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**Talking to God and talking to self among Muslim athletes**

by

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### Abstract

Although self-talk and religion are both held to influence sport performance, little is known about the relationship between these two in sport. The purpose of the present study is to examine the relationship between religiousness and self-talk and to bring up the phenomenon of athletes' talk to God called God-talk (GT). Participants included 159 Iranian athletes (102 male, 56 female and 1 missing), among whom 152 were identified as Muslims. They competed in team sports (e.g. football, volleyball, basketball) as well as individual ones (e.g. athletics, weightlifting, wrestling, judo). The participants' ages ranged from 17 to 38 years, with a mean of 22.9 years ( $SD = 4.2$ ). Participants were asked to complete the positive self-talk dimensions from the Automatic Self-Talk Questionnaire for Sport (ASTQS, Zourbanos, Hatzigeorgiadis, Chroni, Theodorakis, & Papaioannou, 2009), the Functions of Self-Talk Questionnaire (FSTQ; Theodorakis, Hatzigeorgiadis, & Chroni, 2008), and the Religiousness Scale (as adapted from Saroglou, 2009). In addition, a questionnaire comprising athletes' talk to God was developed, which was based on a pilot study was administered along with an adapted version of the FSTQ to reflect the perceived functions of God-talk. The results showed that athletes reported equal or higher means for God-talk compared to self-talk, and also for God-talk functions compared to self-talk functions. Regression analyses revealed that religiousness could significantly predict both God-talk ( $p < .01$ ) and God-talk functions ( $p < .05$ ). The results of the study indicate that, for Iranian Muslim athletes, talking to God is a frequent phenomenon, perceived as improving performance. The results provide valuable preliminary evidence regarding the role of religion in athletes' cognitive activation and encourage further research for the better understanding of cognitive processes in religious athletes.

Key words: **self-talk, self-talk functions, spirituality, prayer, God-talk, Religion, coach, athletes.**

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## Introduction

Self-talk is one of the psychological techniques that plays a pivotal role in better sport performance. The important role of self-talk has been identified and the topic has been attracting increasing interest from researchers during the past three decades. Although there is a considerable number of studies about self-talk, the need for further research to enhance our understanding of the influence of self-talk phenomenon on performance level has been stressed (Theodorakis, Hatzigeorgiadis, & Zourbanos, 2012). Self-talk has a lot of outcomes that athletes take advantages of ; for example, to acquire new skills, to build and maintain confidence, to improve concentration, to focus attention, to regulate mood, to regulate intensity, to psych up or relax and calm down, to sustain effort and also to initiate an action ( Kimberley L. Gammage, 2001; Yiannis Theodorakis et al., 2011). As researches have pointed out, self-talk is a personal matter for athletes, and the way athletes' self-talk evolves and influenced depends on a variety of factors. Religion is one of significant factors influencing athletes' careers (Melissa A. Murray et al., 2005) and thus is a potentially significant factor in shaping athletes' self-talk.

Research in the psychology of religion has grown dramatically in the past two decades, and researchers and practitioners have gained some important insights into the impact of religious beliefs and practices on the psychological well-being of the individual (Hood, Hill & Spilka, 2009; Pargament & Abu-Raiya, 2007; Paloutzian & Park, 2005). The relations between religious activities, religious orientation, and religious coping styles in relation to mental health have been widely investigated (Batson, Schoenrade, & Ventis, 1993; Koenig, 1998; Loewenthal, MacLeod, Goldblatt, Lubitsh, & Valentine, 2000; Pargament, 1997; Pargament et al., 1990;

Worthington, Kurusu, McCuUough, & Sandage, 1996). There is an overall positive relationship between many measures of religiousness and those of mental health, although the effects are weak. Nonetheless, studies relating to religion were not very common until two decades ago. It is often seen that the media as well as other athletes ridicule religious athlete (Nixon .S: Frey, 1996). However, in today's society, many people including athletes are turning to faith to gain answers to life's questions. The extent of prayer and/or spiritual rituals before, during, and after sporting contests permeates today's collegiate, club, and professional sports. Presently, almost every American team in the Major League Baseball, the National Basketball Association and the National Football League holds Sunday Chapel services prior to games (Czech et al., 2004). Prayer circles can be seen at almost every collegiate sporting event. Sunday services are also held in sports as varied as automobile racing and golf (Rotenberk, 1992). This social movement of athletes and coaches who witness for Christ has been termed "Sportianity" (Deiord, 1979). These types of athletes are frequently vocal about the impact of religious beliefs on their lives and specifically upon their sports performance.

In summary, based, in one hand, on what we know about self-talk and its importance for sports performance, and on the other hand on the role of religion and God in sport, and considering the need for studies on religion and prayers for religious cultures, the present investigation attempts to examine self-talk related to religiousness and the content of what athletes say to God.



## Literature Review

### Self-talk

#### *Definition*

There is no any compromise on a same definition of ST in literature. Self-talk has been described as private speech, inner dialogue, soliloquy, egocentric speech, communicative speech, sub vocal speech and self-verbalization speech (Gibson and Foster, 2007). As Theodorakis, Weinberg, Natsis, Douma, and Kazakas (2000) suggested, self-talk has been defined as “what people say to themselves either out loud or as a small voice inside”. This definition is, however, a little simplistic. Hackfort and Schwenkmezger (1993) described self-talk as verbalizations that allow individuals to interpret feelings and perceptions, regulate cognitions, and give themselves instructions and reinforcement. In an attempt to provide a more thorough definition, Hardy, Gammage, and Hall, (2001) suggested that self-talk can be better thought of as a multidimensional phenomenon concerned with athletes’ verbalizations that are addressed to themselves, which can serve both instructional and motivational functions. Although the promotion of appropriate self-talk is a commonly employed cognitive intervention in applied sport psychology that is frequently included in mental skills intervention packages (e.g. Rogerson & Hrycaiko, 2002), relatively little is known about the nature of self-talk or of its correlates.

Hatzigeorgiadis and Biddle (2008) discriminated between two different approaches to the study of self-talk; self-talk as spontaneous thoughts individuals experience and self-talk as a mental strategy with the use of specific cues. Hardy, Oliver, and Tod (2009) further clarified that

self-talk can either refer to automatic thoughts that may occur spontaneously, or deliberate statements addressed to one-self, and also to the strategic use of cues and self-talk plans.

Researchers categorized types of ST based on some dimension. Contemporary research has identified two broad dimensions with regard to the purposes self-talk serves, instructional and motivational (Zinsser, Bunker, & Williams, 2001). Instructional ST refers to statements related to intentional focus, technical information, and tactical choices, whereas motivational ST refers to statements related to confidence building, effort input, and positive moods (Hatzigeorgiadis, Zourbanous, & Theodorakis, 2007). Motivational self-talk includes cues aiming at psyching up (e.g., “let’s go”), maximizing effort (e.g., “give it all”), building confidence (e.g., “I can do it”), and creating positive moods (e.g., “I feel good”). Instructional self-talk includes cues aiming at focusing or directing attention (e.g., “see the target”) and providing instruction with regard to technique (e.g., “high elbow”), strategy (e.g., “push”), or kinesthetic attributes of a skill (e.g., “smoothly”) (Hatzigeorgiadis et al., 2011).

Moreover, self-talk has been described as positive or negative depending on the content, but also depending on the impact it may have (Hatzigeorgiadis et al., 2011). Positive self-talk was defined as personal encouragement, or a belief in the ability to succeed. Negative self-talk was defined as self-critical internal dialogue, or a lack in belief in the ability to succeed. Neutral self-talk was defined as neither positive nor negative.

### *Field studies*

The sport literature that has examined the effects of positive and negative self-talk has generally supported the use of positive self-talk. To overcome problems associated with the use of self-report surveys and laboratory-based methodological approaches, Van Raalte et al. (1994)

developed the Self-Talk and Gestures Rating Scale (STAGRS) to assess tennis players' use of observable self-talk. It would appear that observable self-talk is similar to external self-talk (one component of the perspective/ overtness dimension of the content of self-talk). Using the STAGRS, Van Raalte et al. (1994) demonstrated that tennis players make use of observable self-talk approximately once every three points. Moreover, although match winners did not differ from match losers on their use of positive self-talk, match winners used significantly less (observable) negative self-talk during matches than their match-losing counterparts. In a subsequent study, match winners did not differ from match losers on the observable self-talk they generated, but did differ on how they responded to their self-talk. It was found that match losers were more likely to lose a point after the use of negative self-talk than match winners (Van Raalte, Cornelius, Brewer, & Hatton, 2000). Surprisingly, Highlen and Bennett (1983) found that athletes reported that negative self-talk may actually improve performance, while Dagrou, Gauvin, and Halliwell (1991) and Rotella, Gansneder, Ojala, & Billing (1980) found positive and negative self-talk did not differentially influence performance.

The specific nature and content of self-talk during exercise has only recently been specifically examined. Van Raalte et al. (1994) specifically examined the nature of overt as opposed to sub vocal self-talk in tennis players, and found that a large percentage of overt self-talk was negative in nature. They also found that there was a correlation between the quantity of negative self-talk and losing, while there was no correlation between positive self-talk and winning. However, they suggested that it was possible that there was more negative than positive overt self-talk because positive self-talk may be more sub vocal than overt, and that negative self-talk may be motivational to some athletes, but that it was difficult to prove either of these possibilities with their study design.

Rotella, Gansneder, Ojala, and Billings (1980) in a comparative study reported that more and less successful skiers did not differ in their self-talk. Dagrou, Gauvin, and Halliwell (1991) found that athletes reported similar self-talk during their best and worst performances. Recently, Hardy and colleagues (2005) performed several studies that perhaps have been pivotal in identifying the nature and content of self-talk during exercise (Hardy, 2005). In an initial study, this group analyzed the nature of self-talk used by 164 athletes during a variety of sports. In this trial, 95% of the athletes reported that they used either overt or sub vocal exercise-related self-talk. Why 5% of athletes in this trial reported not using self-talk is unclear. As suggested by Tonsing (2006) self-talk may occur without conscious knowledge of it occurring, and athletes may, therefore, be unaware of their self-talk until they keep a diary of their thought processes, or are alerted to these processes by a coach. The athletes in the study of Gammage et al. (2001) who reported being aware of their use of self-talk described that, during exercise, there were several specific occasions when they most used self-talk. These included when they were fatigued, when they wanted to terminate the exercise bout, during the hardest part of the exercise bout, and near the end of the exercise bout. The nature of self-talk was reported to occur most often as phrases rather than sentences or single words, and subjects used the second person more frequently than the first person during exercise. Similar findings of sub vocal 'abbreviated' phrases being used mainly by athletes as self-talk was reported in a follow-up study performed by the same group. In this follow-up study, Hardy et al. (2005) also reported that self-talk was used more in competition than training bouts.

In the earlier study by Gammage, Hardy and Hall (2001) the main reason why athletes thought they used self-talk was described as either for motivational purposes, to maintain drive and effort, or for maintaining focus and arousal. A lesser percentage described the reasons for

self-talk as being for cognitive functions such as correct strategy or using specific technical methods to improve exercise performance such as breathing correctly, analyzing the amount of exercise time remaining and the future benefits that would be derived from completing the exercise bout, and analyzing the health benefits of the exercise bout. While the initial study of Gammage et al. (2001) described that the majority of the content of self-talk was neutral, in their later study, Hardy et al. (2005) reported that the majority of self-talk was described as being positive. A reason for the disparity in these findings between the two studies may be that in the first study the athletes were asked to provide examples of their self-talk, and the majority of examples were coded by the researchers as being neutral. However, in the later study, athletes provided more detailed information regarding their self-talk, and self-categorized their self-talk as being positive, neutral or negative. It is difficult to assess which of the two methodologies is more accurate in verifying the true nature of an athlete's self-talk, and further work is required to assess these interesting contradictory findings.

Several studies have examined the nature of athletes' 'thoughts' rather than specifically self-talk during exercise. The relationship between self-talk and thoughts has not been clearly defined, although it is likely that they are linked, and it has been suggested that self-talk occurs any time one thinks about something (Hardy et al., 2005). A more radical suggestion is that one cannot have conscious thoughts without self-talk occurring (Athens, 1994). Although it is difficult to assess the validity of this theory, the finding that there are deficits of self-consciousness in individuals with autism provides some support for this theory (Toichi, Kamio, Okada, 2002). The composition of the 'thoughts' of athletes during training runs has been examined by Schomer and colleagues (Schomer & Connolly, 2002) using light-weight micro-cassette recorders to document real-time verbalization of thought processes during exercise. An

advantage of using this technique is that it reduces the problem of subjective reporting that may occur when athletes describe the content of their self-talk or thoughts during an event in a retrospective manner at the end of the event, which was how the data were collected in the study of Gammage et al. (2001). Similar to previous work of Morgan and Pollock (1977) and Morgan (1978), Schomer and Connolly (2002) first divided thoughts during exercise as being either associative or dissociative. They suggested that, with associative thinking, an athlete continuously assesses and monitors their internal state. In contrast, with dissociative thinking, there is externalization of attentional focus, and information generated from the changes in physiological state that occurs in the body during exercise is shut out. They reported that at lower levels of exercise intensity, a greater percentage of thoughts were dissociative. As exercise intensity increased, the percentage of associative compared with dissociative thoughts increased. When ratings of perceived exertion, as measured by a Borg perception of effort scale, were >15 out of a possible 20, a higher percentage of thoughts were described as being associative rather than dissociative. At all levels of exercise intensity, the percentage of associative thoughts increased as the exercise bout progressed. In contrast to earlier findings of Morgan and Pollock (1977), Schomer and Connolly (2002) did not find that elite athletes had a greater percentage of associative thoughts during exercise compared with non-elite athletes.

There are, however, some limits in using field studies. As Hatzigeorgiadis et al. (2012) revealed, this type of study have not provided consistent results regarding the relationship between athletes' self-talk and performance. Several explanations are likely to account for this inconsistency. First, there are a variety of conceptual issues that have confused the findings: different approaches in the conceptualization of self-talk; unclear descriptions of how self-talk was assessed; use of single items measures; and most importantly the lack of clarity with regard

to assessing self-talk as a strategy or as spontaneous self-talk. Second, the assessment of performance, or more accurately the performance criterion that was used, ranging from qualifying versus not qualifying athletes, more successful versus less successful athletes, best and worst performances, and game or situational outcomes, may also account for much of the variability in results, especially when considering the large and more decisive number of factors that may influence or determine such performance dimensions. Besides, inability to argue for the causality of the relationship is another arguable limit of field studies. It is plausible and perhaps likely that self-talk influences performance or components of performance; however it is equally likely that the quality of performance determines athletes' self-talk; you think positively when you are doing well and negatively when not. Nevertheless, this research approach has been useful in advancing self-talk research and can help provide inspiration and ideas for further research development.

#### *Intervention/Experimental studies*

The large majority of experimental studies in the sport self-talk literature have focused on the effectiveness of self-talk interventions on task performance. Researches showed that self-talk is an effective mechanism for motivating an athlete during an exercise bout, or being a component of the mental processes required to allow the athlete to complete an exercise bout, it would be reasonable to suggest that optimizing self-talk through training would improve exercise performance in a similar manner to how physical training has been shown to improve performance. Previous researches of the effect of self-talk on exercise performance have shown equivocal results. Morgan and Pollock (1977) reported a 30% improvement in running performance during a time to fatigue test when subjects ran at 80% of maximal oxygen uptake capacity and were instructed to verbally repeat a verbal 'pseudo-mantra' continuously

throughout the exercise bout. Weinberg et al. (1984) found that dissociative and positive self-talk intervention strategies produced significant improvements in performance of a leg force output endurance task compared with associative self-talk intervention strategies. However, in a second part to this study, they reported that when athletes attempted to run as much distance as possible in a 30-minute period using associative, dissociative, or positive self-talk, there were no significant differences in performance associated with any of these self-talk interventions (Weinberg et al., 1984). Dagrou, Gauvin and Halliwell (1992) examined the effect of positive, negative and neutral overt self-talk on motor performance during a dart-throwing trial, and found that positive overt self-talk was associated with the greatest improvement in performance, while negative self-talk was associated with no significant improvement, and produced the most errors during the motor performance trial. Recently, Theodorakis, Hatzigeorgiadis and colleagues from their laboratory have shown that self-talk training improves physical performance and concentration on task performance, if it is task specific (Hatzigeorgiadis, Theodorakis and Zourbanos, 2004). For example, Theodorakis et al. (2001) asked subjects to repeat the words 'relax' or 'fast' sub vocally when performing a basketball-shooting task, and found that repeating the word 'relax' led to significant improvement in performance compared with using the word 'fast'. They concluded that self-talk will be most effective if the words used in training are appropriate for the task being performed. Papaioannou et al. (2004) examined the effect of either self-talk or goal setting, or a combination of both interventions, on the performance of a soccer shooting task, and found that both self-talk and goal setting caused a significant improvement in performance, but that the combination of both interventions had the most significant effect on performance. Schomer (1987) used two-way hands free radio transmitters during training runs in order to attempt to modify the thought processes of athletes by making them think more



associative thoughts during their running, which Schomer (1987) perceived would be beneficial to running performance. Although he did not report whether this cognitive performance improved racing performance, Schomer (1987) found that in eight of the ten subjects who participated in the trial, there was a relationship between an increased proportion of associative thoughts described by the subjects and an increase in perceived training intensity reported by the subjects during the intervention period of the trial. Schomer (1987) further found that the perceptions of the athletes at the start of the trial determined the result of the thought intervention, with athletes who result of the thought intervention, with athletes who perceived that the intervention would improve their performance receiving the most benefit from the trial, and athletes who appeared to have a 'mental block' about the training process and were negative about its efficacy showing less changes. Schomer (1987) suggested that the majority of the athletes in the trial already had a high degree of awareness of the positive capacity of psychological strategies to improve their running performance from their prior training and racing experience, and already had formulated their own 'private' psychological strategies and theories that they used during running. He suggested that to alter these mental strategies would require a belief in the athlete that the psychological intervention strategies would work, and a prolonged period of continuous psychological training in order for the changes to become habituated or permanent. In regard to explore the effectiveness of self-talk strategies, Weinberg, Smith, Jackson and Gould (1984) and Hamilton and Fremouw (1985) reported that positive self-talk improved endurance and basketball performance respectively. Two years later, Ziegler (1987) examined the effect of a four-step self-talk instruction strategy on tennis forehand and backhand strokes and reported significant performance improvement for both strokes. Rushall, Hall, Roux, Sasseville, and Rushall (1988) examined the impact of three different types of self-

talk; instruction, mood, and positive self-talk, on skiing performance. Their results showed that all types of self-talk cues resulted in improved performance.

To put it in the nutshell, results from experimental studies have shown that the use of certain ST cues can be more effective for some tasks than for others. Theodorakis et al. (2000) examined the effectiveness of ST on four experimental tasks. In two of the tasks, a passing accuracy test in soccer and a serving accuracy test in badminton, the use of motivational ST did not have an effect on performance. In contrast, the use of motivational ST was effective for the other two tasks, a sit-up endurance test and a knee extension power test. Considering that the motivational ST cue was the same for all tasks, it can be assumed that the use of that particular cue was more suitable for gross tasks than for accuracy tasks. Perkos, Theodorakis, and Chroni (2002) examined the effectiveness of a ST intervention program on basketball skills. The results revealed that instructional ST was effective for a dribbling and a passing test, but not for a shooting test. The researchers attributed the lack of effect for the shooting to the complexity of the task, and the suitability of the selected cues in relation to the task.

As conclusion, meta-analysis asserted that there are four factors that moderate effectiveness of self-talk. Those factors are categorized into four categories; task, participants' characteristics, specifics of self-talk and characteristics of the intervention (Hatzigeorgiadis et al. 2011). There are two types in regard to task characteristics; motor demands and novelty. Hatzigeorgiadis (2006) assumed that self-talk interventions would have a higher impact on tasks requiring fine skills than on tasks requiring gross skills. In addition, there two types regarding novelty. There two types of tasks; novel and well-learned task. Hatzigeorgiadis et al. (2011) showed that self-talk interventions have a greater impact on novel rather than well-learned tasks.

Hardy et al. (2009) introduced second factor which is about participants' identity. It can be seen from previous researches that students and beginners will benefit more from the use of self-talk than would more experienced athletes (Hatzigeorgiadis et al. 2011). Furthermore, three characteristics of the self-talk are underlined: the content, the selection, and the overtness. In sum, it is crystal clear that self-selected cues and overtness will be more effective than assigned. Last but not least factor is the type of the intervention. Hatzigeorgiadis et al. (2011) hypothesized that training plays a significant role in effectiveness of self-talk.

### *Mechanisms and functions of self-talk*

Despite of different opinions about self-talk definition and how it works for athletes, the effectiveness of self-talk strategies cannot be disputed. Researchers have identified improvements in both subjectively and objectively assessed technique resulting from self-talk (Anderson, Vogel, & Albrecht, 1999; Edwards, Tod, & McGuigan, 2008). Furthermore, it has been proposed that during early phases of skill learning, novices may “talk” themselves through movements (Coker & Fischman, 2010; Fitts & Posner, 1967). It is possible that changes in movement patterns or technical execution underlie any performance improvements as a result of using self-talk. Researchers have suggested that there are a lot of advantages by using self-talk. ST has been proposed to enhance self-confidence and increase effort (Finn, 1985; Hardy, Jones, & Gould, 1996; Zinsser et al., 2001), regulate mood and anxiety (Hardy et al.; 1996; Zinsser et al., 2001), control attention (Landin, 1994; Nideffer, 1993), and trigger desired actions effectively (Hardy et al.; 1996).

Theodorakis, Weinberg, Natsis, Douma, and Kazakas (2000) compared the effectiveness of instructional and motivational self-talk in a series of motor tasks and suggested that different self-talk cues should be appropriate for different tasks. They then proposed the matching hypothesis, assuming that instructional cues should be more beneficial for finer motor skill tasks, whereas motivational cues should be more beneficial for grosser motor tasks. Hatzigeorgiadis et al. (2004) further compared the effectiveness of instructional and motivational self-talk on a precision and a power water-polo task. Their results were somewhat different from those of Theodorakis et al. (2000), but also provided support for the matching hypothesis. They found that for the precision task, both types of self-talk improved performance, with the instructional self-talk having a greater effect, whereas for the power task, only motivational self-talk was effective. Hatzigeorgiadis et al. (2007) discussed that ST may serve different functions depending on the content of ST and the nature of the performed task.

Several researchers have made speculations regarding the way ST function, which is the mechanisms through which ST effects occur. Landin (1994) supported an attentional interpretation of ST effects, indicating that ST can be used to enhance attentional focus and direct or redirect attention to task-relevant cues. Finn (1985) and Zinsser et al. (2001) suggested that ST serves to regulate effort and enhance confidence, whereas Hardy, Jones, and Gould (1996) speculated that ST can also be effective in controlling anxiety and triggering appropriate action.

Hardy et al. (2001) found that self-talk serves two main functions for the athlete, cognitive (instructional) and motivational. The cognitive function is subdivided into cognitive specific and cognitive general functions. These relate to assisting the athlete to learn and execute individual skills and strategies, respectively. The motivational function is divided into three

specific functions. The motivational arousal function helps athletes “psych” themselves up, relax and control their arousal. The motivational mastery function is related to mental toughness, focus, confidence and mental preparation, all of which are required if athletes are to successfully master their circumstances.

Preliminary evidence regarding the functions of ST has evolved from studies questioning participants about their perceptions on ST effectiveness. VanRaalte, Brewer, Rivera and Petipas (1994) in a field study with junior tennis players, asked participants to identify how ST affected their performance. Participants’ responses highlighted the motivational and calming effects of ST. Landin and Hebert (1999) examined the effectiveness of ST using a single-subject, multiple baseline design with skilled tennis players. After implementing an effective ST intervention program, they interviewed participants regarding the functions of ST. Participants reported that the use of ST increased their confidence, helped them gain and maintain appropriate attentional focus, and facilitated performance through automatic execution. In a similar intervention study with female soccer players, Johnson et al. (2004) reported that participants perceived that ST increased their confidence and helped them focus their attention on relevant cues. Perkos et al. (2002), following an effective ST intervention program with novice basketball players, asked participants to indicate whether ST helped them increase their confidence, enhance concentration, and control anxiety, by answering a brief questionnaire. The highest scores were revealed for concentration, followed by confidence and anxiety control.

In a study exploring the attentional function of ST, Hatzigeorgiadis et al. (2004) assessed the frequency of interfering thoughts during execution on two water polo tasks. Two experimental groups and one control group were tested twice. In both experiments it was revealed that participants in the ST conditions reported fewer interfering thoughts after the

experimental assessment, when ST was used, in comparison to the initial assessment, whereas no differences were detected for the control group. The authors suggested that the use of ST reduces the occurrence of interfering thoughts, thus enhancing concentration to the task. In a subsequent investigation Hatzigeorgiadis (2006) examined the perceived effects of ST on confidence, effort, anxiety control, attention, and automaticity. Physical education students participated in an experiment involving a swimming task. After receiving appropriate training, participants were asked to choose an instructional (technical instruction) control, and automaticity was similar when they applied attentional and motivational cues.

## **Religion**

### *Religion and Psychology*

Religion is difficult to define. Everyone has a different idea of what it is. Most people simply look in the dictionary or use something else equally simplistic. That might be fine for everyday conversations, it isn't sufficient for the sort of discussions that appear here. Religion is a human creation and as such can vary as widely as human imagination allows.

Psychology of religion is among both the oldest and the newest research areas in psychology. It was part of the field of psychology from the beginning. The famous psychologist William James wrote *The Varieties of Religious Experiencing* (1902), shortly after *The Psychology of Religion* (Starbuck, 1899) was published, one of the first journals on any topic in psychology.

The *American Journal of Religious Psychology and Education*, and books were written about adolescent religious awakening and conversion. Psychology of religion flourished until the 1930s but then remained dormant for about three decades. In the last several decades, a renewed

interest in psychology of religion has emerged. A number of books and a host of empirical studies suggest that it is once again a viable area in the discipline of psychology (Batson, Schoenrade, & Ventis, 1993; Hood & others, 1996; Paloutzian, 1996; Wulff, 1997).

Psychologists involved in the psychology of religion today work in a wide variety of settings, including colleges and universities, hospitals, clinics, counseling centers, churches and synagogues, schools, research institutes, and private practice.

Raiya (2010) pointed out that the psychology of religion has become more interesting for researches dramatically in the past two decades, and researchers and practitioners have gained some important insights into the impact of religious beliefs and practices on the psychological well-being of the individual (Hood, Hill & Spilka, 2009; Pargament & Abu-Raiya, 2007; Paloutzian & Park, 2005).

#### *Religion psychology and mental health*

Research on the relationships between religiousness and mental health has burgeoned in the past twenty years. Studies employing surveys in non-clinical general population and community samples reveal fairly consistent inverse relationships between global indices of religion (such as frequency of church attendance and self-rated religiousness) and depressive disorders (Koenig, McCullough & Larson, 2001; Mc Cullough & Larson, 1999; Smith, McCullough & Poll, 2003).

In regard to depression prevention, researches demonstrated that activities such as prayer and reading the Bible could be prevalent in individuals with severe enduring mental illnesses including those with major depressive illnesses, and may be associated with reduced symptoms (Rogers, Poey, Reger, Tepper & Coleman, 2002; Tepper, Rogers, Coleman & Malony, 2001). In

a longitudinal study of elderly depressed patients, Bosworth, Park, McQuoid, Hays and Steffens, (2003) found positive religious coping to be negatively associated with depression above and beyond social support, demographic variables and clinical variables. In other words, Prayer appears to be a helpful activity in improving depressive symptoms. In one study of depressed individuals, 33% felt that prayer improved their depressive symptomatology (Astin & Harkness, 2000). Finally, the relationships between anxiety and religious involvement appear to be complex with some studies reporting less anxiety among the more religious (Koenig, Ford, George, Blazer & Meador, 1993; Koenig et al 2001; Williams, Larson, Buckler & Heckmann, 1991).

In short, despite the fact that empirical research has not so far provided conclusive evidence that interventions which integrate religious components are more effective than traditional psychological interventions, psychotherapists are beginning to incorporate spiritual and religious elements into their work with promising results. There have been some randomized trials which indicate that religious interventions among religious patients enhance recovery from anxiety and depression although the results may be short term (Propst 1980, Propst, Ostrom, Watkins, Dean & Mashburn, 1992 among Christians; Ahzar & Varma 1995 and Razalli, Amina & Khan, 2002 among Muslims; Zhang, Young, Lee, Li, & Zhang, 2002 among Taoists). Smith, Bartz and Richards (2007) reported a meta-analysis of 31 outcome studies of spiritual therapies (teaching spiritual principles, prayer, meditation, reading religious texts) conducted from 1984 to 2005 which provides some empirical evidence that spiritually oriented psychotherapy approaches may be beneficial to individuals with depression and anxiety.

Besides, several articles have indicated that some aspects of religiousness (including general measures of religiosity and intrinsic religious motivation) are associated with better self-



control or self-regulation (Abar, Carter, & Winsler, 2009; Ahmed, 2009; Vitell et al., 2008). Links of religion with global self-report measures of self-control and self-regulation have been shown not only in studies of American Christians, but in samples of Muslims as well (e.g., Ahmed, 2009; French et al., 2008).

Evidence from personality research suggests that religious people tend to score higher on measures of self-control, and measures of personality that subsume self-control, such as conscientiousness and agreeableness, than do their less religious counterparts (Lodi-Smith & Roberts, 2007; Saroglou, 2010). McCullough and Willoughby (2009) also described 12 studies that reported associations of measures of religiosity with measures of general self-control (e.g., Bouchard, McGue, Lykken, & Tellegen, 1999; Desmond, Ulmer, & Bader, 2008; French, Eisenberg, Vaughan, Purwono, & Suryanti, 2008; Walker, Ainette, Wills, & Mendoza, 2007).

In the United States, religious families also tend to have children with more self-control (Bartkowski et al., 2008; Brody & Flor, 1998; Brody, Stoneman, & Flor, 1996; Lindner-Gunnoe, Hetherington, & Reiss, 1999). Parental religiosity, variously measured in terms of church attendance, reports of the extent to which religion is discussed in the home, and self-rated importance of religion, is associated with higher parent and teacher ratings of children's self-control and lower impulsivity. These associations do not appear to result from the confounding effects of gender, age, race, socio-economic status, education, or religious denomination.

#### *Prayer and talk to GOD (GOD-talk)*

Prayer is multidimensional in expression, motivation, and cognition. Many studies default to simple indices of prayer frequency, a practice akin to a physician evaluating health by inquiring if a patient is dead or alive; it provides basic data, but the analysis can be deepened to

the benefit of all involved. Prayer is, however, “thick” and has various predictable forms of content (Janssen, de Hart, & den Draak, 1990; Ladd & Spilka, 2002, 2006; Poloma & Gallup, 1991), expressive mediums (Begbie, 2001; Inge, 2001), uses of the body (Tilby, 2001; Savage, 2001), social contexts (Elliott, 2001), modes and times of engagement (Baesler, 2003).

James (1904) provided a broad and all-inclusive definition of prayer, when he suggested that prayer was “every kind of inward communion or conversation with the power recognized as divine ...”If prayer is regarded as every kind of communication with the power recognized (by the pray-er) as divine, then, arguably, all individuals pray to some degree. Brown (1994) suggested that what individuals pray about is more important than how often they pray. Heiler (1932) suggested that prayer originated as a result of need among primitive people who had little control over their environment and developed into what may be the ultimate prayer “not my will but think be done”(Foster, 1992; Heiler, 1932).

Moreover, although research on religion has started recently, it has a reach review. Baesler (2003) works within a context of prayer as communication, both active and receptive; Dein and Littlewood (2008) stress the need to explore the latter. Francis and Robbins (2008) advocate a Jungian approach, while Maltby, Lewis, and Day (2008) employ a cognitive-behavioral framework in line with the clinical applications highlighted by Harris and colleagues (Harris et al., 2010) as well as others (Bade & Cook, 2008; Laird, Snyder, Rapoff, & Green, 2004). Janssen, de Hart, and den Draak (1990) orient their efforts toward symbolic interactionism. Ladd and Spilka (2002, 2006; Ladd, 2010) look to theories that highlight how people create meaningful networks or connections using social information (Modeé, 2002), physical, emotional and other forms of mimicry (Girard, Antonello, Rocha, & Kirwan 2007), and cognitive processes (Tremelin, 2006). Poloma and Gallup (1991) organize forms of prayer based

on a nationally (U.S.) representative sample. Heiler's (1918) well-known volume outlined a variety of kinds of prayer; German texts by Bolley (1930) and Eller (1937) were also explicitly cast in the mold of psychology of religion. More recently, Hauenstein (2002) added another important book featuring both a literature review and empirical investigation. In French, Segond produced an early work (1911) and Puglisi (1928) offered an Italian perspective. Also, while on the periphery of the psychology of religion proper, Cabrol's (1900) text offers insight concerning the practical aspects of how prayers in the Catholic tradition were understood. Within the English language, as older texts, those of Hodge (1931), Jellett (1878), and Romanes (1874) represent early forays into the scientific psychology of prayer. Poloma and Gallup's (1991) survey, Brown's (1994) extensive treatment of the subject plus the volume of new material edited by Watts (2001) provide contemporary orientations.

Leaping forward nearly a century brings us to a point where Finney and Maloney (1985) had more empirical material with which to work. They moved beyond studies focused on the frequency of prayer and explored the literature on development, motivation, and outcomes of both verbal and silent praying. With regard to developmental issues, they note that prayer is generally analyzed according to Piagetian stages of understanding. Moreover, in the process of development, individuals' prayers reflect declining expectations of materialistic outcomes, a progression from vague to intimate "conversation," and a transition from egocentric to altruistic content. The single empirical study that concerned motivation led the authors to tentatively note that petitionary prayer helped reduce frustration and increased positive adaptation to novel contexts. The authors summarize six studies relevant to verbal prayer. They conclude that positive petitionary prayer might be useful in the context of therapy. They further note that intercessory / reflective prayers were less effective than simple muscle relaxation exercises for

reducing stress. After critiquing two articles dealing with contemplative prayer, Finney and Maloney basically set them aside due to methodological and analytic problems. They do, however, allow that contemplative prayer might aid practitioners develop a sense of self, in part due to its reflective quality.

### *Prayer and health*

There is increasing interest in the empirical effects of prayer on health. However, little attention has been paid to the theoretical causal mechanisms by which health may be affected by prayer. A critical examination of extant literature on the psychology of prayer was conducted to identify potential ways in which prayer may act to promote health. The review suggested that an array of prayer types exist ranging from prayers of attunement to petitionary prayers.

Additionally, prayer may affect health by a variety of means including: (a) prayer may improve health because of the placebo effect; (b) individuals who pray may also engage in health-related behaviour; (c) prayer may help by diverting attention from health problems; (d) prayer may promote health through supernatural intervention by God; (e) prayer may activate latent energies, such as chi, which have not been empirically verified, but which nevertheless may be beneficial to health; and (f) prayer may result in a unity of consciousness which facilitates the transmission of healing between individuals.

In addition, I have found a number of researches that showed the effect of prayers on physical and mental well-being. For instance, the well-known Byrd (1988) study is offered as confirmatory evidence of prayer's influence on physical well-being via intercessory prayer, yet that work has since been thoroughly discredited (Benson et al, 2006; Hood, Hill, & Spilka, 2009; Sloan, 2006). McCullough (1995) also took a narrower empirical approach in his review of the

literature. He explored the relation between prayer and health. In particular, the article addressed subjective well-being, coping, psychiatric symptoms, and intercessory efficacy. As with the previous reviews, the author concluded that while single-item measures of the frequency of prayer had reliability problems, the intensity of the prayer experience positively related to increased subjective well-being. The report on the status of coping strategies and psychiatric symptoms is that their relations to the practice of prayer are mixed, partially due to compromised methodologies, including reliance on the measurement of prayer purely on the basis of frequency. Prayer's role in primary care is reviewed by Hollywell and Walker (2008). While they report an overall positive relation between prayer frequency and good health, we have already discussed the problems associated with using a single item measure of prayer frequency, so we do not consider this strong evidence. They do, however, suggest that different ways of praying can mediate between faith and health. For instance, among those who perceived a caring God, prayers were associated with improved health; for those who did not share this perception and its assumed relationship, prayers were linked to greater distress levels. From the practical vantage point of counseling, Curtis and Robertson (2009) reviewed the recent literature on prayer and meditation. They report that the expectancy of receiving intercessory prayer (as compared to actually receiving intercessory prayer) was a better predictor of positive health effects. In addition, they found that evidence was lacking for any robust support for the notion that personal prayer (praying for oneself) resulted in better health conditions.

### *Prayer and Psychology*

Beside of prayer's effects on physical health, there are many researches that showed how it can be useful to promote some mental problems. Ellison and Taylor (1996) suggested that prayer may assist in the regulation of negative emotions: (a) by helping the faithful to redefine

these potential stressors in ways that seem less threatening, (b) by situating them within a broader context of meaning, or (c) by diverting attention from these problems. Conti, Matthews, and Sireci (2003) suggested that prayer is analogous to psychotherapy to the extent that individuals' beliefs are significantly related to positive outcomes. Magaletta and Brawer (1998) pointed out that some therapists report that when clients know they are being prayed for, the transmission of empathy that occurs generates healing. Razali, Hasanah, and Subramaniam (1998) suggested that praying promotes relaxation and therefore a general sense of well-being. With regard to self-esteem, Magee (1994) pointed out that mystics envisage the socially constructed self as rooted in the "true-self" that resides in God and in which God resides. He suggested that in terms of the "true-self", God's esteem is the basis for self-esteem whether or not the socially constructed self is found "good enough". This suggests that prayers of attunement may enhance self-esteem. Griffith and Mahy (1984) suggested that a God-based form of self-esteem is important for well-being, particularly among the socially disadvantaged. Moreover, In an experimental study, more frequent prayer for others predicted greater increases in self-esteem and greater decreases in negative affect (i.e., state and trait anxiety, depressive symptoms, multidimensional measure of negative affect) for the pray-er (O'Laoire, 1997). On the other hand, the link between religious variables and depressive symptoms in the general population is well established (Smith et al., 2003). In particular, several types of prayer have been associated with lower levels of distress and greater well-being in non-patient populations (Ladd & Spilka, 2002, 2006; McCullough & Larson, 1999). Among cancer patients, prayer is a widely used coping mechanism (Levine et al., 2009; Ross et al., 2008); in a sample of medically ill older adults, participants who engaged in more religious helping experienced fewer depressive symptoms (Koenig et al., 1998).Pe´rez, Norris, Canenguez, Tracey and DeCristofaro (2011),

recently, concluded from their research that prayers of adoration, reception, thanksgiving, and prayers for the well-being of others were significantly associated with lower levels of depressive symptoms in cancer patients.

### *Prayer and Sport psychology*

The recent increase in public demonstrations of prayer in sport has led many in the sport arena to begin questioning the possible positive and negative aspects to the spirituality of athletes. Spectators often see a football player "take a knee" in the end zone after scoring a touchdown, a baseball player mouth a quick prayer in the on deck circle, or a soccer player stop and point to the sky after scoring a goal, not to mention the spiritual actions that are invisible to the public. A concern with spiritual actions in sports is the possible interference with mental and physical preparation for the upcoming event. Some coaches and managers believe prayer before an event interferes with athletes' mental and physical readiness for competitions (Stevenson, 1991). In their argument, however, these coaches do not address other pre-game routines, such as relaxation techniques or athletes sleeping. From another standpoint, Turman (2003) found that athletes considered pre-game prayer to be a way coaches facilitated and maintained team cohesion. Athletes believed praying as a team was an action that connected all the other team-building efforts.

Most of the people in world are religious. In particular, about 5 billion people are religious, which is about 70% of the world ( Harper, 2012). God is of paramount importance for religious people. Although religious population who believe in God and religion is being decreased slightly, one cannot deny that there is still huge religious population. The proportion of religious people is similar among athletes as well. Rotenberk (1992) revealed that Major League

Baseball has an average of 4,000 players attend Christian chapel on Sunday morning (Rotenberk, 1992). Many college campuses are home to Christian organizations for athletes, such as Athletes in Action and the Fellowship of Christian Athletes, which encourage evangelism through sport. The presence of religion is not new to sport, however. Ancient Greek games were based on religious rituals. Although physical activity was once thought to be "anti-Christian," the YMCA was founded in 1844 to change this notion (Coakley, 2001). Even still, the purpose of visible spiritual gestures has been debated by those in the sport world. These actions may be viewed as beneficial or detrimental to performance, and have been questioned as being genuine demonstrations of faith or simply overt gestures.

In an interesting research, Murray, Joyner, Burke, Wilson and Zwald (2005) examined the differences in team cohesion and spirituality between softball teams who pray and those who do not pray, and described why softball players use prayer, when they pray, if they pray by choice, and how genuine the prayers are. A significant difference was found between athletes who reported individual prayer and those who did not. Qualitative results revealed athletes believed prayer aided team cohesion. They also found that athletes who reported spending individual time praying for teammates demonstrated significantly higher levels of spirituality in sports than those who did not pray individually.

Research in the field of religious involvement outside of sport indicates that individuals who take part in religious rituals tend to demonstrate higher levels of interpersonal trust and a heightened view of quality of social relationships (Ellison & George, 1994). Also, friendships tend to form between individuals who share similar values, have similar interests, and participate in the same activities. Furthermore, individuals who report frequent prayer and who perceive an active God tend to show more altruistic behaviors (Ellison & George, 1994). These findings are



relevant to explaining interpersonal support systems and relationships developed between teammates. It should also be noted that religion is a very powerful force in society. Religious beliefs are generally the conceptual base for why the world is as it is and why things happen. Therefore, its influence on a group of people should not be underestimated (Coakley, 2001).

### **Function of talking to oneself versus talking to GOD**

Athletes use self-talk for a variety of different functions during exercise. This self-talk appears to have a teleological purpose, and may occur as a 'multi-party' dialogue with voices being either motivational or inhibitory. There are anatomical correlates of self-talk, and self-talk appears to be linked to action and memory via a 'phonological loop'. There appears to be a developmental necessity for the alteration of overt to sub vocal self-talk and self-talk appears to be important in defining self-identity and a sense of self. Studies have shown that training may have the capacity to alter self-talk, which may improve performance (Gibson and Foster, 2007).

As researches show, using self-talk has some advantages. In order to point the benefits of self-talk for athletes, researchers scrutinized the case and found a number of interesting results. For instance, Nideffer's (1993) proposed that the use of ST cues may help not only to switch attentional focus but also to maintain appropriate concentration for specific tasks. Landin (1994) also forwarded an information-processing perspective, suggesting that verbal cues may help individuals searching for correct task stimuli, setting the individual in a state of readiness. Theodorakis et al. (2008) demonstrated five main functions of ST. They extracted these functions through a study which developed FSTQ. They believe that self-talk is an effective technique which can make athletes try harder and makes them keep trying their best. Finn (1985) and Zinsser et al. (2001) suggested already that ST serves to regulate efforts made by athletes

(Hatzigeorgiadis et al. 2007). As second function, they showed that ST can make and keep athletes calm and also make them capable of controlling their cognition and emotion. In addition, Hatzigeorgiadis et al. (2012) demonstrated that self-talk can serve to regulate cognitive and emotional reactions. That is athletes let their anxiety go by using ST.

Third function is related to confidence. Researches show that self-talk increases athletes' confidence. We deduced that ST refers to statements related to confidence building and positive moods (Hardy, 2006; Hardy, Hall & Hardy 2005). Landin (1994) suggested that verbal cues not only help athletes to search for correct task stimuli, but also set the individual in a state of readiness by initiating a sequence of actions assumed to ease the execution of the task.

Moreover, automaticity function is one of self-talk's functions that trigger automatic execution among athlete in order to make them to execute automatically and impulsively. Last but not least, ST in sports can serve to enhance attentional focus (Theodorakis et al. 2008). It directs athletes' attention efficiently. It also makes them concentrate on their task and keeps them focused. Meichenbaum (1977) asserted that self-statement instructions can direct individuals' attention to task-relevant dimensions, maintain information in the short-term memory, and ward off disturbing thoughts. As conclusion, internal dialogue influences individuals' attentional and appraisal processes.

In sum, ST in sports can serve to enhance attentional focus, increase confidence, regulate effort, control cognitive and emotional reactions, and trigger automatic execution. However, use of different types of self-talk may serve different functions depending on the content of the employed cues. In other words, examination of potential moderators revealed that the

effectiveness of self-talk strategies may vary depending on the appropriate matching of task and type of self-talk, on task novelty, and on the implementation of training in self-talk interventions.

On the other hand, GOD-talk may have the same or even more advantages for religious athletes in comparison with self-talk. It can be clearly seen from literature that prayers and GT are getting more and more common among religious athletes. Leonard (1998) states that prayer is one of the most common religious practices of athletes in today's sport. For example, a familiar religious expression in sport is that of a Roman Catholic athlete making the sign of the cross before and after praying and performing. Because Christians believe that God is personal and involved in their activities, many feel it is also appropriate to invite God to be a part of their sporting lives (Hoffman, 1992). For some, there is even the hope that praying will affect the outcome of the game or activity, although this appears to be a subconscious effort (i.e. ritual superstitious belief). In one of the first prayer/sport studies, Marbeto (1967) found that 55 percent of the male and female high school athletes (n=140) surveyed sometimes prayed in association with athletic events. In 80 percent of church-affiliated schools as well as 10 percent of public schools, over half of high school coaches and players said they repeated prayers before performances that is related to the game (i.e., to win or to help them do their best). In addition, most of the athletes who prayed regularly attended church, came from religious families, and believed their prayers helped performance. More recently, Coakley (2001) suggests six possible reasons athletes utilize religious prayer. These reasons include: (a) prayer as a coping mechanism for uncertain stressful situations, (b) to help live a morally sound life, (c) to sanctify athletes' commitment to sport, (d) to put sport into perspective, (e) to establish a strong bond of attachment between teammates, and (f) to maintain social control. Park (2000) found that 22.2 percent of the Korean National athletes interviewed (148 athletes aged H-SH from 41 different

.sports) utilized prayer as a coping mechanism for stress. One co-participant added; "I always prepared my game with prayer from the major games to the minor games. The content of my prayer to God is to help me do my best in practice time. I committed all things to God, without worry. ..., these prayers make me calmer and more secure and I forget the fear of losing resulting in good play". Unfortunately, only a small part of this research was devoted to the athletes' experience of prayer in sport.

In summary, prayer and religious observation are utilized a great deal in sport. Many times, Christian athletes utilize their belief system as a performance enhancing technique. More specifically, prayer has been used as a coping mechanism for stress, to help with team cohesion, and to promote a morally sound life.

Furthermore, despite significant role of prayer to promote athletes' performance, Eitzen and Sage (1993) pointed out that very little is known about the actual extent to which individual athletes use prayer in conjunction with their sport participation. Unfortunately, functions of prayers/God talk have not been adequately examined in sport and particularly, during a game or a competition.

### **Purpose and importance of study**

Athletes and coaches believe that self-talk is an intervention that enhances sporting performance and various psychological states, such as confidence (Vargas- Tonsing, Myers, & Feltz, 2004; Wang, Huddleston, & Peng, 2003). In addition, many sport psychologists promulgate the benefits that athletes and coaches can expect from using self-talk interventions. On the other hand, a concern with spiritual actions in sports is the possible interference with mental and physical preparation for the upcoming event. Some coaches and managers believe

prayer before an event interferes with athletes' mental and physical readiness for competitions (Stevenson, 1991). Religious athletes would rather use God-talk than self-talk. God-talk is a type of inner speech whose recipient, although the sender of message is the athlete himself, is supposed to be God. In other words, Athletes talk to themselves in order to enhance attention, regulate cognitive and emotional reactions, boost confidence, trigger automatic performance, and increase motivation, drive, and effort (Zourbanos et al., 2009). Athletes also talk to God, mostly to ask for help and support, increase their motivation and so on. It is crystal clear that the functions of self-talk may also apply to God talk. The present research has tried to knot these two aspects, ST and spirituality, in order to find out how religious athletes would benefit from God talks.

Furthermore, current study tried to interpret the cues which athletes use in order to reach to assumed functions of ST. We believe that beliefs affect these cues and these are different based on how religious athletes are. The purpose of this study is to investigate mediating role of religiousness on the relationship between self-talk and God-talk. In other words, the present study examines the relationships between self-talk, God-talk and religiousness among religious athletes in Iran. In addition, I am of the opinion that, for religious people, talking to god may be more important than talking to the self, and therefore this aspect of human cognition should be further explored in sport. We will mention how significant the role of religious athletes' beliefs is to develop their ST and GT. In other words, we expected talking to God to be of greater importance for our sample.

Self-talk is of great significance in athletes' performance promotion. Most of the athletes around the world use it in order to reach better records and also have a better performance. What I assume that might happen for religious people is these definitions include also prayers and GT.

It is based on self-talk's definition that Beretsky (2009) presented. He believes that self-talk is a form of intrapersonal communication (or communication within oneself) in which you're both the sender and receiver of the message. However, I have seen athletes having these kinds of inside talks that sender and receiver are same, but the message had been sent for God. Items that athletes use are subjective and they might take same advantages from different phrases with different contents. In religious countries, athletes prefer to use prayers and talking to god, either loud or quietly. As mentioned above, athletes use inside talks in order to take some advantages. However, researches always mention it as talking to oneself, while it might be talking to another person who the athlete believes will listen to them even if they don't talk loudly.

In conclusion, we assume that there are different ways for religious athletes to take same outcomes. I believe that although athletes from religious cultures use self-talk, it is not as common as it is in non-religious countries. One purpose of the present study is to show that God-talk helps religious athletes reach the outcomes that are supposed to be reached by Self-talk. In other words, religious athletes take more advantages of GT rather than ST. Thus it can be assumed that athletes who belong to a religious society would rather talk to God. In addition, their ST is somehow related to their religion and religious beliefs.

The religion that I've chosen is Islam. Historically, the psychology of Islam has relied almost entirely on theological speculation, clinical observations and anthropological methods of inquiry (e.g., MacPher, 2003; Carter & Rashidi, 2003; Dwairy, 2006). Recently, this picture has begun to change as empirical studies on the psychology of Islam have grown in number. Collectively, this emerging body of empirical research has underscored the centrality of Islam to the lives of Muslims and identified clear connections between Islamic beliefs and practices and the well-being of Muslims (Abu-Raiya, 2010b). Abu-Raiya also said that Islam is the last major

monotheistic traditions to emerge in history. However, instead of being the youngest of the major monotheistic world religions, from the Islamic viewpoint it is the oldest. Islam, according to this view, represents the “original” as the final revelation of God to Abraham, Moses, Jesus, and Muhammad (Esposito, 1998). According to Gordon (2002), the word Islam, often translated as “submission” or “surrender,” reflects the decision by the Muslim (“one who submits or surrenders”) to abide in mind and body by the will of the one and the true God (Allah). The word Islam has also a linguistic connection to the word Salam (peace). To surrender to Allah’s will then is to bring about a harmonious and peaceful order to the universe.

Furthermore, we have evaluated God-talk as one of major variables in present study. What we mean by God is exactly the definition of it in Islam. According to Islamic beliefs, there is “one, unique, unmatched God, Who has neither son nor partner, and none has the right to be worshipped but Him alone. He is the true God, and every other deity is false. He has the most significant names and sublime perfect attributes. No one shares His divinity or His attributes” (Ibrahim, 1997).

## **Method**

### *Participants and procedures*

Participants were 159 (102 male, 56 female and 1 missing) athletes from a variety of individual and team sports (99 individual, 54 team; 6 missing). They were aged 17-38 years old, with a mean age 22.9 years ( $SD = 4.2$ ). In terms of competitive level, participants ranged from local ( $n=68$ ) to national (57) and international ( $n= 15$ ) (19 missing). Finally, in terms of religion 152 participants were identified as Muslims (7 missing).

The study was approved by the Ethics Committee of the institution. Club officials were then contacted and asked to consent for the data collection. For those agreed, the coaches were contacted to arrange the data collection date and time. Participation was voluntary; participants were informed that the questionnaires were anonymous and therefore confidential, that they were free not to participate or to withdraw from the data collection process if they wished to.

### *Instruments*

#### *Self-talk*

The positive self-talk subscale from the Automatic Self-talk Questionnaire for Sports (ASTQS; Zourbanos, Hatzigeorgiadis, Chroni, Theodorakis, Papaioannou, 2009) was used to assess athletes' positive self-talk during training and competition. The questionnaire includes four positive self-talk factors; psych up (e.g. let's go), anxiety control (e.g. calm down), confidence (e.g. I can make it), and instruction (e.g. concentrate). Participants responded on a 5-point scale from 0 (not at all) to 5 (all the time).

#### *God-talk*

A new scale was developed to assess athletes talk to God. The items were selected based on interviews with 12 Iranian athletes. Athletes were asked whether they talk to God, and if so, to recall what they usually say to God. Initially, 37 items were recorded. Items that were reported from all athletes or presented high frequency were selected for the final version of the scale, which comprised 11 items (e.g. you are great). Participants in the main study were asked to indicate how frequently they address such talk to God. Responses were given on a 5-point scale from 0 (not at all) to 5 (all the time).

#### *Functions of self-talk and God-talk*



The Functions of Self-Talk Questionnaire (FSTQ; Theodorakis, Hatzigeorgiadis, & Chroni, 2008) was used to assess the different functions self-talk serves, i.e. the mechanisms through which self-talk facilitates sport performance according to participants' perceptions. The instrument comprises 25 items assessing five factors representing potential mechanisms, i.e., confidence (e.g. I feel stronger), automaticity (e.g. I execute impulsively), effort (e.g. I try harder), cognitive and emotional control (e.g. I stay calm), and attention (e.g. I stay focused). Participants were asked to indicate the degree to which talking to themselves had the listed effects. Responses were given on a 5-point scale from 1 (not at all) to 5 (very much).

The FSTQ was also adapted to assess the function of God-talk. Participants were asked to indicate the degree to which talking to God had the listed effects. Responses were also given on a 5-point scale from 1 (not at all) to 5 (very much).

### *Religiousness*

The Four Basic Dimensions of Religiousness scale, as adapted by Saroglou (2009) was used to assess religiousness. The scale comprises 20 items assessing four dimensions of religiousness; believing (e.g. Religion helps me to try to live in a moral way), bonding (e.g. I feel attached to religion because it helps me to have a purpose in my life), behaving (e.g. I like behaving ceremonies), and belonging (e.g. religious rituals, activities or practices make me feel positive emotion). Responses were given on a 5-point scale from 1 (not at all) to 5 (extremely so).

## Results

### Descriptive statistics and correlations

Descriptive statistics and Cronbach's alpha coefficients for positive self-talk, self-talk functions, God-talk and its function for the total sample are presented in Table 1. All Cronbach's alpha coefficients were acceptable, ranging from .64 to .92. Participants scored moderate to high for on the religiousness dimensions, moderate to high on positive self-talk and God talk, and moderate on the functions of self-talk and God talk.

**Table 1. Descriptive Statistics and alpha coefficient values for all scales.**

Scales	M	SD	Alpha
<i>Automatic Positive Self-Talk</i>			
Psych-up	2.50	.80	.67
Anxiety Control	2.39	.87	.67
Confidence	2.78	.92	.85
Instruction	2.73	.92	.85
<i>Functions of Positive Self-Talk</i>			
Confidence	2.69	.85	.80
Automaticity	2.21	.91	.80
Effort	3.01	.82	.83
Cognitive and emotional control	2.55	.89	.84
Attention	2.69	.89	.90
<i>God-Talk</i>	2.77	1.02	.92
<i>Functions of God-Talk</i>			
Confidence	2.88	.82	.80
Automaticity	2.47	.90	.85
Effort	3.05	.82	.88
Cognitive and emotional control	2.89	.87	.84
Attention	2.94	.89	.87
<i>Religion</i>			
Believing	4.73	1.59	.64
Bonding	5.15	1.66	.81
Behaving	4.99	1.58	.74
Belonging	4.99	1.69	.79

The correlations of God-talk with self-talk and God-talk functions appear in Table 2. God talk had moderate to high correlations with positive self-talk and God-talk functions, with the highest correlation emerging with psych-up self-talk and the confidence God-talk functions. The correlations of religiousness with God-talk and functions of God-talk appear in Table 3. Regarding religiousness and God-talk the highest correlation for was revealed for believing. Regarding religiousness and the functions of God-talk the highest correlations were revealed for effort.

**Table 2. Correlation of God-Talk with self-talk, and God-talk functions**

	GT
<i>Automatic Positive Self-Talk</i>	
Psych-up	.561**
Anxiety Control	.470**
Confidence	.476**
Instruction	.437**
<i>Functions of God-Talk</i>	
Confidence	.587**
Automaticity	.500**
Effort	.500**
Cognitive and emotional control	.490**
Attention	.501**

\*\* p < .001

**Table 3. Correlations of Religiousness with God-talk and God-Talk functions.**

	God-Talk	Functions of God-Talk				
		Confidence	Automaticity	Effort	Cognitive and emotional control	Attention
<i>Religion</i>						
Believing	.393**	.394**	.363**	.414**	.396*	.394**
Bonding	.347**	.348**	.250**	.382**	.361**	.354**
Behaving	.276**	.340**	.266**	.348**	.356**	.306**
Belonging	.368**	.408**	.337**	.424**	.421**	.363**

\*\*  $p < .01$

### God-talk versus self-talk: Mean differences.

One-way repeated ANOVA was conducted to determine the differences in means between God-talk and positive self-talk. The results revealed a significant multivariate effect,  $F(1,154) = 19.95, p < .01$ . Examination of the univariate effects showed that participants scored higher on God-talk compared to the psych-up,  $F(1,154) = 14.331, p < .01$ , and the anxiety control self-talk dimensions,  $F(1, 154) = 22.43, p < .01$ , of self-talk. The means appear in Table 1.

One-way repeated MANOVA was conducted to test for differences between self-talk functions and God-talk functions. The analysis revealed a significant multivariate effect,  $F(5, 150) = 10.72, p < .01$ . Examination of the univariate effects showed that participants scored higher for the God-talk functions: confidence,  $F(1, 154) = 14.83, p < .01$ , automaticity,  $F(1, 154) = 26.64, p < .01$ , cognitive and emotional control,  $F(1, 154) = 37.16, p < .01$ , and attention,  $F(1, 54) = 21.86, p < .01$ . The mean scores for all the self-talk functions and god-talk functions appear in Table 1.

### Regression analysis: Religiousness predicting God-talk

Regression analysis was calculated to test the degree to which dimensions of religiousness could predict athletes' God-talk. The analysis showed that religiousness could predict 17% of God-talk variance,  $F(4, 154) = 7.70$ ,  $p < .01$ . Examination of the betas showed that believing was the only significant predictor ( $\beta = .32$ ,  $p < .05$ ).

Regression analysis was used to test if the religiousness significantly predicted athletes' God-talk functions. The results of the regression indicated the religion explained 19 % of the variance ( $F(4, 150) = 9.024$ ,  $p < .001$ ). It was found that religiousness significantly predicted automaticity ( $F(4, 150) = 6.948$ ,  $p < .001$ ), as did effort ( $F(4, 150) = 8.989$ ,  $p < .001$ ). Religiousness also predicts 18 % of athlete's attention ( $F(4, 150) = 8.378$ ,  $p < .001$ ). We also carried out the linear regression in order to investigate prediction percentage of religiousness for cognitive and emotional control. It pointed out that religiousness significantly predicts 19 % of cognitive and emotional control ( $F(4, 150) = 9.20$ ,  $p < .001$ ). Betas are reported in Table 4.

**Table 4. Beta coefficients for religiousness prediction of God-talk and God-talk functions.**

	God-Talk Functions					
	God-talk	Confidence	Automaticity	Effort	Control	Attention
	Beta	Beta	Beta	Beta	Beta	Beta
Believing	.430 **	.349	.416*	.215	.296	.430 *
Bonding	.024	-.102	-.258	.029	-.083	.024
Behaving	-.129	-.077	-.096	-.095	-.047	-.129
belonging	.088	.264	-.282	.297	.280	.088

\*\*  $p < .001$

\*  $p < .01$

## Discussion

Spirituality plays a pivotal role in athletes' career. Researches have pointed out that religiousness and spirituality are of paramount importance in coping with pain (Wachholtz, Pearce, & Koenig, 2007), relaxation (Doufesh et al., 2012), coping to stressors (Czech et al., 2004), injured athletes' rehabilitation (McKnight et al., 2011), and team-cohesion (Murray et al. 2005). For instance, Coakley (2001) has suggested that athletes use prayer to cope with the uncertainty of an athletic performance. Consistent with this suggestion, the participants in this study said they used prayer to cope with uncertainty, not only when it was to relieve the nervousness about a performance but also for the anxiety of facing injury. Despite the leading part that religiousness has in an athlete's career, there has been lack of research considering the relevance of it with self-talk (Hardy, 2006). On the other hand, despite the significant evidence regarding the effectiveness of self-talk, there is a dearth of research regarding the functions of self-talk (Hatzigeorgiadis et al., 2008). Previous studies on self-talk, either observational or experimental, haven't described relationships between different types of self-talk and religiousness. Therefore, the purpose of the current study is to investigate mediating role of religiousness and spirituality on self-talk in religious athletes. To sum up, current research has sought for several purposes. First, we believe that talking to god is likely to be more common than self-talk among religious athletes. Moreover, this research's goal has been to survey if god-talk is a different phenomenon of self-talk. Last but not least, we intended to investigate if GT is more efficient than ST. Does religion play any significant role to predict talking to one's self among athletes? Is there any relationship between god-talk and assumed functions of self-talk

and god-talk. The aim of this research, in sum, is to find answers to these questions. To put it in a nutshell, what we did was to determine if GT is a diverse phenomenon.

In general, our results provide support for the utility of the religiousness and spirituality in reaching to assumed self-talk's functions among Iranian athletes. There is no study investigating role of religiousness as a mediator on athletes' self-talk. Womack (1992) is one of first researchers who mentioned that prayer can lead athletes to perform better. The present study, in order to explore effects of spirituality and prayer in athletes' career, examined the mediating role of religious beliefs. In order to find how significant God-talk's role is among participants, firstly, we carried out One-way repeated ANOVA. We, by this, compared GT and its functions with positive self-talk and ST's functions. It is crystal clear from given data that God-talk is more common among participants than two factors of self-talk (psych-up and anxiety control). That is, participants would rather use GT than psych-up and anxiety control's items. However, the rest of self-talk's factors (confidence and instruction) were as common as GT among participants. There is a rich literature in regard to functions that self-talk serves for athletes (Landin, 1994, Finn, 1985, Zinsser, 2001, Hardy, Jonesn and Gould, 1996)). Furthermore, Although Hatzigeorgiadis et al. (2007) proved functions of self-talk, they also emphasized that it depends on the content of self-talk. In this study, we worked on religious content which is related to spirituality and religiousness. In this research participants, by praying and talking to God, felt more confident, automatic. As it has been mentioned, they also became capable of controlling their cognition and emotion and their attention. This study demonstrated that different functions can result in GT as well as in ST. Besides, religion is of paramount importance in predicting God-talk. According to the given data religion can predict 17 % of GT. As I mentioned, participants are all from Iran which is a religious country. So we can generalize

our results to most of religious athletes. In other words, religion and its dimensions are good predictors for GT and its functions.

More specifically athletes' God-talk was found significantly different than two of dimensions of self-talk, psych-up and anxiety control. These results support previous findings regarding the role of prayer, rituals and GT in anxiety control (Matthew Anastasi and Andrew Newberg, 2008). Our findings also showed that a psychological benefit of GT can be immediately measured as a mediator to psych up athletes. In addition, in order to find out how significant the difference is between God-talk's functions and self-talk's among participants, a One-way repeated ANOVA was carried out. We, by this, compared GT's functions with self-talk.

This paper aimed to address a void in the ST-based literature (among athletes) as to how religion-contextual and spiritual factors predict inner speech and self-talk's cues and functions. As found through previous researches, ST can serve to enhance attention, regulate cognitive and emotional reactions, boost confidence, trigger automatic performance, and increase motivation, drive, and effort (Zourbanos et al., 2009). In addition, Theodorakis et al. (2008) pointed out that ST has been proposed to enhance self-confidence and increase effort (Finn, 1985; Hardy, Jones, & Gould, 1996; Zinsser et al., 2001), regulate mood and anxiety (Hardy et al.; 1996; Zinsser et al., 2001), control attention (Landin, 1994; Nideffer, 1993), and trigger desired actions effectively (Hardy et al.; 1996). Furthermore, findings suggest that different self-talk cues may have different effects through the operation of different mechanisms, which may however operate concurrently (Yiannis Theodorakis et al., 2012). Based on these findings, we compared differences between ST and GT among religious athletes, in order to find out if functions of these two are significantly different. Our findings are consistent with our hypotheses



that athletes can reach these functions by religiousness and spirituality. First function that we investigated was confidence. There are a number of researches that showed self-talk improves confidence not only in sport, but also in other life contexts (Johnson et al., 2004, Perkos et al., 2002, Thelwell and Greenlees, 2003). Besides, literature showed significant role of ST for two other functions, effort and cognitive and emotional control (Hanton & Jones, 1999). Moreover, Nideffer (1993) suggested that ST could help directing and redirecting attention to task relevant cues. With regard to attention Landin (1994) considered the relevance of Nideffer's attentional framework, and suggested that verbal cues can facilitate performance through enhancing appropriate attentional focus (Yiannis Theodorakis et al., 2012). Theodorakis et al. (2012) also showed that ST is capable of triggering automatic execution. In sum, ST in sports can serve to enhance attentional focus, increase confidence, regulate effort, control cognitive and emotional reactions, and trigger automatic execution. Therefore, this study considered the functions' level of athletes by using ST and GT. Then we computed mean differences of these functions. As we mentioned in results, athletes take advantage of GT in order to reach these functions significantly more than ST except for effort function. It can be seen from results that highest mean difference is for cognitive and emotional control function. Hanton & Jones (1999) believes that there are some self-talk's phrases that help athletes not become over aroused (e.g., relax, calm down) and overcoming anxiety symptoms (Zourbanos et al., 2009). That is, religious athletes would rather pray and talk to god in order to control their cognition and emotion.

According to what we discussed above, it can be clearly concluded that GT is of critical importance in preparing athletes for competition. Besides, in order to understand how God-talk works, it is imperative to investigate the role that antecedents play on shaping athletes' God-talk. In addition, with above mentioned being examined, we can understand what role God-

talk plays to reach to outcomes in order to improve skills. Research has suggested that mediating role of religiousness on the relationship between athletes' GT and its functions will allow us to understand of its importance. That is, we found that religion can predicts 17 percent of GT and how often a religious athlete uses GT depends on how religious he is. As it was said earlier, believing dimension of religion is the only one which is significant. In other words, by investigating athletes' beliefs, we would be capable of predicting a part of their GT. On the other hand, it is not surprising that religiousness can predict GT's functions as well. We could find that religiousness can predict all five functions significantly. That means athletes who are more religious, can take more advantage of GT and there is more possibility for them to reach outcomes supposed to be reached through using GT. Believing is the most important dimension to predict GT's functions as well as GT. I presumed that if athletes want to have and useful GT, they should believe to whom they talk to and what they say. Our findings show that GT benefits athletes who pray and believe genuinely to what they do.

### **Limitations and future directions**

The present findings have highlighted the significant role of religion and spirituality on athletes' ST; nevertheless, a number of limitations that further research should address are considered below.

The first limitation is about the scales that were used. Existing self-talk scales may not be appropriated to assess individuals' God-talk. Following studies can aim to develop a scale to assess GT to examine athletes' GT and GT's functions. This study points out that there is a variety of different phrases that athletes use in order to have an internal talk. Despite limited time that we had to do this research, we could find some phrases which are more common among

religious athletes. But we had a small sample community and asked only a limited number of athletes and also we are not sure if they are religious enough.

Second, we didn't have a unique definition of concept of religion and spirituality. This is among the key limitations in religion studies because the term spirituality is subject defined as personal interpretation by those involved in the study, researchers, participants, and readers. Although attempts were made to operationally define spirituality at the beginning of the survey, the very words used to construct survey items conveyed a subjective interpretation of the elements of spirituality that are worth assessing. Although the subjective nature of the topic does not preclude us from studying it, the difficulties involved in measuring an abstract construct should be taken into account.

Moreover, all participants are from same city that is a religious city. In addition, because of some limitations related to religion, people don't feel like to talk about their beliefs. Because of the repressive situation for nonreligious people, there was every likelihood that more spiritually-oriented people would be more participated to this study. Consequently, it is difficult to generalize the results of this study to populations that differ by religious affiliation. That is, religious controlling atmosphere of Iran doesn't let people express their real beliefs about spirituality. They have to pretend their religion as the governing regime wishes. So, despite confidentiality that I tried to arise, because of this limitations, participants did not seem to be honest in order to avoid further problems.

There is strong chance of an expert who is involved in sport psychology not standing spiritual. It means all of sport psychologists are not religious and some of them are not highly likely to believe in God. In my opinion, what is a key point to solve clients' problem is what they believe themselves instead of sport psychologists' beliefs. On the other hand, current study

showed the significant role that spirituality plays in athletes' profession. Therefore, sport psychologists must start and continue the process of consultation while athletes' beliefs are considered. For instance, GT can be as useful as ST for injured athletes. Most would agree that treating both the body and mind results in a better recovery process. However, treatment that includes addressing the spiritual care of an ill or injured person has fewer consensuses. The key point is that, in addition to the body and mind, spirituality should be one of the dimensions that composes holistic care in the allied health care professions. Ledger (2005) claimed that the patient has a right to receive holistic care, which includes cultural, religious and/or spiritual care. However, aspects of spiritual care are not identified easily because they emerge from the concept of spirituality, which has a myriad of interpretations. My suggestion for succeeding is to observe a recovery process of religious athletes and find out if they can have a better rehabilitation by using prayer and GT.

The field of religion/spirituality and health has grown dramatically in the past few decades. As the field develops, there is a greater need to understand mechanisms linking specific dimensions of religiousness and athletes' performance promotion. Although this field is a new one, there are a number of researches about religion in sport. But it still needs to be worked on.

In addition, the present study showed that GT is a technique that athletes can take benefit from apart from ST. Future researches can examine it as a new theory which is completely different from ST. There is possibility that religion impacts other mental aspects of athletes. Thus I think future researches can survey the effects of god-talk on athletes' mindfulness, relaxation and imagery. Doufesh et al. (2012) showed that increased alpha amplitude in parietal and occipital regions during meditation and mental concentration. Thus

subsequent studies are needed to illuminate the role of mental concentration ( Doufesh, Faisal, Lim, &Ibrahim, 2012).

In summary, prayer and religious observations are utilized a great deal in sport. Many times, spiritual athletes employ their belief system as a performance enhancement technique. Thus we need to work more on the role that religion and GT play to support athletes and how they take advantage of it to promote their performance.

### **Conclusion**

So God-talk or Self-talk? Self-talk is influenced by a number of established beliefs and private and protective factors. The present study is among the first researches to critically examine religion's perceptions of providing self-talk factors for spiritual athletes; therefore, this research can be used as a reliable source to formulate inspiring talks which can be useful for more than 70% of athletes. If researchers offer some theoretically based argument regarding God-talk for the hypotheses they are testing, the results from studies concerning prayer may be more meaningful. Having established the theoretical models of the ways in which God-talk may promote better performance, the challenge for psychology is to provide empirical evidence to confirm or disconfirm the hypotheses.

As this research demonstrated, religion influences athletes' talking to themselves and God. It was also shown that God-talk is different from self-talk, and is of a great significance in athletes' professional life. In comparison with ST, GT is more common in religious countries and athletes take more benefit of GT compared to ST.

Last but not least, using ST is also getting more and more common even in spiritual countries. This study, therefore, gave no support for the view that self-talk's factors aren't seen as useful factors to prepare athletes psychologically. The study does highlight the importance of

religious factors in the planning of internal talk's phrases provision. Finally, finding that how much talking to God could be helpful is in order to reaching to ST and GT's functions can help us to establish new theories based on religious athletes' beliefs.

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## Appendix

Original version of questionnaires used by researchers:

This is a study about type of Self-talk that athletes use in Iran. This questionnaire helps us to determine the type which is common for athletes in our country and we can find out differences between self-talk between Iran and some developed countries. The questionnaire is anonymous and no one will be informed about result of your answer except researchers. There are no correct or wrong answers, so just answer what you really feel is closer to yourself.

Sex: Male  Female

Age: \_\_\_\_\_

Religion: \_\_\_\_\_

Sport: \_\_\_\_\_

Hours of training per a week: \_\_\_\_\_

Days of training per a week: \_\_\_\_\_

Competitive Level: Local  National  International

### INSTRUCTIONS

On the following questionnaire, there are phrases describing athletes' thoughts, or what athletes say to themselves. Please use the rating scale below to indicate, based on your latest competitions, thoughts you usually experience or intentionally use while performing. Your responses will be kept in **absolute confidence**. In other words, your individual answers will not be shown to anyone. Please read each statement carefully, and then choose the correct response for you by circling the appropriate number.

**0 =never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often**

1.	Let's go	0	1	2	3	4
2.	Relax	0	1	2	3	4
3.	I believe in me	0	1	2	3	4
4.	Concentrate on your goal	0	1	2	3	4
5.	Power	0	1	2	3	4
6.	Don't get upset	0	1	2	3	4
7.	I am very well prepared	0	1	2	3	4
8.	Focus on what you need to do now	0	1	2	3	4
9.	Give 100%	0	1	2	3	4
10.	Calm down	0	1	2	3	4
11.	I feel strong	0	1	2	3	4
12.	Concentrate on your game	0	1	2	3	4
13.	Do your best	0	1	2	3	4
14.	No stress	0	1	2	3	4
15.	I can make it	0	1	2	3	4
16.	Focus on your technique	0	1	2	3	4
17.	Strong	0	1	2	3	4

18.	I believe in my abilities	0	1	2	3	4
19.	Concentrate	0	1	2	3	4

**WHEN I TALK TO MYSELF ...**

1.	I feel more certain for myself	0	1	2	3	4
2.	I execute impulsively	0	1	2	3	4
3.	I maintain effort to high levels	0	1	2	3	4
4.	I feel more relaxed	0	1	2	3	4
5.	I concentrate on what I'm doing at the moment	0	1	2	3	4
6.	I feel more confident for my abilities	0	1	2	3	4
7.	I execute automatically	0	1	2	3	4
8.	I keep trying my best	0	1	2	3	4
9.	I reduce my nervousness	0	1	2	3	4
10.	I concentrate better to the execution	0	1	2	3	4
11.	I feel stronger	0	1	2	3	4
12.	I execute as if on an automatic pilot	0	1	2	3	4
13.	I make my efforts more intense	0	1	2	3	4
14.	I let go my anxiety	0	1	2	3	4
15.	I direct my attention efficiently	0	1	2	3	4
16.	I boost my confidence	0	1	2	3	4
17.	The execution is spontaneous	0	1	2	3	4
18.	I try harder	0	1	2	3	4
19.	I interrupt negative thoughts	0	1	2	3	4

20.	I stay focused	0	1	2	3	4
21.	I psych-up myself	0	1	2	3	4
22.	The execution comes automatic	0	1	2	3	4
23.	I increase effort	0	1	2	3	4
24.	I stay calm	0	1	2	3	4
25.	I concentrate on what I have to do	0	1	2	3	4

On the following questionnaire, there are phrases describing athletes' thoughts. Please use the rating scale below to indicate, based on your latest competitions, thoughts you usually experience or intentionally use while performing. Your responses will be kept in **absolute confidence**. In other words, your individual answers will not be shown to anyone. Please read each statement carefully, and then choose the correct response for you by circling the appropriate number.

**0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often**

1.	God, Help me	0	1	2	3	4
2.	Make me strong	0	1	2	3	4
3.	I believe to you	0	1	2	3	4
4.	You are great	0	1	2	3	4
5.	I deify you	0	1	2	3	4
6.	Give me patient	0	1	2	3	4
7.	Take care of me	0	1	2	3	4
8.	I totally trust you	0	1	2	3	4
9.	You give hope to me	0	1	2	3	4
10.	Mentioning you put my heart in piece	0	1	2	3	4
11.	Make me more energetic					

**WHEN I TALK TO GOD ...**

1.	I feel more certain for myself	0	1	2	3	4
2.	I execute impulsively	0	1	2	3	4
3.	I maintain effort to high levels	0	1	2	3	4
4.	I feel more relaxed	0	1	2	3	4
5.	I concentrate on what I'm doing at the moment	0	1	2	3	4
6.	I feel more confident for my abilities	0	1	2	3	4
7.	I execute automatically	0	1	2	3	4
8.	I keep trying my best	0	1	2	3	4
9.	I reduce my nervousness	0	1	2	3	4
10.	I concentrate better to the execution	0	1	2	3	4
11.	I feel stronger	0	1	2	3	4
12.	I execute as if on an automatic pilot	0	1	2	3	4
13.	I make my efforts more intense	0	1	2	3	4
14.	I let go my anxiety	0	1	2	3	4
15.	I direct my attention efficiently	0	1	2	3	4
16.	I boost my confidence	0	1	2	3	4
17.	The execution is spontaneous	0	1	2	3	4
18.	I try harder	0	1	2	3	4
19.	I interrupt negative thoughts	0	1	2	3	4
20.	I stay focused	0	1	2	3	4
21.	I psych-up myself	0	1	2	3	4
22.	The execution comes automatic	0	1	2	3	4

23.	I increase effort	0	1	2	3	4
24.	I stay calm	0	1	2	3	4
25.	I concentrate on what I have to do	0	1	2	3	4

You may be interested or not in religion for a variety of reasons. Please try to be as specific as possible in your answers to the following questions dealing with the reasons they eventually make you to be interested on religion.

**1= totally disagree, 7= totally agree**

	Totally disagree						Totally agree
In religion, I enjoy belonging to a group/community	1	2	3	4	5	6	7
Belonging to a religious tradition and identifying with it is important for me	1	2	3	4	5	6	7
Referring to a religious tradition is important for my cultural/ethnic identity	1	2	3	4	5	6	7
I am attached to the religion for the values and ethics it endorses	1	2	3	4	5	6	7
Religion helps me to try to live in a moral way	1	2	3	4	5	6	7
When I've got a moral dilemma, religion helps me to make a decision	1	2	3	4	5	6	7
I like religious ceremonies	1	2	3	4	5	6	7
Religious rituals, activities or practices make me feel positive emotion	1	2	3	4	5	6	7
Religion has many artistic, expressions, and symbols that I enjoy	1	2	3	4	5	6	7



	Totally disagree						Totally agree
I feel attached to religion because it helps me to have a purpose in my life	1	2	3	4	5	6	7
It is important to believe in a Transcendence that provides meaning to human existence	1	2	3	4	5	6	7
Religious beliefs have important implications for our understanding of human existence.	1	2	3	4	5	6	7

Second version which is shown below is the translated one to Persian

به نام خدا

این پرسشنامه تعیین کننده نوع صحبت با خودی است که در میان ورزشکاران ایرانی مرسوم تر است. در این پرسشنامه اسمی از شما ذکر نخواهد شد و هیچکس به جز محقق از محتوای پاسخهای شما مطلع نمی شود. هیچ پاسخ صحیح و غلطی وجود ندارد و شما فقط لازم است به گزینه ای که حس می کنید به شخصیت شما نزدیکتر است پاسخ دهید.

جنسیت:      مرد      زن      سن:      دین:      مذهب:

نوع ورزش:

تعداد روزهایی که در هر جلسه تمرین میکنید:

تعداد ساعت هر جلسه تمرین :

ملی

کشوری

محلات و استانی

سطح رقابتی که در آن فعالیت میکنید:

### دستورالعمل

در پرسشنامه زیر، عباراتی وجود دارند که افکار ورزشکاران و آنچه آنان به خود می گویند را توصیف میکنند. لطفاً آن را بر اساس میزان استفاده تان در آخرین رقابتی که داشته اید، پاسخ دهید. جوابهای شما کاملاً به صورت یک راز باقی خواهند ماند. به عبارت دیگر، جوابهای شخصی شما به هیچکس نشان داده نخواهند شد. لطفاً هر عبارت را با دقت خوانده و سپس جواب صحیح خودتان را با کشیدن دایره به دور شماره مناسب انتخاب کنید.

0= هرگز      1= به ندرت      2= گاهی اوقات      3= به کرات      4= خیلی اوقات

1.	بزن بریم	0	1	2	3	4
2.	ریلکس	0	1	2	3	4
3.	من به خودم ایمان دارم	0	1	2	3	4
4.	روی هدف تمرکز کن	0	1	2	3	4

5.	قدرت	0	1	2	3	4
6.	عصبانی نشو	0	1	2	3	4
7.	من خیلی خوب آماده ام	0	1	2	3	4
8.	روی چیزی که نیاز داری انجام بدی تمرکز کن	0	1	2	3	4
9.	صد درصدا را اختصاص بده	0	1	2	3	4
10.	آرام باش	0	1	2	3	4
11.	من احساس می کنم قوی هستم	0	1	2	3	4
12.	بر روی مسابقه تمرکز کن	0	1	2	3	4
13.	حد اکثر تلاشت را بکن	0	1	2	3	4
14.	بدون استرس	0	1	2	3	4
15.	من می توانم انجامش دهم	0	1	2	3	4
16.	بر روی تکنیکت تمرکز کن	0	1	2	3	4
17.	قوی	0	1	2	3	4
18.	من به تواناییهایم اعتقاد دارم	0	1	2	3	4
19.	تمرکز	0	1	2	3	4

زمانی که من با خودم صحبت می کنم...

1	حس می کنم اطمینان بیشتری به خودم دارم	0	1	2	3	4
2	تکانشی عمل می کنم	0	1	2	3	4
3	تلاشم را در سطوح بالاتری نگه می دارم	0	1	2	3	4
4	حس می کنم ریلکستر هستم	0	1	2	3	4
5	بر آنچه که در آن لحظه دارم انجام میدهم تمرکز می کنم	0	1	2	3	4
6	حس می کنم اعتماد بیشتری به تواناییهایم دارم	0	1	2	3	4

7	اتومات تر عمل می کنم	0	1	2	3	4
8	حد اکثر تلاش خودم را میکنم	0	1	2	3	4
9	عصبانیت خود را کاهش میدهم	0	1	2	3	4
10	تمرکز بهتری بر عملکرد خود دارم	0	1	2	3	4
11	حس میکنم قوی تر هستم	0	1	2	3	4
12	طوری عمل میکنم که یک هواپیمای خودکار عمل میکند	0	1	2	3	4
13	تلاش خودم را بیشتر میکنم	0	1	2	3	4
14	به اضطرابم محل نمی دهم	0	1	2	3	4
15	توجه ام را موثرتر هدایت می کنم	0	1	2	3	4
16	اعتمادم را ارتقا می دهم	0	1	2	3	4
17	عملکردم خودانگیزه میشود	0	1	2	3	4
18	بیشتر تلاش می کنم	0	1	2	3	4
19	افکار منفی ام را رفع می کنم	0	1	2	3	4
20	متمرکز باقی میمانم	0	1	2	3	4
21	خودم را هیجانی تر میکنم	0	1	2	3	4
22	عملکردم اتوماتیک میشود	0	1	2	3	4
23	تلاشم را زیادتر میکنم	0	1	2	3	4
24	آرام می مانم	0	1	2	3	4
25	تمرکز میکنم بر آنچه که باید انجام دهم	0	1	2	3	4

پرسشنامه زیر شامل 11 عبارت با هدف دستیابی و شناسایی افکار ورزشکاران و آنچه که آنان به عنوان دعا یا صحبت با خدا و ائمه در حین مسابقه استفاده میکنند، میباشد. لطفاً آن را بر اساس میزان استفاده تان در آخرین رقابتی که داشته اید، پاسخ دهید. دوباره تاکید میشود که جوابهای شما کاملاً به صورت یک راز باقی خواهند ماند. لطفاً هر عبارت را با دقت خوانده و سپس جواب صحیح خودتان را با کشیدن دایره به دور شماره مناسب انتخاب کنید

=0 هرگز	=1 به ندرت	=2 گاهی اوقات	=3 به کرات	=4 خیلی اوقات
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1	خدایا کمک کن	0	1	2	3	4
2	قدرتمندم بساز	0	1	2	3	4
3	بهت ایمان دارم	0	1	2	3	4
4	الله اکبر	0	1	2	3	4
5	میپرستم	0	1	2	3	4
6	صبرم بده	0	1	2	3	4
7	نگاهت را از من بر ندار (مراقبم باش)	0	1	2	3	4
8	کاملاً بهت اعتماد دارم	0	1	2	3	4
9	بهم امید می دهی	0	1	2	3	4
10	الا بذكر الله تطمئن القلوب	0	1	2	3	4
11	انرژی ام را بیشتر کن	0	1	2	3	4

زمانی که من با خدا و انمه صحبت می کنم (دعا می کنم) ...

حس می کنم اطمینان بیشتری به خودم دارم	0	1	2	3	4
تکانشی عمل می کنم	0	1	2	3	4
تلاشم را در سطوح بالاتری نگه می دارم	0	1	2	3	4
حس می کنم ریلکستر هستم	0	1	2	3	4

تمرکز می‌کنم بر آنچه که دارم انجام میدهم در آن لحظه	0	1	2	3	4
حس می‌کنم اعتماد بیشتری به تواناییهایم دارم	0	1	2	3	4
اتومات تر عمل می‌کنم	0	1	2	3	4
حد اکثر تلاش خودم را میکنم	0	1	2	3	4
عصبانیت خود را کاهش میدهم	0	1	2	3	4
تمرکز بهتری بر عملکرد خود دارم	0	1	2	3	4
حس میکنم قوی تر هستم	0	1	2	3	4
طوری عمل میکنم که یک هواپیمای خودکار عمل میکند	0	1	2	3	4
تلاش خودم را بیشتر میکنم	0	1	2	3	4
به اضطرابم محل نمی‌دهم	0	1	2	3	4
توجه ام را موثرتر هدایت می‌کنم	0	1	2	3	4
اعتماد را ارتقا می‌دهم	0	1	2	3	4
عملکردم خودانگیخته میشود	0	1	2	3	4
بیشتر تلاش می‌کنم	0	1	2	3	4
افکار منفی ام را رفع می‌کنم	0	1	2	3	4
متمرکز باقی میمانم	0	1	2	3	4
خودم را هیجانی تر میکنم	0	1	2	3	4
عملکردم اتوماتیک میشود	0	1	2	3	4
تلاشم را زیادتر میکنم	0	1	2	3	4
آرام می‌مانم	0	1	2	3	4
تمرکز میکنم بر آنچه که باید انجام دهم	0	1	2	3	4

شما ممکن است دلایل زیادی داشته باشید که به آن دلایل یا به دین علاقه مندید و یا خیر. پرسشنامه زیر که شامل 11 عبارت است، نشان دهنده میزان و نوع علاقه شما به دین می باشد. پاسخ های شما بدون اسم بوده و به هیچ عنوان در جایی مطرح نخواهد شد.

2= کاملاً موافق

1= کاملاً مخالف

	کاملاً مخالف						کاملاً موافق
دین باعث می شود که من به یک گروه/اجتماع بخصوصی متعلق باشم	1	2	3	4	5	6	7
تعلق به یک سری سنت و هویتی که من از آن می گیرم برای من مهم است	1	2	3	4	5	6	7
رجوع به یک سری سنت و عرف مذهبی و دینی برای هویت فرهنگی/نژادی من مهم است	1	2	3	4	5	6	7
دین یک سری ارزشها و اخلاقیاتی را تصدیق می کند که باعث علاقه من به دین شده است	1	2	3	4	5	6	7
دین به من کمک میکند که در جهت یک زندگی اخلاقی گام بردارم	1	2	3	4	5	6	7
زمانی که من در یک تعارض اخلاقی گرفتارم، دین به من کمک می کند تا آن را حل کنم	1	2	3	4	5	6	7
به جشن ها و مراسم مذهبی علاقه مندم	1	2	3	4	5	6	7
تشریفات، فعالیتهای و اعمال مذهبی به من هیجان مثبتی می دهد	1	2	3	4	5	6	7
دین شامل اصطلاحات، نمادها و آثار هنری زیادی است که من به آنها علاقه مندم	1	2	3	4	5	6	7
دین به زندگی ما هدف خاصی میدهد و به همین علت من به آن علاقه مندم	1	2	3	4	5	6	7
اعتقاد به یک نیروی برتر به وجود بشر معنا می بخشد و این خیلی مهم است	1	2	3	4	5	6	7
اعتقادات دینی مفاهیم مهمی برای فهم ما از وجود بشر دارن	1	2	3	4	5	6	7