



# The Effect of Reflective and Strategic Self-Talk on the Performance and Learning of Dart-Throwing Skills of Primary School Students

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## Abstract

**Introduction:** A review of the research literature showed that no research has been done on the effectiveness of interventions based on reflective self-talk in children.

**Objective:** The present study aims to investigate how primary school students' performance and acquisition of dart-throwing abilities were impacted by reflective and strategic self-talk.

**Methods:** With their parent's permission, 48 students, ages 10.27±1.06 on average, willingly participated in the retention and were divided into three groups of sixteen at random: reflective, strategic, and control self-talk. They participated in the acquisition, retention, and transfer stages. During the acquisition phase, the reflective group received self-talk instructions, challenges in dart-throwing, and matching exercises between their self-talk and challenges during the throw. The strategic self-talk group utilized training words before throwing darts, and they were requested to employ self-talk based on the situations they encountered.

**Results:** The findings demonstrated that the strategic self-talk group outperformed the reflective one in the last efforts at the acquisition stage and retention test. Nonetheless, the reflective self-talk group outperformed the strategic one on the transfer test by a wide margin. Strategic self-talk appears to have improved functional performance throughout the acquisition and memorizing phases by influencing attention.

**Conclusion:** However, reflective self-talk proved beneficial during the transfer test because of the obstacles and difficulties associated with applying the throwing skill.

**Keywords:** Strategic Self-Talk, Reflective Self-Talk, Sports, Athletic Performance, Child, Schools

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## 1. Introduction

Children begin talking to themselves almost as soon as they can speak. Self-talk is the term used to describe this phenomenon, and studies have shown that children utilize self-talk to control their thoughts and actions (1). This aids in children's intellectual (2), motor (3), and social and emotional competence (4). Youngsters who talk to themselves more often exhibit more emotional control, as well as greater effort and perseverance (5). Engaging in self-talk can improve individuals' performance in various situations by effectively balancing personal needs with the demands of the learning environment (6). Thus, this perspective holds that self-talk helps students collect tools to finish projects, stay focused, stay away from distractions, learn from mistakes, and make corrections.

The creation and use of predefined self-talk signals that may be applied to performance enhancement and self-regulation constitute strategic self-talk (7). Strategic self-talk can be articulated in an instructional or motivating way, but its content is predefined and its usage is required (8). Generally, several studies have demonstrated the value of strategic self-talk. These include Dematos et al., 2021 (9) (swimming endurance

performance), Blanchfield et al., 2014 (10) (exercise task), Hatzigeorgiadis, 2011 (11) (meta-analysis), Hatzigeorgiadis et al., 2018 (12) (cycling task under high environmental stress), Galanis et al., 2022 (13) (performance and attention in breathing settings), and Galanis et al., 2018 (14) (performance in distraction situations). Nevertheless, not all self-talk therapies need participants to employ established cue phrases. While organic self-talk targets athletes through the acquisition of metacognitive knowledge, strategic self-talk treatments (e.g., Hardy et al., 2015) (15) concentrate on the efficacy of repeating prepared self-talk signals. To summarize, the scenario is best represented by the new reflective self-talk intervention protocol, which involves first describing recurrent problematic circumstances in and around sport, teaching context-specific targeted self-talk and its efficacy, and then developing alternative expressions that can be employed in future situations (16). The novel reflective self-talk intervention and conventional strategic self-talk therapies vary in three key ways. Initially, as stated in reflective interventions, organic self-talk arises from athletic events and is always chosen by the individual herself; in contrast, the cue words utilized in strategic self-talk interventions are typically predetermined and



seldom chosen by the individual (17). Second, in strategic self-talk interventions, the moment of verbalizing the cue word is typically established before or during task execution. Participants must determine when to apply the self-instructions they have learned in previous sessions during reflective self-talk interventions. Third, targeted self-talk is not mandatory in reflective self-talk interventions, unlike the necessity of cue words in strategic self-talk interventions. Reflective self-talk interventions are still relatively new compared to the extensive research on cue word interventions. Therefore, the researcher seeks to investigate the impact of reflective and strategic self-talk on the performance and learning of elementary school students, considering the importance of self-talk in children and the characteristics of reflective self-talk.

According to (18), self-talk interventions in similar contexts, such as physical education (PE), might be built on studies on sports-based self-talk. Additionally, it has been demonstrated how children may develop new overhead-throwing motor abilities by using strategic self-talk (19). Also, the benefits of self-talk have been demonstrated for young children by demonstrating how using self-talk signals improved elementary school students' performance on soccer tasks (11,20). A study (21) analyzed how instructional and motivational self-talk affected fifth- and sixth-grade elementary school student's performance on the modified floor swimming test and the basketball backstroke. They concluded that while both forms of self-talk signals assist students in focusing better during the breaststroke test, motivational self-talk signals help them attempt more during the stroke test. Ultimately, it was determined that a key factor in the efficacy of self-talk is aligning the content of self-talk signals with task requirements. Furthermore, another study (3) examined how motivational and instructional self-talk signals affected elementary school PE students' performance on a novel and acquired handball task. They discovered that students' performance in such a task is enhanced by instructional and motivating self-talk signals. Consequently, the review of the related literature revealed a scientific vacuum in the area of reflective self-talk-based interventions for children, as there has not been any research on this topic's efficacy. Therefore, the current study was required to close the gap so that students could utilize self-talk interventions to enhance their performance and sports teachers could employ a range of self-talk interventions to support efficient learning in the classroom.

## 2. Method

### 2.1. Research Method and Design

The current study used a hybrid model with an in-group and out-group method.

### 2.2. Participants

The participants in this study were elementary school students. The effect size of 0.36, the number of groups, the frequency of measurement for seven groups, the power of 0.80, the alpha threshold of 0.05, and the total number of subjects were used to estimate the sample size in the G-power software. Thus, 48

students, whose ages ranged from 10.27 to 1.06 years on average, participated willingly and with parental permission. They were then divided into three groups of sixteen, consisting of reflective, strategic, and control self-talk.

### 2.3. Measures

This study was conducted in four phases. Initially, participants received a general education regarding the goal and proper form of dart throwing, as well as instruction in the appropriate and fundamental technique. During the training session, the participants were instructed to throw their darts during the acquisition phase using their dominant hand at a distance of 1.5 meters from the dartboard. The dart board was 1.22 meters high from the ground to the middle of the board (between the spots). They were required to throw fifty test darts, divided into five groups of ten throws each. Both the memorizing and transfer phases were carried out one day following the acquisition phase. During the retention phase, the participants threw 20 throws, comprising two groups of 10 trials from the same distance as the acquisition phase. During the transfer phase, which took place ten minutes later, they threw 20 darts, comprising two groups of 10 attempts from a distance of two meters. Each throw's score was determined by measuring the absolute inaccuracy in centimeters between the dart's center point and the point of contact (21).

### 2.4. Procedure

#### 2.4.1. Strategic Self-Talk Protocol

During the 50-throw dart acquisition phase, strategic self-talk was employed before the throw. Phrases like "thumb adjacent to the middle finger and pointer," "elbow bent to eye level," "concentrate on the movement of your finger and the correct position," "elbow bent and open," and "hand back to the ear" were utilized to draw attention to the proper dart execution.

#### 2.4.2. Reflective Self-Talk Protocol

The advice in this part was to assist athletes become more metacognitive and psychologically knowledgeable so they can recognize psychological obstacles and use self-talk to self-regulate. As a result, the group's participants were first given a thorough explanation of the various negative scenarios that might arise when throwing darts, including increased stress, diversions, and a decreased sense of confidence when a dart misses the dart board. Then, a deliberate self-talk phrase was selected for each of these scenarios in case the participant met it before or during dart throwing. For instance, he might tell himself "I can" if he lacks the essential self-confidence, "I can manage it" if he feels stressed and nervous, or "concentrate on the target" if he is feeling unfocused. Alternatively, if he believes that the dart-throwing method is not performing effectively, he may use "self-talking words" like "elbows to eye level" to address the technical problem.

It is important to note that participants' usage of self-talk phrases was voluntary and dependent on their circumstances. The protocol of self-talk was based on the recommendations of (22).

Throughout the whole study process, the control group followed the same steps as the other research groups and did not engage in any form of

psychological intervention or self-talk.

2.4.3. Manipulation Check Protocol

In this protocol, group self-talk is covered. Indeed, according to Hardy (2005), this method guarantees the accuracy of the experimental contexts the researcher set. The development of the procedure was grounded in the research conducted by Hatzigeorgiadis, et.al (2008). Items included (a): Did you use self-talk each time before throwing the dart? 1 for never to 10 for always; b) How much did you utilize it for dart throwing? 1 for never to 10 for always; and (c) do you believe self-talk helps improve your dart throwing? 10 (very helpful) to 1 (not at all). The inspection protocol's findings revealed that the usage of strategic self-talk has a mean and standard deviation of 8.77±2.2, reflective self-talk of 7.14±1.12, and without self-talk in the control condition of 1.35±0.29.

2.5. Statistical Method

The data in this section were described using the mean and standard deviation. The data analysis employed in the acquisition stage included two-factor ANOVA (category × group) with repeated measurements in the category factor, and the data in the retention and transfer stage involved one-way ANOVA at the 0.05 level using SPSS version 26 software.

3. Results

The average age of the participants was 10.27±1.06 years and their gender were male. A two-factor analysis of variance in Table 1 revealed a significant main impact of the category on dart throwing performance ( $\eta=0.87$ ,  $p=0.001$ ,  $F(4,180)=3.04$ ). Furthermore, there was

a significant main impact of the group on dart throwing performance ( $\eta=0.22$ ,  $p=0.004$ ,  $F(2, 45)=6.37$ ). Finally, there was a significant interaction between the group and class effects on dart-throwing performance ( $\eta=2.45$ ,  $p=0.001$ ,  $F(8,180)=18.85$ ). Simplifying the interaction effects' findings revealed that there was no significant difference in the first group's ( $P=0.224$ ), second group's ( $P=0.487$ ), and third group's ( $P=0.075$ ) performance. In the fourth category, the reflective ( $p=0.040$ ) and strategic self-talk groups outperformed the control group ( $p=0.001$ ), and the strategic group outperformed the reflective group ( $p=0.031$ ) by a significant margin. In the fifth category, the reflective ( $p=0.013$ ) and strategic self-talk groups performed better than the control group ( $p=0.001$ ), and the strategic group's performance outperformed the reflective group by a significant margin ( $p=0.013$ ). One-way analysis of variance findings for the retention test indicated that there is a significant difference between the three research groups' approaches to learning how to throw darts ( $\eta=0.24$ ,  $p=0.002$ ,  $F(2,45)=7.27$ ). The results of the follow-up test demonstrated that while reflective ( $p=0.005$ ) and strategic ( $p=0.005$ ) self-talk improved the acquisition of dart-throwing skills, there was no significant difference in the throwing abilities of the two groups-strategic and reflective-in the retention test ( $p = 1.000$ ). The one-way analysis of variance results in the transfer test indicated a significant difference in the three research groups' learning of how to throw darts ( $\eta=0.40$ ,  $p=0.001$ ,  $F(2,45)=15.34$ ). Based on the findings of the follow-up test, learning how to throw darts was enhanced by reflective and strategic self-talk ( $p=0.001$ ) and  $p=0.020$  in the former case, and by  $p=0.023$  in the latter case compared to the strategic self-talk in the transfer test.

**Table 1.** Results of Variance Analysis.

Stage	Source	SS	df	MS	F	P-Value	$\eta^2$
Acquisition	Category	112.48	4	28.12	6.304	0.001	0.87
	Category×Group	13.92	8	1.74	18.54	0.001	0.45
	Error	16.61	180	0.092			
	Group	36.10	2	18.05	6.37	0.004	0.22
Retention	Error	127.5	45	2.83			
	Group	6.25	2	3.12	7.27	0.002	0.24
Transfer	Error	19.33	45	0.430			
	Group	14.04	2	7.02	15.34	0.001	0.40
	Error	20.59	45	0.458			

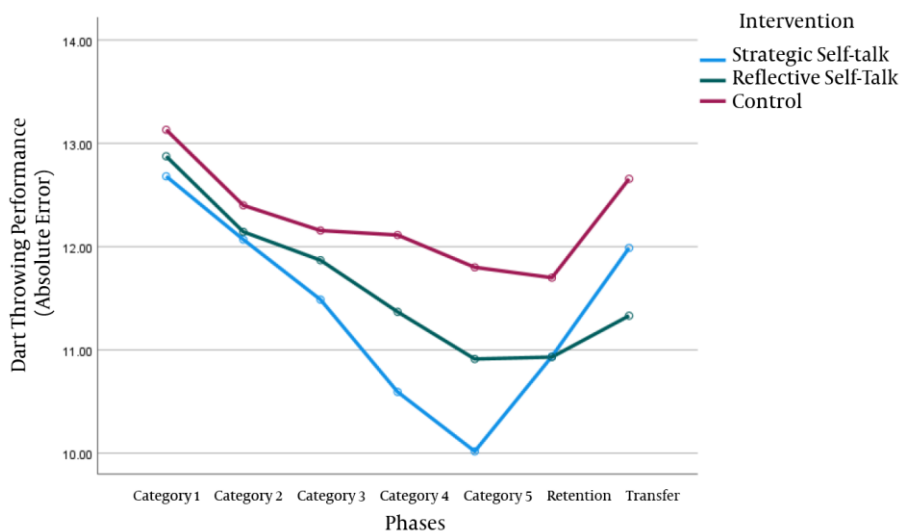


Figure 1. Dart Throwing Performance (Error) in Three Stages of Acquisition, retention and Transfer.

#### 4. Discussion

The manipulation verification procedure was used to guarantee the formation of self-talk situations. The reflective self-talk group's students reported that they used adequate self-talk throughout the skill acquisition process, but in this particular setting, reflective self-talk students used less self-talk. This is because reflective self-talk is voluntary, but strategic self-talk requires participants to use self-talk. The findings of this study align with the theoretical frameworks put out by Latinjak et al. (2019) in that they indicate that in reflective self-talk interventions, participants are required to decide when to use the self-teachings that were covered in earlier sessions. Targeted self-talk is optional in the context of reflective self-talk interventions, whereas the use of signal words is required in strategic self-talk interventions. As a result, reflective self-talk interventions may result in a decrease in the use of targeted self-talk (16).

The self-talk protocol's internal validity is supported, on the whole, by the results of the self-talk manipulation. The acquisition phase findings demonstrated that both reflective and strategic self-talk enhanced performance. In the final categories, dart-throwing performance was positively correlated with strategic self-talk as opposed to reflexive self-talk. The results of this study support the benefit of strategic self-talk and are in line with the findings of previous studies (9,10,12,13), on the efficacy of these two self-talk methods during the acquisition phase. The interpretation of this finding suggests that attention management plays a crucial part in the facilitation of strategic self-talk, which is the foundation of self-control. The degree of self-control one possesses may be used to gauge their effectiveness in performance. According to experimental research, those who struggle to focus on relevant stimuli are more likely to become distracted (23). The benefits of self-talk have been discussed, including its ability to enhance attentional processes (24) and manage internal and external distractions. Thus, it appears from the current research that educational strategic self-talk has improved dart-throwing performance by enhancing focus and decreasing distraction. Theodorakis et al. (2000) noted that educational self-talk is more beneficial for fine and precise activities like throwing darts, but motivational self-talk is more beneficial for gross motor abilities (requiring strength and endurance). This observation is consistent with the categories of motivational and educational self-talk. The matching hypothesis was presented by Hardy (2009), stating that motivational self-talk is more efficient for activities requiring strength and endurance, while educational self-talk is more effective for tasks requiring precision and time (17). Participants were able to identify painful events and develop original self-talk expressions through the reflective intervention. Literature reviews have demonstrated the advantages of this strategy since athletes take greater responsibility for their interventions (25). They also appear to have connected self-talk to a good experience and have reinforced this connection with practice, considering that reflective self-talk contains motivational elements. Thus, reflective self-talk may raise emotional arousal, which in turn may raise effort and enhance performance (26). Particularly when contrasted with the large amount of research that has already been done on signal word interventions,

reflective self-talk interventions are still in their infancy. On the contrary, several therapeutic paradigms, including cognitive behavioral modification and rational emotive behavior therapy (REBT), have been effectively used in the context of sports (25,27), providing indirect support for the efficacy of reflective self-talk therapies in sports. Both reflective self-talk interventions and cognitive-behavioral methods aim to uncover emotionally charged automatic ideas in athletes, increase their awareness of internal dialogue and organic self-talk, and, in the event of inefficiency, replace these thoughts with applied self-learning (22).

The current study's findings demonstrated that improving one's retention and strategic self-talk at the end of the acquisition phase improved one's dart-throwing ability; which no similar research has been conducted in this field. Consequently, self-talk is a more behavior-oriented procedure than reflective interventions that involve more complicated mental processes since it is a technique meant to communicate a message by indicators that are predefined and employed based on a specified plan. To put it succinctly, strategic self-talk refers to the use of prearranged and trained self-talk signals intended to elicit a certain response and, consequently, fulfill a particular function, such as triggering mechanisms that enhance performance or help achieve self-regulation objectives. Sports performance is impacted by strategic self-talk because it directs attention. Approaches that address the restricted capacity of attention might justify the function of attention, specifically, the efficiency of attention in challenging settings, taking into account both the physical demands and the importance of attention in sports. Distractions of any kind, internal or external, are minimized, and the processing of relevant signals is constrained (28). Strategic self-talk signals can be useful in preventing or lessening the severity of distracting stimuli, protecting attention resources in the process. Additionally, replenishing attentional resources can assist in mitigating the negative consequences of weariness. These characteristics might lessen the negative impact that unfavorable conditions have on attention processes and, in turn, performance. To promote learning and enhance performance, researchers employ educational self-talk signals in strategic self-talk interventions (Latinjak, et al., 2010). Intrigued by the possible use of self-talk signals, these researchers tried to demonstrate that acquiring skills and improving athletic performance could be achieved by the repeated use of instructional signal words. Meanwhile, other researchers have expressed rather different views about the function of educational self-talk signals in learning and performance.

The current study's findings demonstrated that, in the transfer test, reflective self-talk, as opposed to strategic self-talk, resulted in better dart-throwing skill acquisition. That is, reflective self-talk performed better under conditions of task complexity. This finding may be explained by stating that reflective self-talk interventions, in whatever form, are invariably athlete-focused. These abilities, in turn, facilitate the development of non-judgmental self-awareness, which is followed by logical and experiential reasoning to challenge, adjust, and replace self-regulatory strategies. It is said to be beneficial for raising awareness and sharpening one's intellect when addressing problems (Ninan, 2008). According to

Latinjak et al. (2016), reflective self-talk interventions enhance sensitivity to problem-related psychological abilities and promote awareness of psychological issues, both of which aid in self-regulation. Given that the task's complexity has increased the obstacles throughout the transition period, it appears that students who engaged in reflective self-talk were better equipped to handle these worries and challenges and were able to adjust to changing circumstances during the test. They also outperformed students who engaged in strategic self-talk by retaining self-confidence, increasing motivation, and managing their emotions. For instance, the positive effects of reflective interventions on participants' motivation, emotions, and self-confidence both inside and outside of the domain of athletic life has been well established (22). Developing the "inner coach" is the particular goal of reflective self-talk interventions. To help practitioners become more effective and self-directed self-talkers beyond the duration of the intervention utilized, they, therefore, concentrate on strengthening metacognitive abilities (e.g., planning, monitoring, and evaluating thoughts) (29). One of the present study's limitations is the children's weak information processing, which required the researcher to continually remind them of self-talk phrases. Furthermore, as dart throwing was done in a school setting, the ambient aspects of the institution could have had an impact on the participants' performance. This study was limited to male students. Finally, it is recommended that future researchers investigate reflective self-talk at different educational levels and incorporate self-talk as circumstances and consequences in their studies.

#### 4.1. Conclusions

The results of this study emphasize the positive effect of strategic and reflective self-talk on motor performance and learning. But the important issue of this research was to conduct it in school children, because self-talk studies in the field of physical education, especially at this age, are very limited. Therefore, physical education teachers in schools are recommended to use this psychological skill in teaching movement skills.

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#### Footnotes

**Authors' Contribution:** Study concept and design: DU. U; S. R. Acquisition of data: S. R. Analysis and interpretation of data: DU. U. Drafting of the manuscript: DU. U; S. R. Critical revision of the manuscript for important intellectual content: DU. U. Statistical analysis: DU. U. Administrative, technical, and material support: S. Study supervision: DU. U; S. R.

**Conflict of Interests:** The researcher confirms that there is no conflict of interests in this study with any participant.

**Data Availability:** The data that support the findings of this study are openly available upon request from the corresponding author.

**Ethical Approval:** Approval for this study was obtained from the university. The author confirms that all steps . The requirements of this study comply with ethical guidelines. Participants were informed about the characteristics of the study and gave written informed consent.

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#### References

1. Thibodeaux J, Bock A, Hutchison LA, Winsler A. Singing to the self: Children's private speech, private song, and executive functioning. *Cog Dev*. 2019;**50**:130-141. <https://doi.org/10.1016/j.cogdev.2019.04.005>
2. Thomaes S, Tjaarda IC, Brummelman E, Sedikides C. Effort self-talk benefits the mathematics performance of children with negative competence beliefs. *Child Dev*. 2020;**91**(6):2211-2220. [PubMed ID: 31845326]. [PubMed Central ID: PMC7754294]. <https://doi.org/10.1111/cdev.13347>
3. Zourbanos N, Hatzigeorgiadis A, Bardas D, Theodorakis Y. The effects of self-talk on dominant and nondominant arm performance on a handball task in primary physical education students. *Sport Psychol*. 2013;**27**(2):171-176. <http://dx.doi.org/10.1123/tsp.27.2.171>
4. Ashdown DM, Bernard ME. Can explicit instruction in social and emotional learning skills benefit the social-emotional development, well-being, and academic achievement of young children? *Early Child Edu*. 2012;**39**:397-405. <http://dx.doi.org/10.1007/s10643-011-0481-x>
5. Wang C, Shim SS, Wolters CA. Achievement goals, motivational self-talk, and academic engagement among Chinese students. *Asia Pac Educ Rev*. 2017;**18**:295-307. <http://dx.doi.org/10.1007/s12564-017-9495-4>
6. Zimmerman BJ, Schunk DH. Self-regulated learning and academic achievement: A Vygotskian view. In *Self-Regulated Learning and Academic Achievement* (pp. 222-247). Routledge. 2013. [http://dx.doi.org/10.1207/s15326985sep2501\\_2](http://dx.doi.org/10.1207/s15326985sep2501_2)
7. Latinjak AT, Hatzigeorgiadis A. The knowledge map of sport and exercise psychology: An integrative perspective. *Front Psychol*. 2021;**12**:661824. [PubMed ID: 34220635]. [PubMed Central ID: PMC8242169]. <https://doi.org/10.3389/fpsyg.2021.661824>
8. Walter N, Nikoleizig L, Alfermann D. Effects of self-talk training on competitive anxiety, self-efficacy, volitional skills, and performance: An intervention study with junior sub-elite athletes. *Sports*. 2019;**7**(6):148. [PubMed ID: 31248129]. [PubMed Central ID: PMC6628429]. <https://doi.org/10.3390/sports7060148>
9. De Matos LF, Bertollo M, Stefanello JMF, Pires FO, Da Silva CK, Nakamura FY, Pereira G. Motivational self-talk improves time-trial swimming endurance performance in amateur triathletes. *Int J Sport Exe Psychol*. 2021;**19**(3):446-459. <http://dx.doi.org/10.1080/1612197X.2020.1717576>
10. Blanchfield AW, Hardy J, De Morree HM, Staiano W, Marcora SM. Talking yourself out of exhaustion: the effects of self-talk on endurance performance. *Med Sci Sport Exe*. 2014;**46**(5):998-1007. [PubMed ID: 24121242]. <https://doi.org/10.1249/mss.0000000000000184>
11. Hatzigeorgiadis A, Zourbanos N, Galanis E, Theodorakis Y. Self-talk and sports performance: A meta-analysis. *Perspectives on Psychological Science*, 2011;**6**(4):348-356. [PubMed ID: 26167788]. <https://doi.org/10.1177/1745691611413136>
12. Hatzigeorgiadis A, Bartura K, Argiropoulos C, Comoutos N, Galanis E, D Flouris A. Beat the heat: Effects of a motivational self-talk intervention on endurance performance. *Journal of Applied Sport Psychology*, 2018;**30**(4):388-401. <http://dx.doi.org/10.1080/10413200.2017.1395930>
13. Galanis E, Hatzigeorgiadis A, Comoutos N, Papaioannou A, Morres

- ID, Theodorakis Y. Effects of a strategic self-talk intervention on attention functions. *International J Sport Exe Psychol.* 2022;**20**(5):1368-1382. <http://dx.doi.org/10.3390/su14127046>
14. Galanis E, Hatzigeorgiadis A, Comoutos N, Charachousi F, Sanchez X. From the lab to the field: Effects of self-talk on task performance under distracting conditions. *Sport Psychol.* 2018;**32**(1):26-32. <http://dx.doi.org/10.1123/tsp.2017-0017>
  15. Hardy J, Begley K, Blanchfield AW. It's good but it's not right: instructional self-talk and skilled performance. *J Appl Sport Psychol.* 2015;**27**(2):132-139. <http://dx.doi.org/10.1080/10413200.2014.959624>
  16. Latinjak AT, Hardy J, Comoutos N, Hatzigeorgiadis A. Nothing Unfortunate About Disagreements in Sport Self-Talk Research: Reply to Van Raalte, Vincent, Dickens. 2019. *Sport Exe Perform Psychol.* **8**(4):379-386. <http://dx.doi.org/10.1037/spy0000184>
  17. Hardy J, Oliver E, Tod D. A framework for the study and application of self-talk within sport. In *Advances in applied sport psychology* (pp. 47-84). Routledge. 2008.
  18. Hardy J, Comoutos N, Hatzigeorgiadis A. Reflections on the maturing research literature of self-talk in sport: Contextualizing the special issue. *Sport Psychol.* 2018;**32**(1):1-8. <http://dx.doi.org/10.1123/tsp.2017-0141>.
  19. Hardy J, Hall CR, Hardy L. Quantifying athlete self-talk. *J Sports Sci.* 2005 Sep;**23**(9):905-17. [PubMed ID: 16195042]. <https://doi.org/10.1080/02640410500130706>
  20. Hatzigeorgiadis A, Zourbanos N, Goltsios C, Theodorakis Y. Investigating the functions of self-talk: The effects of motivational self-talk on self-efficacy and performance in young tennis players. *Sport Psychol.* 2008;**22**(4):458-471. <http://dx.doi.org/10.1123/tsp.22.4.458>
  21. Theodorakis, Yannis, Robert Weinberg, Petros Natsis, Irini Douma, and Panagiotis Kazakas. "The effects of motivational versus instructional self-talk on improving motor performance." *The sport psychologist.* 2000;**14**(3):253-271. <http://dx.doi.org/10.1123/tsp.14.3.253>
  22. Latinjak, Alexander Tibor, Raquel Font-Lladó, Nikos Zourbanos, and Antonis Hatzigeorgiadis. "Goal-directed self-talk interventions: A single-case study with an elite athlete." *The Sport Psychologist.* 2016;**30**(2):189-194. <http://dx.doi.org/10.1123/tsp.2015-0120>
  23. Latinjak AT, Torregrosa M, Renom J. Studying the effects of self-talk on thought content with male adult tennis players. *Percept Mot Skills.* 2010 Aug;**111**(1):249-60. PubMed ID: 21058604]. <https://doi.org/10.2466/02.05.28.pms.111.4.249-260>
  24. Hardy, James, Ross Roberts, and Lew Hardy. "Awareness and motivation to change negative self-talk." *The Sport Psychologist.* 2009;**23**(4):435-450. <http://dx.doi.org/10.1123/tsp.23.4.435>
  25. Zourbanos N. The use of instructional and motivational self-talk in setting up a physical education lesson. *Journal of Physical Education, Recreation & Dance.* 2013;**84**(8):54-58. <http://dx.doi.org/10.1080/07303084.2013.827555>
  26. Kolovelonis A, Goudas M, Dermitzaki I. The effects of instructional and motivational self-talk on students' motor task performance in physical education. *Psychology of sport and exercise.* 2011;**12**(2):153-158. <http://dx.doi.org/10.1016/j.psychsport.2010.09.002>
  27. Emanuel M, Jarus T, Bart O. Effect of focus of attention and age on motor acquisition, retention, and transfer: a randomized trial. *Physical therapy.* 2008;**88**(2):251-260. [PubMed ID: 18042657]. <https://doi.org/10.2522/ptj.20060174>
  28. Latinjak AT, Hernando-Gimeno C, Lorido-Méndez L, Hardy J. Endorsement and constructive criticism of an innovative online reflexive self-talk intervention. *Frontiers in psychology.* 2019;**10**, 447825. [PubMed ID: 31447746]. [PubMed Central ID: PMC6691160]. <https://doi.org/10.3389/fpsyg.2019.01819>
  29. Englert C, Bertrams A, Furley P, Oudejans RR. Is ego depletion associated with increased distractibility? Results from a basketball free throw task. *Psychology of sport and exercise.* 2015;**18**:26-31. <http://dx.doi.org/10.1016/j.psychsport.2014.12.001>