

Positive self-talk and its effect on learning the grab start skill in swimming and self-efficacy improvement

KHITAM MOUSA AY¹; RAMI HALAWEH²; MOHAMMAD ABU AL-TAIEB³
^{1,2,3}The University of Jordan, Faculty of Physical Education, Amman - JORDAN

Published online: December 25, 2013

(Accepted for publication November 29, 2013)

DOI:10.7752/jpes.2013.04090;

Abstract:

This study investigates positive self-talk and its effect on learning the grab start in swimming and self-efficacy improvement. Thirty male students from Physical Education College at the University of Jordan (M age = 19.4 SD =1.35). The subjects randomly divided into two groups, instructional self-talk group (n=15) and control traditional teaching group (n=15). Two measurements were taken; both groups were measured at the beginning (pre-test) in order to establish that all students started at the same level of technique and self-efficacy. After the pre-test of the grab start skill, all subject filled out the self-efficacy questionnaire (Theodorakis, 1996). After the completion of the intervention the final measurements were taken (post-test), to note the impact of the intervention on the student's performance in grab start skill in swimming and self-efficacy improvement. Statistical analysis included t-test for mean at pre and post test for the two groups, and t-test for mean at post test in the two groups. The results showed significant differences ($p < 0.05$) in post test between the two groups was in favor of the experimental group. In conclusion, learning a new sport skill through positive self-talk and physical practice enhanced learning and improved self-efficacy more than physical practice of the skill alone.

Key words: Positive self-talk, self-efficacy, learning, improvement, questionnaire.

Introduction

Self-efficacy has proven to be a more consistent predictor of behavioral outcomes than any other motivational construct (Graham & Weiner, 1996). According to Bandura (1994) a person's attitudes, abilities, and cognitive skills comprise what is known as the self-system. This system plays a major role in how we perceive situations and how we behave in response to different situations. Self-efficacy plays an essential part of this self-system, however, learning how to minimize stress and elevate mood when facing difficult or challenging tasks, people can improve their sense of self-efficacy. Students will persevere in the face of difficulties (Salanova et al., 2011) because they believe that they can draw upon the necessary cognitive and motivational resources to successfully execute study-related tasks (Stajkovic & Luthans, 1998).

In sport psychology, it is generally agreed that the performance of a skill is affected by what the individual brings to the task (Terry, 2004). Several factors influence students' performance, students' self-efficacy levels seem to be one of the strongest predictors of performance (Multon et al., 1991 & Robbins et al., 2004). Efficacious students generally perform well because they tend to try other options when they do not achieve their goals at first, they regulate their motivation and deal more effectively with problematic situations by persevering and staying confident that they will find solutions and be successful in the end (Bandura, 1997 & Diseth, 2011). Several studies have shown that self-efficacy is positively related to task performance. Bouffard-Bouchard (1990) compared manipulated levels of self-efficacy as regards their effects on cognitive task performance of the participants. Niemivirta and Tapola (2007) looked at changes in 'natural' levels of self-efficacy and their effects on task performance. In both experimental studies, higher levels of self-efficacy were related to higher levels of performance. George et al (1992) found that self-efficacy and anxiety (cognitive and somatic) to equally predict hitting performance in the first of a 9-game series.

Sport psychology researches support the use of mental skill training for improving sport performance. One of the most commonly used strategies is positive self-talk. It has been suggested that positive self-talk interventions and procedures are some of the most widely applied and effective strategies used by athletes (Hatzigeorgiadis et al., 2007; Park, 2000; Weinberg et al., 1992). It is the talking of somebody to himself either by talking loudly or from inside, in a way affects emotions and athletes' actions (Morris & Andersen, 2007; Hatzigeorgiadis et al., 2004; Johnson et al., 2004). Positive self-talk influences performance in a number of ways including the acquisition of skills, the development of self-confidence, and the self-regulation of habits.

Theodorakis et al (2000) extended this approach by examining the influence of instructional versus motivational self-talk on various motor skills. It was found that both self-talk strategies are effective on

improving performance, Perkos et al (2002) examined the effectiveness of a self-talk intervention program on basketball skills. The results revealed that instructional self-talk was effective for a dribbling and a passing test. Although mental training and self-talk are considered as sources of self-efficacy, few studies have been conducted on the effect of positive self-talk on self-efficacy.

This study investigates the psychological positive self-talk during technical instruction for learning the grab start skill in swimming and improvement of the student's self-efficacy. On the basis of the research literature, it was hypothesized that self-talk would improve block start skill learning and also student's self-efficacy.

The research will look at varsity, male students of physical education college at the University of Jordan where psychological skill in teaching program will be implemented by using positive self-talk for the purpose of learning grab start performance, and becoming familiar with the new swimming skill, and for the correction of some technical aspects required of the skill, students will repeat a series of drill through psychological positive self-talk. Swimming is one of the main subjects that taught for the students of physical education students at the University Jordan. Where there are many benefits associated with the ability to swim, swimming promotes excellent physiological fitness because it is a low-impact, aerobic activity. Individuals who can swim are more likely to be able to save themselves or others because they can perform basic swimming skills (Brenner, 2003). At its most basic level, learning how to swim can provide a great sense of accomplishment and personal satisfaction (Irwin et al., 2009). Therefore, good anticipation and swimming skills should be taught to the students.

Method

Participates and procedure

This study investigates positive self-talk and its effect on learning the grab start skill in swimming and self-efficacy improvement, the study sample consisted of 30 under graduate male students who were physical education college at the university of Jordan. (M age = 19.4 SD =1.35). All the subjects were students in swimming class level one, where they learn basic swimming skills. The students already learnt how to swim the free style and backstroke swimming, they were divided randomly into two groups, the experimental positive self-talk group ($n=15$) and the control traditional teaching group ($n=15$), the subjects volunteered to participate in the study. Permission to conduct this study was received from the head dean of faculty physical education at the University of Jordan. The students were told the purpose of the study, their rights as participants in the study and asked to sign a consent form. The instruments for measuring the different variables were administered in the pool to the chosen subjects. Participants were novices in grab start skill (they were taught the grab start in swimming for the first time). Two measurements were taken; both groups were measured at the beginning (pre-test) in order to establish that all students started at the same level of technique and self-efficacy. After the completion of the intervention the final measurements were taken (post-test), to note the impact of the intervention on the student's performance in grab start skill in swimming.

In the first training unit, after warming up in the water, subjects performed a set of three grab start (warm up). Afterwards, the evaluation test of the block start in swimming was conducted. The students performed five attempts, while in the mean time all the attempts of students were videotaped. The instruction that was given to all subjects before the attempts was: "do the best you can" The video camera was placed 4m distance. The next section, subjects were informed about their scores in the test, and they filled out the self-efficacy questionnaire (Theodorakis, 1996). The program consisted of eight sessions for 4-weeks, 60 mins a session for both groups. Subjects in experimental group received both physical practice of the skill and positive self-talk instructions (what is self-talk and how it works, instruction to use the self-talk for technique), this included educational session, physical practice, watching video recording of the skill (modeling) being performed by an elite swimmer, on weekly basis. Subjects in the control group received normal physical practice of the skill, this included learning the skill through physical practice and repeated execution of the skill, watching a video recording of the skill being performed (modeling) by an elite swimmer on weekly basis. After four weeks of intervention program there was a second measurement in grab start skill technique and the self-efficacy questionnaire was fulfilled once again by the subjects of the two groups.

Skill evaluation

In order to evaluate students' performance in grab start technique, they were videotaped while executing five attempts. The two researchers in this study are experts swimming instructors for fifteen years they observed the video and they evaluated the student's performance in five technical elements of the skill.

Self-efficacy evaluation

Self-efficacy is the measure of one's own ability to complete tasks and reach goals. Psychologists have studied self-efficacy from several perspectives, noting various paths in the development of self-efficacy; the

dynamics of self-efficacy, and lack thereof, in different settings; interactions between self-efficacy and self-concept; and habits of attribution that contribute to, or detract from, self-efficacy (Ormrod, 2006).

To evaluate self-efficacy, a common format for evaluating perceived self-efficacy (Theodorakis et al., 2000; Theodorakis, 1996) was used, subjects were informed on their scores in the grab start skill performance test and then indicated their performance of self-efficacy by responding to questions such as “In this specific test of the block start, I can achieve a score of.....” they indicated the magnitude of self-efficacy by replying to the question. “How certain you are?” on a 10-point scale anchored by absolutely certain (10) and uncertain (1). Subjects rated their self-efficacy estimations for performance levels ranging from 10 to 40. Cronbach’s alpha was 0.76, 0.79, and 0.81 for the two measurements, respectively.

Reliability of instruments

To examine the reliability of measurements a test-retest reliability method was used on a pilot study consist of 8 graduated physical education students out of this study sample, (Pearson, $r > 0.8$). Correlation Pearson’s analysis between two groups revealed that there was significant correlation between first and second measures in grab start technique ($r=0.95$) and self-efficacy questionnaire ($r=0.88$), which certify the reliability of measurements.

Results

Table 1 t-test, means and standards deviations of the experimental and control group in the baseline measurement.

Pre-test	group	m	sd	T	Prob
grab start skill	experimental	5.31	1.18	0.99	0.332
	control	5.73	1.00		
self-efficacy	experimental	33.417	2.629	0.47	0.624
	control	32.750	3.320		

Table (1) t-test results for checking the equivalence between the experimental and control group in the baseline measurement, t-test analysis for Independent samples revealed that there were no significant differences in grab start skill performance between the two groups for the baseline measure was ($p=0.332$) and global self-efficacy ($p=0.624$), indicates that the calculated t values were not significant when compared to critical t value 2.20 for the probability values supports that there were no significant differences between the two groups at 0.05 level which means that subjects started at the same level of learning and global self-efficacy, concluding the two groups are equivalent.

Table 2 t-test, means and standards deviations between the pre and post test for the experimental and control group in grab start skill.

variable	group	pre		post		t	
		m	sd	m	sd	Calculated	sig
grab start skill	experimental	5.31	1.81	8.19	0.55	8.87	S
	control	5.73	1.00	7.39	0.26	6.44	S

Table (2) the results indicate the values of means, standard deviations and calculated t between the pre and post tests for each group in grab start skill. The experimental (instructional self-talk group) pre-test mean 5.31 with standard deviation 1.81, while the post-test mean was 8.19 with standard deviation of 0.55 ; the calculated t value 8.87 was greater than the critical value 2.20 with 11 D.F at 0.05 level of significance indicating that mean differences were significant in favor of the post test. While the control (traditional teaching) pre-test mean was 5.73 with standard deviation of 1.00 while the post-test mean was 7.39 with standard deviation of 0.26 ; the calculated t value 6.44 was greater than the critical value 2.20 with 11 D.F at 0.05 level of significance indicating that mean differences were significant in favor of the post test for both experimental and control group. A significant difference was found between the pre and post-test scores for both experimental (instructional self-talk group) and control (traditional teaching) group in the grab start skill. The results indicated that subjects of both groups improved their performance in the grab start skill in swimming. Experimental group improved performance in the skill in relation to the control group; the increase score in the experimental group provides support for the effectiveness of instructional self-talk as a performance enhancing strategy. Furthermore, in line with the second hypothesis in this study, the combination of positive self-talk and physical practice enhanced learning the grab start skill and improved performance among experimental group subjects.

The control group subjects improved their performance between the pre- and post-test in the new swimming skill the grab start. The increased score caused by the duration of the training session, the repeated execution of the skill (physical practice) and the feedback information after modeling the swimming skill.

Table 3 t-test, means, and standards deviations between the pre and post test for the global Self- efficacy.

variable	group	pre		post		T	
		m	Sd	m	Sd	Calculated	sig
global efficacy	self- experimental	33.417	2.629	48.167	3.508	14.736	S
	control	32.750	3.320	34.333	2.528	5.344	S

Table (3) shows the values of means, standard deviations and calculated t between the pre and post tests in each group for the global Self-efficacy. the experimental (instructional self-talk) group pre test mean 33.417 with standard deviation of 2.629, while the post test mean was 48.167 with standard deviation of 3.508 ; the calculated t value 14.736 was greater than the critical value 2.20 with 11 D.F at 0.05 level of significance indicating that mean differences were significant in favor of the post test. While the control (traditional teaching) group pre test mean 32.750 with standard deviation 3.320, while the post test mean was 34.333 with standard deviation of 2.258 ; the calculated t value 5.344 was greater than the critical value 2.20 with 11 D.F at 0.05 level of significance indicating that mean differences were significant in favor of the post test . Significant differences were found between the pre- and post-test scores in global self-efficacy for both experimental and control group. Both groups had better self-efficacy. Significant differences were found between the experimental and control group in the post-test scores in self-efficacy, the significant were in favor of the experimental group. Furthermore, in line with the second hypothesis in this study, the instructional self-talk group showed a higher improvement than the control group in self-efficacy scores, suggesting that instructional self-talk should be more appropriate for self-efficacy improvement.

Discussion

The aim of this study was to investigate positive self-talk and its effect on learning the grab start skill and self-efficacy improvement of novice male students in physical education college at the university of Jordan. The results of this study supported the predictions. According to the first hypothesis, experimental group improved performance in grab start skill in swimming in relation to the control group, thus providing support for the effectiveness of positive self-talk as a performance enhancing strategy.

Furthermore, in line with the second hypothesis, the positive self-talk group showed a higher improvement than the control group in self-efficacy scores, suggesting that positive self-talk should be more appropriate for self-efficacy improvement. Results indicated that subjects of both groups improved the grab start skill in swimming, but subjects of the experimental (positive self-talk) group was much better than subjects of the control (traditional teaching) group. When teachers deal with novice students it is recommended to teach them to use positive self-talk strategy, so as to perform quickly and correctly the skills. In the present study, subjects of the experimental group claimed that positive self-talk possible helped them to focus their attention to the key points of the skill so as to manage to improve it.

In several studies positive self-talk was found to be associated with enhanced performance and optimal emotional states. In Perkos et al (2002) research revealed that self-talk helped basketball athletes to improve dribble and pass. Same results were found in Johnson, Hatzigeorgiadis et al (2004), and Theodorakis et al (2000) studies, in which an intervention using self talk was used. The results also showed that subjects of positive self-talk group had better scores in self-efficacy compared to the control group, which reflects that positive self-talk probably helps students to increase their self-efficacy.

Whereas, Johnson et al (2004), Hatzigeorgiadis et al (2007) and Morris and Andersen (2007) showed evidence in their researches which supported the relation between positive self-talk and self-efficacy improvement. Schuijers (2004) mentioned that the mental training positive self-talk enhanced the mental factors self-efficacy, reaching the right tension level in games, dealing with the environment and the explanation of performance, these factors in turn enhanced sport performance. In this area. Hardy et al (2001) mentioned that positive self talk can activate cognitions which enhance sport training and competitive performances. Self talk can aim at two domains: cognition and motivation. More studies should be conducted, concerning self-talk in various sports and different ages of physical education students and athletes.

Conclusion

The results of this study showed that positive self-talk enhanced learning a new swimming skill and improved self-efficacy to the novice students of physical education college at the university of Jordan, these conclusions encourage the use of positive self-talk as a strategy to facilitate learning, to enhance students performance and to improve their self-efficacy.

References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Bandura, A. (1994). Self-efficacy. V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior*, 4. New York: Academic Press.
- Bouffard-Bouchard, T. (1990). Influence of self-efficacy on performance in a cognitive task. *The Journal of Social Psychology*, 130, 353-363.
- Brenner, R. (2003). Prevention of drowning in infants, children, and adolescents. *Pediatrics*, 112(2), 440-445.
- Diseth, Å. (2011). Self-efficacy, goal orientations and learning strategies as mediators between preceding and subsequent academic achievement. *Learning and individual differences*, 21, 191-195.
- George, T., Feltz, D., & Chase, M. (1992). The effects of model similarity on self-efficacy and muscular endurance: A second look. *Journal of Sport and Exercise Psychology*, 14, 237-248.
- Graham, S., & Weiner, B. (1996). Theories and principles of motivation. In D.C. Berliner & R.C. Calfee (Eds.), *Handbook of educational psychology* (pp. 63-84). New York: Simon & Schuster Macmillan.
- Hardy, J., Hall, C., & Alexander, M. (2001). Exploring self-talk and affective states in sport. *Journal of Sports Sciences*. 19(7):469-475.
- Hatzigeorgiadis, A., Theodorakis, Y., & Zourbanos, N. (2004). Self-talk in the swimming pool: The effects of ST on thought content and performance on water-polo tasks. *Journal of Applied Sport Psychology*. 16:138-150.
- 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.
- Irwin, C., Irwin, R., Ryan, T., & Drayer, J. (2009). The mythology of swimming: Are myths impacting minority youth participation? *International Journal of Aquatic Research and Education*, 3, 10-23.
- Johnson, J., Hrycaiko, D., Johnson, G., & Hallas, J. (2004). Self-talk and female youth soccer performance. *The Sport Psychologist*. 18:44-59.
- Morris, T., & Andersen, M. (2007). Psychological intervention programs for reduction of injury in ballet dancers. *Research in sports medicine*. 15:13-32.
- Multon, K., Brown, S., & Lent, R. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology*, 38, 30-38.
- Niemivirta, M., & Tapola, A. (2007). Self-efficacy, interest, and task performance: Within-task changes, mutual relationships, and predictive effect. *Zeitschrift für Pädagogische Psychologie*, 21, 241-250.
- Ormrod, J. (2006). *Educational psychology: Developing learners* (5th ed.). Upper Saddle River, N.J.: Pearson/Merrill Prentice Hall.
- Park, J. (2000). Coping strategies used by Korean national athletes. *The Sport Psychologist*. 14:63-80.
- Perkoss, S., Theodorakis, Y., & Chroni, S. (2002). Enhancing performance and skill acquisition in novice basketball players with instructional self-talk. *The Sport Psychologist*. 16:368-383.
- Robbins, S., Lauver, K., Le, H., Davis, D., & Langley, R. (2004). Do Psychosocial and study skill factors predict college outcomes? *Psychological Bulletin*, 130, 261-288.
- Salanova, M., Llorens, S., & Schaufeli, W. (2011). "Yes, I can, I feel good, and I just do it!" On gain cycles and spirals of efficacy beliefs, affect, and engagement. *Applied Psychology: An International Review*, 60, 255-285.
- Schuijers, R. (2004). *Mentale training in de sport: toepassing en effecten*. Maarssen: Elsevier.
- Stajkovic, A., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, 124, 240-261.
- 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: 253-272.
- Terry, M. (2004). *Acquisition and Performance of Sports Skills*, University college, chicester, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chicester, UK.
- Theodorakis, Y. (1996). The influence of goals, commitment, self-efficacy and self satisfaction on motor performance. *Journal of Applied Sport Psychology*. 8:171-182.
- Weinberg, R., Grove, R., & Jackson, A. (1992). Strategies for building self-efficacy in tennis players: A comparative analysis of Australian and American coaches. *The Sport Psychologist*. 6:3-13.