparison between baseline and intervention phases for percentage of yips within 5 feet was moderate at .57.

Struts. Figure 2 shows that during the baseline phase, Strut's percentage of yips within 5 feet ranged between 27% and 50% ($X = 36.7\%$). During the intervention phase, Strut's data of percentage of yips within 5 feet ranged between 0% and 20% ($X = .08$). Visual analysis of Figure 2 revealed an overall and immediate decrease of percentage of yips within 5 feet between baseline and intervention phases. Two effect sizes were conducted. Effect size comparison of percentage of yips within 5 feet between baseline and intervention phases with the first data point was moderate at .79; it was also moderate without the first data point at .77.

Summary of Percentage of Yips

Visual analysis of figure 2 shows an overall and immediate decrease in percentage of yips across participants. No overlapping data points were revealed across all participants. Therefore, visual analysis suggests that the intervention caused the decrease in percentage of yips within 5 feet. Visual analysis of Figure 2 is also confirmed by effect size calculations that show a moderate decrease in the percentage of yips within 5 feet.

Putting Accuracy

Storm. During the baseline phase, Storm averaged 73.3% of made putts within 5 feet. During the intervention phase, Storm increased putting percentage by 13.3% and averaged 86.6% of made putts within 5 feet. During the baseline phase, Storm averaged 18.7 of total putts per nine holes. Throughout the intervention phase, Storm decreased total putts by 1.5 strokes and averaged 17.2 of total putts per nine holes. Finally, during the maintenance phase, Storm made 100% of putts within 5 feet and had 17 total putts.

Commish. During the baseline phase, Commish averaged 89% of made putts within 5 feet. During the intervention phase, Commish decreased 5.2% and averaged 83.8% of made putts within 5 feet. During the baseline phase, Commish averaged 17.2 total putts per nine holes. Throughout the intervention phase of the study (six rounds), Commish added .6 putts per round and averaged 17.8 total putts. During one round of the maintenance phase, Commish averaged 88.8% of putts within 5 feet and had 14 total putts.

Struts. During the baseline phase, Struts averaged 77.5 % of made putts within 5 feet. Throughout the intervention phase, Struts increased his percentage by 10.5% and averaged 86% of made putts within 5 feet. During the baseline phase, Struts averaged 16.8 total putts per round and during the intervention phase, he improved by one stroke per nine holes and averaged 15.8 putts per round. One round of maintenance data revealed that Struts had 16 total putts and averaged 89% of putts within 5 feet.

Summary of Putting Accuracy

Although putting accuracy was not a dependent variable, the data suggested that the intervention helped two of the golfers in terms of overall putting performance. Specifically, Storm and Struts both improved their putting accuracy and demonstrated a 10% increase in made putts within 5 feet; both also decreased total putts by over one stroke per nine holes. However, Commish's performance did not improve on putting accuracy measures. Commish added a half a stroke per nine holes and decreased 6% on percentage of made putts within 5 feet. In the next chapter, these results are discussed in relation to existing literature, suggestions for future research and for sport psychology practitioners are offered, and conclusions are presented.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The purpose of this study was to investigate the effectiveness of solution-focused guided imagery (SFGI) (Sklare, 1997) with yip-affected golfers. Four experienced golfers in the Southeast United States participated in a M-B A-S design (Bolton et al., 1994). Results of this study suggest that solution-focused guided imagery was successful in reducing the number of yips for these golfers. Analysis of participant data revealed an immediate decrease in yips, non-overlapping data points, and a moderate effect size between baseline and intervention phases. Maintenance data of three weeks post-intervention also revealed no instances of yip behavior across participants.

In this chapter, results are discussed relative to the theoretical orientation underlying solution-focused guided imagery, the etiology of the yips, and the role of self-efficacy (Bandura, 1977). Strengths and limitations of the current study are also provided. Finally, conclusions and implications for future research and suggestions for sport psychology practitioners are offered.

Solution-Focused Guided Imagery

Results from both the yips and percentage of yips data (see Chapter IV) indicate that the solution-focused guided imagery was effective with these golfers in reducing instances of the yips. Addressing the specific components of SFGI may help explain why it is an appropriate intervention for yip-affected golfers (see Appendix C for Strut's completed transcript). McKeel (1996) suggests that research has often overlooked clients'

perceptions and evaluations of treatment. Therefore, this framework provides the opportunity to evaluate participant answers during SFGI sessions and their perceptions of the intervention.

Golfers in the current study reported that the time efficiency of SFGI was appealing. Similar studies with solution-focused methods have advocated the short-term model as well (Yarbrough & Thompson, 2002). Specifically, Downing and Harrison (1992) indicate that solution-focused methods fit the modern day “time-conscious atmosphere.” Counseling approaches in sport have also stressed brief interventions that focus on improvement instead of the problem (Giges & Petipas, 2000; Hoigaard & Johansen, 2004).

SFGI is designed to encompass the goals of SFBC (Sklare et al., 2003). Coinciding with other SFBC literature, focusing on solutions appeared to create imagery sessions that helped the golfers in the current study recognize possibilities and identify resources (Gutkind, 2004; Sklare, 2005). A goal of solution-focused methods is to engage in “solution talk” rather than “problem-talk” (O’Connell, 1998). Though dialogue was minimal during the guided imagery sessions, participants were directed to engage in solutions by describing what they would be doing (right) as opposed to something they would not be doing. Gingerich, De Shazer, and Weiner-Davis (1988) found that engaging in solution talk facilitated rapid change and shortened therapy sessions. De Shazer (1986) also indicates that solution talk helps clients expect positive change. In essence, the solution focused language used throughout SFGI by participants is an important principle in the process and appeared to be effective for the golfers in the current study.

Scaling

The first step in SFGI involved rating the problem throughout each session. The technique of “scaling” helped participants scale their progress toward positive goals. At the beginning of each SFGI session, participants were asked to rate their problem on a scale from 0 (worst it’s ever been) to 10 (non-existent) regarding the severity of the problem.

Initial ratings among participants in this study varied. Storm’s ratings ranged between one and four, Commish’s ratings ranged from three and seven, and Strut’s ratings were consistently at five. At the end of each session, participants moved at least one number higher except for two instances in which the self-rating stayed the same. Typically, participants rated themselves several numbers higher by the end of the session, often reaching ratings of 8 or 9. These higher self-ratings provide an indication that SFGI was a reliable tool and was effective in helping participants solve their yips problem. According to Sklare et al. (2003), higher self-ratings provide an indication that participants are moving closer to a problem solution by the end of a guided imagery session.

Miracle Question

One of the steps most often cited in SFBC research is the “miracle question” (Gutkind, 2004; Hoigaard & Johansen, 2004; Yarbrough et al., 2002). Although limited research exists regarding the effectiveness of the miracle question by itself, Skidmore (1993) found that therapists rated the miracle question as the most effective component of the SFBC process. The goal of the miracle question is to have the person visually create

positive outcomes to the problem by recognizing the first small sign that something is different.

In this study, answers to the miracle question included either participant's feelings, psychological state, and/or putting technique. These specific descriptions coincide with de Shazer (1988) who suggests that clients should report concrete, specific behaviors to the miracle question. In addition, Sklare (1997) states that detailed answers and the specifics of solutions are crucial for the effectiveness of the miracle question. For instance, in this study, most responses to the "miracle" question included content that described a "feeling" such as: "confident", "natural", "self-assured", "focused", "relaxed", and "calmer".

Qualitative analysis of the data suggested that Struts was the most consistent in his answers to the miracle question. He stated, "I am confident, I feel confident, and I know that I can execute a smooth stroke. I am confident it feels natural." Storm stated: "My level of confidence would be like on the putting green. I would have no doubt in my mind about [having] a solid stroke and follow-through impact." Commish stated "One, the ball is going in the hole, and two my shoulders would be relaxed."

Interestingly, participants sometimes identified results that they would see if the "miracle" happened as opposed to a certain feeling, psychological state, or putting technique. For example, Commish stated that the first small sign of the miracle occurring would be the putt "going in the back of hole" or "banging in the back of the cup." These answers to the miracle question appeared to focus on the result of the action as opposed to the first small sign that something was different. Hurn (2003) conducted a case study

that focused solely on the miracle question and found that an inhibitor to treatment was the client's identification with material changes (lottery win) as opposed to identifying the absence of the problem. In the present study, these "result-oriented" answers occurred in the first few sessions with Commish but diminished during latter SFGI sessions. This self-adjustment by Commish coincides with solution-focused assumptions that "if it does not work, try something different" (Sklare, 1997).

Exceptions

Another SFGI question that was well received by participants was to imagine how they made their miracle happen during the problem time. This question emphasized the assumption of facilitating small change through the process of identifying exceptions to the yips and how one makes these changes occur (Lipchik, 2002). The notion of identifying exceptions to the problem is a fundamental assumption of SFBC and is characterized as "mind-mapping." In SFBC, mind-mapping accompanies the presupposition that some of the miracle has already occurred and is designed to help the client recognize and strengthen specific thought patterns that will ultimately create successful behaviors (Sklare, 2005).

Participants' answers to this question followed the common theme of identifying specific putting techniques, thought processes, and /or physiological states. For instance, Struts stated, "[I] tried to be relaxed and focused on keeping my head still. I focus on a dimple of the ball and let it happen." Storm stated, "I would be more self-assured and think 'let it go'." Commish stated, "[I] am trying to do successful things by reinforcing the straight back and straight through and relaxing my hands."

Written Message

SFGI helped participants reframe their outlook through having them compose a written message at the end of each session. This step of SFGI asks participants to create their own message that summarizes what they discovered or rediscovered about themselves or their situation. SFGI differs from traditional SFBC methods in which the counselor or consultant composes the written message for the client. SFBC methods highlight that the message includes some aspect of goal behavior and a compliment. However, in SFBC, this step has created some problems for counselors in that agreement has not been achieved regarding specific guidelines (Lipchik, 2002). Thus, SFGI appears to enhance the goal of empowering the client by having him/her compose the message him/herself (O'Connell, 1998).

In this study, participants almost always constructed a message that contained some sort of goal-directed behavior. The content was comprised of physiological, cognitive, and/or technical strategies. For instance, Strut's messages consistently encompassed all three types of strategies. He stated, "Concentrate on relaxing and staying focused. My head is still and my eye is on the ball. I let the stroke happen." Storm's messages were comprised of cognitive strategies and were mostly absent of technical and physiological goals. He stated, "I can only do so much. Just let it go and allow it to happen," and "I know I can do it. Just do it." Commish's messages mostly consisted of technical strategies with some physiological elements. He stated, "Get relaxed, grip it lightly, get alignment, straight back and straight through, and put the ball in the hole."

Two additional considerations also need to be discussed: types of yips and SFGI as an intervention

Type of Yips

The results of this study provide support for the effectiveness of solution-focused guided imagery (SFGI) as an appropriate treatment for yip-affected golfers. However they do not indicate if SFGI can be effective for all golfers experiencing symptoms of the yips, regardless of the type. Past research by Smith and colleagues (2003) classified yip-affected golfers as either Type I (i.e. task-specific dystonia), Type II (i.e. choking), or a combination of both. While no physiological measurements were gathered for golfers in the current study, the presence of a task-specific focal hand dystonia (Type I yips according to criteria of Smith et al., 2000; Smith et al., 2003) was suggested. For instance, each golfer demonstrated an observable flinch of the hand during the execution of a putt. Also, each was an accomplished performer (handicap < 7) and had extensive playing experience (>24 years). Lastly, each mentioned that he had previously been a very accomplished putter and that his yip symptoms were episodic, which also suggests that the yips were acquired. These aforementioned factors suggest that all of these golfers could be classified as Type I.

SFGI as an Intervention

This study was conducted to look at a potential solution to the problem as opposed to scrutinizing etiology of the yips. The theoretical rationale of this study was based upon a common factor of stress and/or anxiety present not only with Type I and

Type II yip-affected golfers (Smith et al., 2003), but most yip related research (Cook, 1993; McDaniel et al., 1989; Sachdev, 1992). Research also indicates that individuals with a focal hand dystonia experience increased bouts of stress and anxiety (Grafman, et al., 1991; Kollé, 2000). Support for the presence of psychological factors was suggested in this study when golfers stated that the yips were episodic and did not occur on the practice green, even with the presence of monetary wagers. The episodic nature of the yips manifesting during an actual round of golf suggests the presence of additional contributing agents such as increased performance expectations and perceived risk. According to Heil's (2000) psychophysiological model of risk, fear of an event can lead to increased physiological and psychological burden, which can emerge with thoughts of doubt or worry and increased muscle tension. Of relevance to the present study is the question if doubt or worry is related to the fear of an involuntary flinch during the execution of the putting stroke. This perceived threat could have led to a negative cycle of doubt and muscle tension which, in turn, perpetuated the yips. This explanation coincides with Smith et al., (2003) who suggest that the "yips are accompanied by performance anxiety, by the fear of recurrence and by a loss of confidence" (p.27).

Concomitant with perceived threats is diminished self-efficacy (Bandura, 1977). Research suggests the existence of an inverse relationship between self-efficacy and symptoms of perceived threat (i.e. anxiety, muscle tension) (Krane & Williams, 1992). Bandura (1989) claims that two main components of self-efficacy are past performances and physiological arousal. To that end, solution-focused guided imagery was used in the current study to assist yip-affected golfers in creating successful images by providing a

mental framework of how they would like to putt. Putting distance was important in the imagery intervention because of the increased expectancy of “making” a short putt coupled with the perceived threat of experiencing an involuntary flinch. Golfers in this study were most likely to have the yips on putts within 5 feet of the hole. This distance coincides with explanations of golfers’ experiences in the Smith et al., (2000) study. Solution-focused guided imagery may have helped these golfers increase their self-efficacy by thinking, feeling, and behaving in ways they would as if they didn’t have the “problem”. Gutkind (2004) indicates that increased self-efficacy can be a result of SFBC.

Even though past performance information appears to be the strongest predictor of self-efficacy (see Chase, Magyar, & Drake, 2005), solution-focused guided imagery appears to help decrease physiological arousal related to past performance worry via the creation of positive scenarios. The putting scenarios created in the current study focused on moderating negative physiological arousal through suggestions of being relaxed, free of tension, and calm. These states of reduced physiological arousal coincide with research suggesting that anxiety is a source of performance expectations (Krane & Williams, 1992). In essence, golfers’ responses of reduced arousal may have helped perpetuate an upward spiral of declining yips. More specifically, during a session of SFGI before a round, each golfer pictured himself as he would like to think and feel. Thus, it is presumed that he then took the thoughts and feelings from the imagery session out onto the course where he executed the putt without an involuntary flinch, thereby increasing his self-efficacy.

Strengths and Limitations

There are strengths to the current study that offer contributions to the literature dealing with single-subject designs, solution-focused guided imagery, golf, and sport psychology. The meticulous M-B A-S design of the current study adds strength to the interpretation of results. This study controlled for threats to internal validity while simultaneously maximizing ecological validity. For instance, data were recorded in the natural environment in which each golfer's yips occurred. All golfers played for monetary wagers and scoring was a main component. The overall score of a round or hole was important due to the perceived pressure to "make" a putt. Conversely, a poor score or hole may have contributed to feelings of frustration or disappointment.

This study focused on assisting golfers in reducing their instances of the yips. Research on the yips in golf has examined possible causes (McDaniel et al., 1989; Sachdev, 1992; Smith et al., 2000; Smith et al., 2003), yet no studies have obtained empirical data to determine the effects of a specific psychological intervention aimed at helping golfers alleviate yip related symptoms. Although SFGI and SFBC have been used in a variety of fields and settings (see Yarbrough, 2004 on the efficacy of SFBC with academically challenged students), prior to this, no study had examined SFGI as a potential intervention to enhancing performance in sport. In general, there is a need for applied studies which examine sport performance outcomes (Anderson, Mahoney, Miles, & Robinson, 2002). Also, applied studies often utilize a combination of sport psychology techniques so that results are not conclusive regarding the relative effectiveness of specific techniques (see Thelwell & Greenlees, 2001 for more discussion). Another

finding of interest for sport psychology practitioners is the suggested modification of a few SFGI questions by certain participants. Specifically, Storm felt the question about “others and who would notice a change in behavior?” was ineffective and did not contribute to the overall experience. Thus, this question was deleted during subsequent sessions with this golfer.

A few limitations are present in this study. For instance, each golfer received the intervention under the supervision and delivery of the same researcher and it is possible that the results may have been influenced through the relationship the golfers had with that person. Participants might have been more motivated to perform well because of the attention they received from the researcher, although the solution-focused guided imagery methods were the same for each golfer. The putting accuracy data illustrates another possible limitation. Whereas two of the three participants increased overall putting accuracy, one participant did not improve. That is, although instances of yips were reduced, improved putting accuracy was not conclusive. This may be a limitation because of the applied significance to golfers; if yips are reduced but putting accuracy does not simultaneously improve, golfers may be less likely to use the technique. However, these golfers were accomplished performers and their putting has compensated for their yips. Thus putting accuracy may have eventually improved with Commish with further exposure to SFGI. Of note is that the yips were a dire experience for the golfers in this study and merely alleviating the occurrences of the yips were of great significance.

Another limitation in this study was the absence of certain pre-and post-psychological measures. Measures of self-efficacy and anxiety ratings prior to and

following the intervention would have been a good compliment to the outcome data. Providing additional empirical evidence of psychological measures may have allowed for more substantive conclusions to be made regarding which psychological construct was influenced through SFGI. Also, an inventory measure assessing golfers' imagery ability may have contributed to the findings by increasing the effectiveness of solution-focused guided imagery.

Finally, it should be noted that Commish received 6 sessions of SFGI as opposed to five. During the fifth round of the intervention phase, he demonstrated a slight increase in yips. Therefore, another SFGI session was conducted. As previously mentioned, Paris's results were excluded from the analysis because of low yip occurrences and a mortality effect. Paris was unable to complete the study due to worsening weather conditions and personal time constraints. Yip occurrences were difficult to confirm for Paris because his putting stroke was often choppy, resulting in a stabbing motion at the ball and therefore he had an extended baseline phase due to the lack of yip occurrences. This may have resulted from Paris being the least experienced golfer in the study (handicap 10). Nonetheless, it was difficult to introduce an intervention with his unstable baseline.

Future Research

In addition to correcting the limitations mentioned above, future research should focus on the effectiveness of solution-focused guided imagery in other sport settings. There are numerous sport activities where the yips may occur and where one could test the generalizability of solution-focused guided imagery in reducing them. For example,

instances have been cited within baseball with players experiencing difficulty completing simple tasks (i.e., catchers throwing the ball back to the pitcher). Second, the effectiveness of SFGI should be examined with other golfers experiencing the yips, particularly with the population of professional golfers whose career is dependent upon overcoming problematic putting. Future researchers might also include longer maintenance phases to determine if SFGI is responsible for permanent change and/or if additional sessions are necessary during that time. Lastly, there are numerous experienced golfers of all races and genders, yet these groups have not been included to date with yip related research. Thus future research with the yips should be utilized with women and male golfers who are not Caucasian.

Suggestions for Sport Psychology Practitioners

Researchers have called for effective and simple sport psychology methods for athletes (Giges & Petipas, 2000). Yet there remains a dearth of applied work that examines the effectiveness of specific mental training techniques (Anderson et al., 2002). The effectiveness of solution-focused guided imagery with yip-affected golfers provides an example of a technique examined in outcome-based research that sport psychology practitioners might find useful.

The nature of the yips in golf has only recently been examined (Smith et al., 2003). Results of the current study suggest that solution-focused guided imagery is an appropriate and easily performed framework for sport psychology practitioners. Golf is a preferred leisure activity by millions of Americans and the onset of the yips has the potential to take enjoyment of this activity away. Notwithstanding that professional

golfers have been affected by the yips, symptoms may affect approximately 30% of all experienced golfers (Smith et al., 2003). More troublesome is the finding that some golfers tend to alleviate symptoms through alcohol and non-prescription drug-use (Smith et al., 2003).

Solution-focused guided imagery may be effective with other populations as well. For instance, the yips in golf may be similar to “Steve Blass Syndrome” which has affected some highly skilled athletes in baseball. This syndrome is characterized by being unable to successfully throw the baseball and has affected prominent baseball players such as Steve Sax, Chuck Knobloch, Mark Wohlers, and Rick Ankiel. Additional professions outside of sport have also been affected by symptoms of the yips including musicians, dentists, stenographers, and surgeons (Smith et al., 2003). Therefore, it is important that sport psychology researchers and practitioners are aware of the benefits of solution-focused guided imagery as a possible intervention technique for athletes experiencing yips symptoms.

Conclusions

Results of this study suggest that solution-focused guided imagery is an effective intervention for reducing instances of the yips in yip-affected golfers. Whereas previous researchers have suggested that anxiety is a component of the yips, no empirical evidence exists regarding how to alleviate the problem (Byl, 2004; Cook, 1993; McDaniel et al., 1989; Sachdev, 1992; Smith et al., 2000; Smith et al., 2003). Thus, this study not only provides an indication that there are psychological components that perpetuate the yips, but also offers golfers an avenue for relieving symptoms. The results of this study suggest

a number of components of SFGI that may have reduced instances of the yips. For example, having the golfer successfully image what would be different, noticing exceptions to the problem, and compositing goal-oriented behaviors enhanced discovering solutions to the problem. In turn, these potential solutions were an impetus to reduced anxiety and increased self-efficacy.

Additionally, this applied study of the effectiveness of solution-focused guided imagery maximized ecological validity while simultaneously controlling for threats to internal validity. As Sport Psychology consultants, there is a need to continue developing interventions and performing intervention research. Perhaps this study will provide a clear direction for clinicians and future research alike.

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APPENDICES

Appendix A

The purpose of this study is to determine the effectiveness of solution-focused guided imagery (SFGI) with golfers experiencing the yips. We are inviting you to participate in this study because you experience the yips while playing golf in your usual format. In this study, you will be asked to continue to play golf in your usual format and the number of yip occurrences will be recorded by a trained observer. You will also be asked to participate in five intervention sessions. The intervention sessions will consist of a solution-focused guided imagery script which contains 15 questions that will be read aloud by the researcher. You will be asked to verbalize your responses to each imagery question and the primary researcher will write down your responses. The purpose of solution-focused guided imagery is to have you create vivid images of yourself, thinking, feeling, and behaving in ways devoid of the problem.

The SFGI session will last approximately 20-30 minutes and will be audio taped. Participation in this study is voluntary. If at any time you want to discontinue your participation you may do so without penalty. This consent form will be stored in a locked file cabinet in the principal investigator's office (HPER 144) for three years and destroyed at the end of this period.

The Human Subject's Review Board at the University of Tennessee has approved this project. If you have any questions regarding research regulations at the University of Tennessee, Knoxville, please call (865) 974-3466.

If you would like to know more about this study please contact Rob Bell at (865) 591-7730.

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I acknowledge that the research procedures for this study have been explained to me and that any questions that I have asked regarding the research have been answered to my satisfaction. I have been informed of the minimal risks involved as a result of participation in this study. I have been informed that my individual interview will be recorded and analyzed for possible publication but at no time will my individual identity be disclosed without my permission. I understand that I am free to withdraw my consent to participate at any time.

(Printed Name of Participant)

(Signature of Participant)

(Date)

Appendix B

Research Team Member Confidentiality Agreement

I, _____, am taking part in a research study about the yips. As a member of this research team, I understand that I will be watching and recording data of yips occurrences. I will be expected to maintain the confidentiality of the participants and I agree not to share any information in these observations with anyone other than the primary researcher.

Team Member's signature _____ Date _____

Investigator's signature _____ Date _____

Appendix C

Struts. Answers to Solution-Focused Guided Imagery

Step 1

Close your eyes and picture a recent recurring problem that you would like to overcome. This could be something that you would like to do, or something you want to stop doing. Rate the severity of this problem from 0 (worst it has ever been) to 10 (non-existence) and write the rating in the space provided.

11-6-05

5

Step 2

Close your eyes. If your problem is something you want to stop doing. Picture what you would be staring to do instead. Picture what it would look like as if it were a video of the behaviors you would observe yourself start to do. Do not describe something you would not be doing. After you have visualized a mental picture, describe what you have pictured.

11-6-05

A good smooth stroke and my head is perfectly still, I have a good follow-through and I'm making the putt.

Step 3

With your eyes closed, imagine that a miracle happened tonight while you were sleeping, and this miracle solved your problem. Because you were sleeping you didn't know this miracle had occurred. When you woke up you realized you no longer had this problem. Picture in your mind what would be the first small sign that would show you were doing something different. After you have a mental image of this different behavioral action, describe what you would be doing. Do not describe something you would not be doing.

11-6-05

I see myself making good stroke. My head is real still and it's a smooth stroke.

Step 4

With your eyes closed, picture in your mind who would notice this different thing you would be doing and imagine how you think they would respond when they notice this different behavior. After you have a mental picture of this, describe what you have pictured. Do not describe something you would not be doing.

11-6-05

People I play with. They say "I feel better for you."

Step 5

With your eyes closed, imagine what you would do in reply to the person's response to your new behavior described in the previous step. Describe what you have pictured of how you would respond to that person. Do not describe something you would not be doing.

11-6-05

"I'm putting like I used to putt" "no problem."

Step 6

With your eyes closed, picture in your mind who else would notice this different thing you would be doing and imagine how you think they would respond when they notice this different behavior and describe what you have imagined. Do not describe something they would not be doing.

11-6-05

Word of mouth, other people would know. People would say they've heard.

Step 7

With your eyes closed, imagine what you would do in reply to the person's response to your new behavior described in the previous step. Then describe what you have pictured, do not describe something you would not be doing.

11-6-05

I would say "I feel like my old self again." I would feel confident saying it.

Step 8

With your eyes closed, picture in your mind a time when you've been having this problem yet some of this miracle has happened, even if only a little bit. Describe what you have pictured. Do not describe what you would not be doing.

11-6-05

Picture self making putts and feeling confident and just knowing that I am going to put a good stroke on it.

Step 9

With your eyes closed, picture in your mind how you made part of this miracle happen during the problem time. It could have been things you thought or tried that were different. Describe what you were doing to make some of this miracle happen. Do not describe something you would not be doing.

11-6-05

Picture self with my head still and focused on a smooth stroke.

Step 10

With your eyes closed. Imagine or remember your thoughts about how pleased you were with your efforts at the time. Describe your thoughts about what you imagined or remembered. Do not describe something you would not be doing.

11-6-05

Feels great.

Step 11

With your eyes closed, picture in your mind how you would now rate the severity of this problem from 0 (worst it's ever been) to 10 (non-existent).

11-6-05

7

Step 12

Close your eyes and imagine how you have gotten yourself to that number. Construct a mental image of how you made this happen. Then describe what you have pictured.

11-6-05

I concentrated and focused on the dimple of the ball and held my head steady.

Step 13

With your eyes closed, Picture in your mind when you are one number higher on the scale. What will you and others see you doing that's different from what you have already done? Describe what you have pictured. Do not describe something you would not be doing.

11-6-05

I am solid on the putts. It is a positive stroke and I am making a high percentage of them.

Step 14

Describe a short note that you would write about what you have discovered or re-discovered about yourself and your situation.

11-6-05

Stay focused and solid. Focus on a smooth stroke and I'll make a high percentage.

Step 15 rate the severity of the problem now that you have gone through this exercise, from 0 (worst it has ever been) to 10 (non-existent).

11-6-05

9

Note: Adapted from Sklare et al., (2003)

Table 1: Storm Treatment Acceptability Form

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. The method used was successful.	1	2	3	4	5	6
2. There are better ways to handle the problem than the one used here.	1	2	3	4	5	6
3. The method used was easy.	1	2	3	4	5	6
4. I liked the method used for addressing the problem.	1	2	3	4	5	6
5. I think this method used helped with improving my putting.....	1	2	3	4	5	6
6. The method would be a good one to use with other golfers experiencing a similar problem.	1	2	3	4	5	6

Note: adapted from Witt and Elliott (1985)

Table 2: Commish Treatment Acceptability Form

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. The method used was successful.	1	2	3	4	5	6
2. There are better ways to handle the problem than the one used here.	1	2	3	4	5	6
3. The method used was easy.	1	2	3	4	5	6
4. I liked the method used for addressing the problem.	1	2	3	4	5	6
5. I think this method used helped with improving my putting.	1	2	3	4	5	6
6. The method would be a good one to use with other golfers experiencing a similar problem.	1	2	3	4	5	6

Note: adapted from Witt and Elliott (1985)

Table 3: Struts Treatment Acceptability Form

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. The method used was successful.	1	2	3	4	5	6
2. There are better ways to handle the problem than the one used here.	1	2	3	4	5	6
3. The method used was easy.	1	2	3	4	5	6
4. I liked the method used for addressing the problem.	1	2	3	4	5	6
5. I think this method used helped with improving my putting.	1	2	3	4	5	6
6. The method would be a good one to use with other golfers experiencing a similar problem.	1	2	3	4	5	6

Note: adapted from Witt and Elliott (1985)

VITA

Rob Bell was born in Fairfax Hospital, Va. on September 7th, 1976. He graduated from Brunswick High School, MD in 1995. Rob attended Shepherd University in Shepherdstown, WV and graduated in May 2000 with a Bachelors degree in Psychology. Rob played competitive baseball and soccer throughout high-school and college. Injuries beset playing in college and he discovered the field of Sport Psychology.

In August 2001, Rob attended Temple University in Philadelphia, Pa. While at Temple University, Rob consulted with the university baseball team and was a Graduate Teaching Assistant in the Basic Instruction Program. He received his Master's Degree in Education with an emphasis in Sport Psychology in May 2003. His thesis investigated softball player's attributions for streaks and slumps.

In fall 2003, Rob entered the PhD program at the University of Tennessee in Sport Psychology. For three years, he was a Graduate Teaching Associate in the Physical Education department. While at the University of Tennessee, Rob consulted for baseball teams at the high-school and college level in the area. He also provided mental training consultation with area high-school, collegiate, and professional golfers. Rob is expected to graduate in May 2006 and will continue his services a mental training consultant.