Players' Perception of the Effect and Superiority of Self-Talk in Motor Performance

¹ Tayebeh Baniasadi, ²Mir Hamid Salehian, ²Amir Giami Rad, ²Lamia Mirheidari

- 1. Department of Physical Education, Roudehen branch, Islamic Azad University, Roudehen, Iran
- 2. Department of Physical Education, Tabriz branch, Islamic Azad University, Tabriz, Iran

Abstract: The present study aimed to investigate darts players' perception of the effect and superiority of both instructional and motivational self-talks in dart throwing skills and dynamic balance tasks. To this end, a number of 40 participants were studied in both instructional and motivational self-talk conditions. The subjects rehearsed the phrase *I Can* in motivational self-talk condition across both dart throwing and dynamic balance tasks whereas they used the phrases *Center-Goal* and *Bend Your Knees* for dart throwing and dynamic balance tasks as the instructional self-talk phrases, respectively, before they performed the tasks. The results showed that the subjects preferred instructional self-talk in dynamic balance task. The results showed no difference between the potential contributing mechanisms in dynamic balance task; however, concentration, self-confidence and composure were more effective than other mechanisms in dart throwing task. [Tayebeh B, Mir Hamid S, Amir G.R, Lamia M. **Players' Perception of the Effect and Superiority of Self-Talk in Motor Performance.** *Life Sci J* 2013;10(5s):323-327] (ISSN:1097-8135). http://www.lifesciencesite.com. 59

Keyword: Instructional Self talk, Motivational Self talk, Motor Performance

1. Introduction

Sports achievements are considered as a value that exerts considerable impact on athletes' life and morale. Thus, athletes at all levels of competence use various training techniques in order to increase their athletic potential. They may draw upon cognitive approaches and sports sciences such as biomechanics, physiology, nutrition and sports psychology to develop appropriate training techniques in order to improve their athletic performance (Hall, 2001). In addition, current athletes are more aware of the effect of thoughts and emotions on their athletic performance. They recognize that they may not separate body and mind in sports performance so that a prominent athlete may fail only due her failure in controlling her thoughts during a competition (Fin, 1985). To achieve better performance, athletes need to use mental/cognitive training techniques in addition to physical training so that they may control their anxiety and provocation. Some mental practices include self-talk, relaxation techniques, goal-setting and mental imagery (Behncke, 2004). Self-talk is a mental skill that athletes may use before, during and after the task performance. As a strategic technique, it refers to what people tell themselves either loudly or subvocally (Sellars, 1997). It has developed in psychology as a cognitive intervention, which is mainly used to reduce anxiety (Ingram, 1989). Research has shown that cognitive strategies such as positive self-talk may change the individual's negative mindset into a positive one. It may also change individual's behavior and bring about better performance (Solley & Payne, 1990). It is reported to be the most effective cognitive intervention in

reducing depression and anxiety and improving performance (Solley & Payne, 1990). Zinnser et al. (2006) reported that self-talk may improve performance through better skill acquisition. increased self-confidence, self-efficacy, adjustment of ineffective habits and controlled effort. Weinberg and Gould (2003) also recommended that athletes used self-talk strategies in different ways such as skill acquisition, elimination of a bad habit, generating motivation, attention control, changed temperament and increased self-confidence. Thus, self-talk may be used in different conditions and for different purposes. There are different classifications of the types of self-talk. In one classification, it is divided into two types: instructional and motivational. Instructional self-talk improves performance through concentration on movement, adequate technique and proper strategy use. It is more effective with the tasks that require higher skills, better timing and precision. Motivational self-talk facilitates task performance through increasing energy, efforts and positive motivation. It is also used to control anxiety and provocation. It is more effective with the tasks that require strength, endurance and gross motor skills (Hardy, 2006). Hardy et al. (2009) proposed taskdemands matching hypothesis whereby instructional self-talk is suggested to be more effective with the tasks that require better timing and precision whereas motivational self-talk is more effective with the tasks that require strength and endurance. However, Hatzigeorgiadis et al. (2004, 2009) reported that instructional self-talk was more effective with the tasks that required precision and delicacy comparing with motivational self-talk. On the other hand, they

reported that motivational self-talk was more effective for gross motor skills (large movements) that required strength while it might also contribute to the tasks that require precision. Overall, these findings suggest that different types of self-talk exert different effects on performance based on the task type. Hatzigeorgiadis et al. (2007) suggested that, as different self-talk clues seem to produce different effects on performance, different types of tasks may be used for different functions. Various studies have investigated the effect of different types of self-talk before sports tasks or competitions. The results, however, have been inconsistent. Some studies have reported improved performance in such sports as swimming, 100-meter sprint, golf and tennis through instructional self-talk (Harvey, 2000; Landin, 1990; Mallett, 1997: Rushall, 1984). Some researchers have reported that either type of self-talk improves performance (Rushall, 1988).

Besides, research has shown that self-talk effectiveness depends on the nature of the task (Landin, 1994). Before athletes use self-talk, the task should be analyzed to determine if it is open or closed, simple or complex, single or continuous (Perkos, 2002). Landin reported that task complexity might affect self-talk effectiveness in boosting performance. For example, Perkos and colleagues (2002) showed that instructional self-talk did not affect free throw task performance as a complex skill. However, Chroni (2007) reported that motivational self-talk could improve basketball free throw task performance. On the contrary, Boroujeni (2011) reported that instructional self-talk improved basketball free throw performance. Therefore, it seems that task type affects the effectiveness of instructional or motivational self-talk. The present study aims to investigate the effect of both types of self-talk on motor performance. The study further investigates darts players' perception of the effect of self-talk type – consistent with the nature of the task (single or continuous) - on dart throwing skill and dynamic balance task.

2. Materials and methods

The present study adopted a quasi-experimental design with a pretest, posttest and control group components. In the present study, we studied the participants' perception of the effect of motivational and instructional self-talks on motor performance. The participants were randomly assigned into groups, and they participated in both a pretest and posttest measurement.

Participants

The population of the study consisted of all male students of Physical Education. A number of 40 students were randomly selected as the participants and subsequently assigned into conditions A or B. The subjects ranged in age from 19 to 24 years. **Instruments**

Dart throwing: the darts were thrown at a standard dartboard (35.5 cm in diameter) installed at the distance of 7 feet from the oche. The scoring was based on the distance between the hit circle and the bull's eye. The distance for the darts that did not hit the board was considered to be 17.5 cm, which is the maximum distance between the bull's eye and board edge.

Dynamic balance: a balance system was used to test dynamic balance performance in the subjects. Balance time was considered as the participants' ability to maintain their stability on a board that stood with 5 degrees gradient to the horizon. A timer recorded the duration (in seconds) when the board was kept balanced. Balance task is a both reliable and valid measurement of balance.

Self-talk perception questionnaire: the questionnaire examined the athletes' perception of the effect of self-talk and its importance in athletic performance. It consisted of two items as follows.

- 1. How do you feel the following self-talk phrase would contribute to your performance?
- Through higher concentration
- Through higher self-confidence
- Through nurturing a sense of strength
- Through relaxation
- Through boosting performance techniques

This item was on a 10-point Likert scale ranging from "Not at all" (1) to "Very much" (10).

2. What type of self-talk (instructional or motivational) contributes to your performance best?

The answer was to be provided on a continuum ranging from 0 to 5 on the one side for instructional motivation and from 0 to 5 on the other side for instructional motivation while zero meant "Neither" (5, 4, 3, 2, 1, 0, 1, 2, 3, 4, 5).

Manipulation Check Protocol: this protocol addresses the use of self-talk by different groups. In fact, it assures that the experimental conditions developed by the researcher are true (Hardy, 2005). The experimental subjects were asked to show on a 10-point scale that (1) how many times did they use the selected self-talk phrase, (2) did they use another type of self-talk, (3) if they used other types of selftalk, what did they rehearse, (4) and if so, how often did they use it. The control subjects were informed of the concept of self-talk. Then they were asked to indicate on a10-point scale that (1) did they use any type of self-talk, (2) if so, what did they tell themselves, (3) and if so, how often did they use selftalk (Hatzigeorgiadis et al., 2008).

3. Procedure

A personal datasheet was used to select the qualified participants who were novice male students with no history of mental, physical or motor disorders. From among the volunteers, a number of 40 subjects were then selected as the participants. A darts coach was invited to train the subjects about the darts throwing techniques, rules and scoring procedure in one session. The participants then did 50 throws each to practice and learn darts throwing task. The participants were randomly assigned into either condition A or condition B. Before the study was started, meetings were arranged with the coach to train and inform him of the research procedure and test administration. According to the timetable, each group attended the gym separately. The subjects were trained as how to use self-talk before the task performance. The subjects were asked not to talk to their teammates during task performance, instead they could rehearse the assigned self-talk either loudly or subvocally before their task performance (Krooni, 2007). In the beginning, the participants were randomly assigned into either Group A or Group B, each containing 20 participants. Group A were asked to perform the dart throwing task using instructional self-talk. Group B were simultaneously performing the same task using motivational selftalk. Afterwards, Group A performed the task using motivational self-talk while Group B performed the task using instructional self-talk. The same procedure was repeated in dynamic balance test in either group in both conditions. During dart throwing performance, the subjects did 15 training throws followed by 15 test throws. The subjects rehearsed the phrase "center-goal" for instructional self-talk and "I can" for motivational self-talk before throwing darts. During dynamic balance task performance, the participants were to stand on a balance board with 5 degrees gradient to the horizon. Every participant practiced for 30 seconds first followed by 30 seconds rest. Then they performed a 30-second dynamic balance test. They rehearsed the phrase "bend your knees" for instructional self-talk and "I can" for motivational self-talk during the balance test. At the end of the 30-second test, the time showed on the balance system was recorded for every individual. Following the completion of the tests, the participants completed the questionnaire.

4.Results

The results of paired t test showed a significant difference in dart throwing performance between motivational and instructional self-talk conditions $(t_{(39)}=5.64, P\geq0.05)$. In other words, the instructional self-talk subjects outperformed the motivational

subjects in dart throwing task performance. In dynamic balance test, the results showed a difference in the balance performance between motivational and instructional subjects ($t_{(39)}$ =4.49, P≥0.05). In other words, motivational subjects outperformed instructional subjects in balance performance.

Considering the participants' perception of the effect of self-talk on athletic performance, the results of t test showed no significant difference between the amount of self-talk used during dynamic balance task performance (t=1.02, P=0.133) and dart throwing task performance (t=1.38, P=0.165). According to the perceived level of self-talk utility (How much do you think self-talk would help task performance), the subjects reported that the phrase "I can" was more effective in dynamic balance task performance comparing with "bend your knees" $(t_{(39)}=4.22)$, $P \ge 0.05$). In order to examine the differences among the subjects' responses to potential mechanisms of the relations between self-talk and performance (increased concentration, increased self-confidence, stronger emotion, composure and better performance techniques), the results of paired t test showed no difference in significant dynamic balance performance. However, in dart throwing task, differences were observed in increased concentration $P \ge 0.05$), increased self-confidence $(t_{(39)}=3.28)$ $(t_{(39)}=4.12, P\geq0.05)$ and higher composure $(t_{(39)}=4.18, P\geq0.05)$ $P \ge 0.05$). Eventually, Chi-square test was run to examine the potential differences in participants' priorities between the two types of self-talks used in task performance. The results showed differences in both dynamic balance performance $(X^2 (N=40)=1.63)$, $P \ge 0.05$ (and dart throwing task (X² (N=40)=2.53, $P \ge 0.05$). The participants preferred motivational selftalk over instructional self-talk in performing both tasks.

5.Discussion and conclusion

The present study aimed to investigate dart players' perception of self-talk effectiveness and of self-talk potential mechanisms contributing to task performance. The study also set to investigate the priority of each of type of self-talk in dart throwing task and dynamic balance performance. The results revealed that instructional subjects outperformed motivational ones in dart throwing task. In dynamic balance test, the results showed a difference between instructional and motivational subjects in balance performance. In other words, motivational subjects outperformed instructional ones. Recent research has concentrated on the comparison between instructional and motivational self-talks as well as examination of task-demands matching hypothesis. Findings have shown that the two types of self-talk may exert different effects on performance. For example, some studies on different skills such as accuracy of soccer

shooting and badminton serving test by Theodorakis et al. (2000), pass accuracy by Boroujeni et al. (2011), and golf shots by Linner et al. (2011) revealed that instructional subjects significantly outperformed the motivational ones. The results of previous studies correspond to the present findings as dart throwing skill is essentially similar to the skills addressed in the above studies. In other words, all these skills are considered as single skills. Hardy and colleagues (1996) contended that self-talk was not only a facilitative psychological skill but also an approach to dealing with negative mental pressures that may adversely affect performance. This highlights self-talk as a potential source to achieve maximum performance (Hardy et al., 2009). The present findings showed that self-talk might be an effective approach to improving performance. Some studies on other skills such as Swedish pushups by kolovelonis et al. (2010) and basketball passing speed by Boroujeni et al. (2011) showed that motivational subjects outperformed instructional ones. This is consistent with the present findings about the darts players' perception of self-talk effectiveness in dynamic balance performance. The self-talk phrase (I can) was assigned as a motivational self-talk phrase in the present study, which was considered as a positive self-talk rehearsal. Generally speaking, positive and motivational self-talk phrases refer to similar types of self-talk that improve performance through creating positive temperament, increasing self-confidence and endeavor (Theodorakis et al., 2000)

Researchers have held that, as self-talk is used to improve performance, it may be important to match self-talk with task demands. According to the conclusions drawn by Theodorakis et al. (2000), a hypothesis was developed, which was later termed task-demands matching hypothesis by Hardy et al. (2009). Based on this hypothesis, instructional selftalk is more effective with the tasks that require precision and timing while motivational self-talk is more effective with the tasks that require strength and endurance (Hardy et al., 2009). The findings generally suggest that different types of self-talk exert different effects on performance based on the type of the task. Hatzigeorgiadis et al. (2007) suggested that, as different self-talk clues exert different effects on performance, it might be better to use different types of self-talk with different tasks.

Based on the perceived level of self-talk utility (Do you believe that self-talk would contribute to performance), the subjects reported that the phrase "I can" was suitable for dynamic balance performance. As dynamic balance task requires endurance and stability over time, the phrase "I can" might have been a better match for this task than the phrase

"bend your knees". That may be why the subjects selected this phrase to use with dynamic balance task. In the present study, dart throwing and dynamic balance tasks were assigned to the participants. As every task has its different motor demands, the differences in self-talk effectiveness may relate to the characteristics of tasks pertaining to performance elements, which are highlighted by the type and content of self-talk. Landin (1994) suggested the importance of self-talk matching with the task. He contended that self-talk effectiveness depended on a variety of factors such as shortness, accuracy and nature of the task. Thus, task components may be important in determining the type of the self-talk in performance. order to improve Eventually, considering the differences between the subjects' responses to potential mechanisms concerning the relations between self-talk and performance (increased concentration, self-confidence, stronger emotions, composure and better performance techniques), the results showed no significant difference in dynamic balance performance. However, in dart throwing task, differences were found concerning increased concentration functions, self-confidence and composure. Dart throwing task requires more concentration and composure during performance, which may account for the selection of these items. Considering the present findings, we may conclude that both instructional and motivational self-talks contribute to athletic performance. Besides, improved performance may relate to the effective potential mechanisms.

References

- 1. Fin, J.A. (1985) .Competitive excellence: It's a matter of mind and body. The physician and sports medicine, 12, 1-15.
- Hall, C.R. (2001). Imagery in sport and exercise. In R. Singer, H. Hausenblas. & C Janelle (Eds.). Handbook of research in sport psychology, (pp. 529-549). New York: John Wiley & Sons.
- 3. Sellars, C. (1997). Building self- confidence. Leeds, UK: National Coaching Foundation.
- 4. Ingram, R .(1989) .Unique and shared cognitive factors in social anxiety and depression : automatic thinking an self-appraisal. Journal of social and clinical psychology, 8, 198-208.
- 5. Behncke, L. (2004). Mental skills training for sports: A brief review. Retrieved
- 6. on June 22, 2004 from http://www.athleticinsight.com/Vol6Iss1/Ment alSkillsReview.htm.
- 7. Solley, B., Payen, B. 1990. The use of self-talk to enhance children's writing.

- 8. Journal of Instructional Psychology. 19, 205-12.
- Zinnser, N., Bunker, L., & Williams, J.M. (2006). Cognitive techniques for building confidence and enhancing performance. In J.M. Williams (Ed.), Applied Sport Psychology: Personal growth to peak performance 5th Ed. (pp. 349-381). New York, NY: McGraw-Hill Companies, Inc. Higher Education.
- Weinberg, R.S., & Gould, D. (2003). Foundations of sport and exercise psychology (3rd ed.). Champaign, IL: Human Kinetics.
- 11. Hardy, J. (2006). Speaking clearly: Acritical review of the self-talk literature. The Journal of Sport and Exercise, 7, 81-97.
- Harvey, T., Van Raalte, J., & Brewer, B. (2000). Relationship between self-talk and golf performance. International Sports Journal, 1, 84-91.
- Landin, D.K., & Macdonald, G. (1990). Improving the overheads of collegiate tennis players. Journal of Applied Research in Coaching and Athletics, 5, 85-100.
- Mallett, C.J., & Hanrahan, S.J. (1997). Race modeling: An effective cognitive strategy for 100 m sprinter? The Sport Psychologist, 11, 72-85.
- Rushall, B.S., Hall, M., Roux, L., Sasseville, J., & Rushall A.S. (1988). Effects of three types of thought content instructions on skiing performance. The Sport Psychologist, 2, 283-297.
- Rushall, B.S. (1984). The content of competition thinking. In W.F. Straub & J.M. Williams (Eds.), Cognitive Sport Psychology (pp 51-62). Lansing, NY: Sport Science Associates.
- 17. Hardy, J., Oliver, E., Tod, D. (2009). A framework for the study and application of self-talk within sport. In S. Mellalieu, S. Hanton (Eds.), Advances In Applied Sport Psycholog.
- Hatzigeorgiadis, A., Theodorakis, Y., Zourbanos, N. (2004). Self-talk in the swimming pool: the effects of self-talk on thought content and performance on water-polo tasks. Journal of Applied Sport Psychology, 16, 138-150.
- Hatzigeorgiadis, A., Zourbanos, N., Mpoumpaki, S., Theodorakis, Y. (2009). Mechanisms underlying the self-talkperformance relationship: the effects of motivational self-talk on self-confidence and anxiety. Psychology of Sport and Exercise, 10, 186-192.

- Hatzigeorgiadis, A., Zourbanos, N., Theodorakis, Y. (2007). The moderating effects of self-talk content on self-talk functions. Journal of Applied Sport Psychology, 19, 240-251.
- 21. Landin, D. (1994). The role of verbal cues in skill learning. Quest, 46, 299-313.
- 22. Perkos, S., Theodorakis, Y., & Chroni, S. (2002). Enhancing performance and skill acquisition in novice basketball players with instructional self-talk. The Sport Psychologist, 16(4), 368-383.
- 23. Chroni, S., Perkos, S., & Theodorakis. (2007). Function and Preference of Motivational and Instructional Self-talk for Adolecent Basketball Players.The Journal of Sport Psychology., 66, 88-101.
- 24. Theodorakis, Y., Weinberg, R., Natsis, P., Douma, I., & Kazakas, P. (2000). The effects of motivational versus instructional self-talk on improving motor performance. The Sport Psychologist, 14, 263-272.
- Lukas Linner (2011). The Effect of Instructional and Motivational Self-Talk on Self-Efficacy and Performance in Golf Players. (C-essay in sport psychology 61-90 ECTS credit) shool of social and health sciences. Halm stad University.
- 26. Athanasios kolovelonis, Marios Goudas, Irini Dermitzaki. (2010). The effects of instructional and motivational self talk on students motor task performance in physical education. Psycholo os Sport and Exercie(2010)1-6.
- Shahzad Tahmasebi Boroujeni^{*} and Mehdi . (2011). The Effect of Instructional and Motivational Self-Talk on Performance of Basketball's Motor Skill. Social and Behavioral Sciences, Volume 15, 2011, Pages 3113-3117.

3/7/2013