

Self-Talk in Sports: Definitions, Roles, Applications

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Abstract

Self-talk, as an important part of psychological adjustment, plays a crucial role in sports. This article defines the concept and classification of self-talk, emphasizing its two functional dimensions: guidance and motivation. Subsequently, in combination with existing research, it explores the positive impacts of self-talk on motor performance, including enhancing motivation, stabilizing emotions, regulating anxiety, and optimizing cognitive processes. The effects of self-talk vary by sport type, age group, and gender. For example, open-skill sports benefit more from short and clear guiding self-dialogue, while closed-skill sports rely more on encouraging language. Teenage athletes are more susceptible to encouraging language, while adult athletes gain greater benefit from guiding language under high technical requirements. Female athletes generally use self-talk more frequently than male athletes, especially before and during competitions. Further intervention research shows that systematically integrating self-talk into training enhances athletes' performance in competitions, especially when performing complex skills and high-pressure situations. While there is a large amount of evidence to prove the effectiveness of self-talk, existing research still has limitations such as methodological constraints, insufficient cross-cultural applicability, and unclear neural mechanisms. Future research should improve measurement tools and explore neural mechanisms, cross-cultural comparisons, and individualized differentiated interventions. Overall, self-talk, as a psychological training strategy, holds significant theoretical value and practical significance, and has broad prospects for enhancing athletic performance and promoting the development of sports psychology.

Keywords

Self-Talk, Sports Psychology, Age Differences, Gender Differences, Athletic Performance

1. Introduction

Self-talk refers to the language individuals use to regulate their feelings and adjust their actions. It can be conscious or unconscious, positive or negative, and plays a major role in shaping mindset. Recently, its increasing application in competitive sports has gained more attention. Self-talk assists athletes in controlling their emotions, enhancing confidence, and improving skill learning. Many studies have already confirmed that self-talk positively affects performance across diverse sports. This paper will discuss existing research and further expound on the function and value that self-talk has towards improving sports performance.

2. The Definition and Classification of Self-Talk

Self-talk is the process by which people consciously or instinctively regulate their emotions and direct their behavior through internal speech (Bülbül & Akyol, 2020). It can manifest either aloud or silently within the mind, and is widely regarded as a multidimensional process central to self-regulation and psychological growth. While self-talk is not a fragment of thought, it profoundly influences social functioning and mental development. Its intrinsic ability—providing both guidance and motivation—makes it particularly valuable in sports, as an essential psychological skill that enhances performance.

In sports psychology, self-talk serves two primary functional dimensions. The first one is called Instructional Self-Talk, which helps athletes focus on technical aspects of their movements and perform tasks with precision. Athletes usually utter specific words or phrases tied to skill execution and technical accuracy, especially during high-stakes moments in sports that require complex movements, such as gymnastics or archery. The second dimension is the Motivational Self-Talk which aims to boost confidence, maintain effort, and manage emotions. Positive affirmations or encouraging statements can elevate mood, sustain long-term training motivation, and bolster resilience in high-pressure situations, such as competitions requiring explosive power (Hardy, 2006). Self-talk takes many forms—positive or negative, automatic or intentional, task-related or non-task-related. Positive self-talk typically promotes performance enhancement, while negative variations can hinder focus and undermine results.

3. Self-Talk and Sports Performance

In sports psychology, the primary aim of self-talk is to optimize athletic performance by bolstering motivation, stabilizing emotions, regulating anxiety, and refining cognitive processes. Research illustrates that self-talk influences athletes' psychological states and competitive results. A study of 70 shooting athletes analyzed the frequency and type of their self-talk usage through questionnaires followed by shooting trials under high-pressure conditions. Those who employed positive, task-specific self-talk consistently outperformed their peers by exhibiting greater composure and achieving stable scores in stressful situations (Park et al., 2020). This finding underscores self-talk's critical contribution in sports, necessitating precision

and mental steadiness.

Another study conducted by [Fritsch et al. \(2022\)](#) focused on using predetermined motivational phrases to regulate athletes' cognitive and emotional states during high-pressure tasks. Participants repeatedly employed affirmative phrases such as "Come on, you've got this" before and during competitions. The results highlighted that athletes utilizing this strategy maintained emotional stability under stress and demonstrated sound decision-making abilities. This research reinforces the idea that self-talk not only enhances motivation but also serves as a powerful cognitive tool for mental clarity and tactical execution under pressure. A recent study further supports these findings. Synthesizing 47 controlled trials, [Tod et al. \(2023\)](#) reported a moderate effect size ($g = 0.42$) of self-talk on performance, with instructional self-talk most effective for precision tasks and motivational self-talk enhancing strength and endurance.

However, persistent negative self-talk can impose costs. Harsh self-criticism or defeatist inner dialogue increases anxiety, impairs attentional control, and reduces confidence ([Hardy, 2006](#); [Tod et al., 2023](#)). Thus, the balance and content of self-talk are critical to its effectiveness.

Still, factors such as sport type, age, and gender influence how athletes engage in self-talk and its effectiveness. Future studies addressing broader populations across diverse sports contexts will be essential to uncover universal mechanisms alongside distinctions within self-talk strategies. Therefore, research still needs to be conducted in a broader context of populations and sports to reveal the differences and universality of the mechanism of self-talk.

4. Factors Influencing the Effects of Self-Talk on Athletic Performance

4.1. The Impact of Self-Talk on Different Types of Sports

Open-skill sports occur in dynamic, unpredictable environments (e.g., soccer, basketball), requiring adaptation to external factors. Closed-skill sports occur in stable, predictable settings (e.g., gymnastics, archery), where movements follow structured patterns.

A study of how self-talk affects athletic performance across different types of sports found that its impact varies greatly depending on the type of sport. In open-skill events, where physical energy consumption is high, and the pace is extremely fast, brief and specific directive self-talk can greatly enhance an athlete's reaction ability and on-the-spot state ([Hatzigeorgiadis et al., 2014](#)). In contrast, in closed-skill events, where the sports environment is relatively stable, athletes' use of encouraging self-talk helps to boost their emotions and enhance their confidence. In a study of college softball players who completed gross motor skills tasks (hitting) and fine motor skills tasks (pitching), participants were divided into three groups: the guiding self-talk group, the encouraging self-talk group, and the control group. The results show that in gross motor skills tasks, encouraging self-talk is the most effective; in fine skills tasks, guided self-talk works best ([Memorial University of](#)

Newfoundland, 2017). Therefore, the positive effect of self-talk on sports performance is not singular. Instead, appropriate self-talk methods should be adopted based on specific sports events to achieve the maximum benefit.

4.2. The Differences in Self-Talk between Teenage and Adult Athletes

Ages influence the content, function and effect of self-talk. In one study, 48 teenage basketball players ($M \approx 15$ years) and 52 adult players ($M \approx 21$ years) completed skill tests in dribbling, passing, and shooting. It was found that the specific effects of the two types of self-talk on exercise vary by age and task type. Adult athletes showed a more significant improvement in guiding self-talk in tasks with higher technical requirements. When under great pressure, teenage athletes relied more on dynamic self-talk to enhance their confidence and motivation (Dana, 2022). Overall, teenage athletes are more suitable for encouraging self-talk when performing gross movements, while technical movements need to be used in combination with guiding ones. Similarly, another study targeting badminton beginners aged 10 to 12 found that dynamic self-talk significantly enhanced self-confidence and alleviated anxiety, which was helpful for them to better complete gross movements and basic skills practice (Hidayat et al., 2023). Compared with adults, teenagers have stronger emotional fluctuations and are more sensitive to encouraging language. Thus, it shows that designing targeted self-talk methods that also take age characteristics into account can help athletes improve their athletic performance to the greatest extent.

4.3. The Influence of Gender Differences on Self-Talk

The gender differences among athletes also influence self-talk. One study examined the differences in athletes' self-talk based on gender in endurance runners. The results show that gender has no significant influence on the practicality of athletes' self-talk. However, compared with men, female athletes use the self-talk strategy more frequently before the competition. They rely more on language-based psychological adjustment strategies than male athletes. Questionnaires conducted before and after the competition showed that the average overall psychological preparation score of female athletes who had received psychological training was significantly higher than that of those who had not been exposed to training (Kelemen et al., 2024). A larger survey pointed out that men and women generally have differences in self-talk. For 233 athletes of different sports and genders, they developed a self-talk scale to measure the frequency of self-talk among athletes before, during, and after the competition (Bülbül & Akyol, 2020). The results showed that the self-talk frequency of female athletes in the three stages was significantly higher than that of male athletes, and it is more susceptible to internal assessment and emotional fluctuations ($p < 0.05$).

5. Self-Talk Intervention Strategies in Training

To maximize the benefits of self-talk for improving sports performance, scientists

have proposed incorporating self-talk training into regular sports practice, in order to apply it in real competitions. They emphasized that self-talk intervention should be organized and purposeful rather than spontaneous, and athletes should be taught professionally and scientifically. One study examined self-talk in adolescent swimmers who underwent self-talk training with a control group. The first group took self-talk training for 10 weeks, where they received lessons on what self-talk is, how to use it, and how to practice it next. The coach would first inform everyone of today's training goals, then assign each person the "key words" or short sentences to use that day, and also stick these words on the edge of the swimming lane so that they can see them at any time. In the first two weeks, athletes mainly practiced in motivational self-talk, such as "Come on" and "I can do it". In the following weeks, they began to use instructive self-talk, reminding themselves to correct their swimming postures and improve their techniques. In the final few weeks, the athletes used both and prepared for the competition, creating their self-talk plans before the competition. The results show that the improvement in the performance of the first group is greater than that of the control group, which reflects that professionally trained self-talk has a significant effect on athletes (Hatzigeorgiadis et al., 2014).

The 10-week duration reflects common sport psychology program lengths (8 - 12 weeks), which allow sufficient time for habit formation and measurable performance gains (Hatzigeorgiadis et al., 2014). Tailoring interventions to athletes' developmental levels is crucial: young athletes are more sensitive, while adult, professional athletes usually can receive more technical and concentrated guidance.

6. Prospects for Future Research on Self-Talk

While there is substantial evidence supporting the effectiveness of self-talk in enhancing sports performance, research in this area still encounters notable limitations and requires further exploration. One primary challenge lies in the methodology, particularly the reliance on self-reported questionnaires to measure self-talk. While these scales have demonstrated reliability, they remain susceptible to issues such as recall bias, variations in linguistic expression, and social desirability effects. Moreover, much of the existing research has concentrated on athletes from Europe and North America, with comparatively limited studies involving athletes from Asia, Africa, and Latin America. This regional imbalance restricts the theoretical development and global applicability of findings.

Another significant limitation is the lack of a comprehensive understanding of the psychological and neural mechanisms underlying self-talk. Most studies focus on behavioral outcomes, leaving the neurological foundations—such as how self-talk influences attention, activates executive control, or mitigates negative cognitive processes—largely unexplored. Future research could benefit from incorporating advanced neuroimaging techniques like fMRI and ERP to uncover the effects of self-talk on key brain regions such as the prefrontal cortex and cingulate gyrus. Additionally, many studies fail to account for the nuanced interplay be-

tween individual differences and situational factors. In real-world competitive environments, a host of psychological and contextual variables—including an athlete's personality traits, levels of self-esteem, prior competition experience, event difficulty, opponent strength, and audience pressure—can all impact the actual effectiveness of such strategies. This highlights the need for tailored training approaches that consider variables like gender, age, psychological states, and specific competition contexts to optimize performance.

Although self-talk has shown significant progress as a psychological intervention strategy in both theoretical research and practical applications, further advancements are needed in areas such as improving measurement tools, deepening mechanism-related research, addressing cross-cultural gaps, refining intervention durations, and recognizing individual variability. These efforts are essential for developing a more scientific, systematic, and effective self-talk training framework. Such advancements carry considerable importance for both theoretical insights and real-world applications in enhancing athletic performance.

7. Conclusion

Self-talk significantly contributes to athletes' psychological adjustment and their performance. By improving athletes' emotion management, motivation and confidence, self-talk improves the outcome of athletes' training or competition. Different types of sports, ages, and genders affect both the form and effect of self-talk. While guiding language influences open-skill sports more, encouraging language affects closed-skill sports. Adolescents are found to be more responsive toward encouraging language, whereas adult athletes require technical guidance. Results of applied research indicate that systematic use of self-talk integrated into training is more effective than its casual usage for enhancing mastery of skills as well as building psychological resilience. Hence, future studies should focus on mechanism exploration, measuring tool improvement, and cross-cultural applications for further optimization of self-talk strategies.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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