Is the Influence of Self-Talk on Team Player Achievement Moderated by Gender?

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Abstract- This study examined the relationship of self-talk team player achievement, with a particular focus on the context of sports. It comes at a time when economic challenges, compounded by the COVID-19 pandemic, have necessitated careful budgetary allocations in Sri Lanka and other nations. The study highlights the importance of strategic fund allocation in the sports sector, emphasizing the need for cost-effective techniques that offer substantial benefits to sports performance. The research underscores the pivotal role of psychological factors in enhancing achievements, with a special emphasis on self-talk. Additionally it was furthermore analyzed whether gender moderates the relationship of self-talk and perceived achievement. Drawing from an extensive literature review, the study establishes the positive correlation between self-talk and achievement across various domains. This positive relationship has been consistently demonstrated in research across sports, education, and professional settings. The impact of self-talk on self-efficacy and performance is grounded in Albert Bandura's self-efficacy theory. The study's methodology involved a cross-sectional approach, utilizing a questionnaire to collect data from individual team players in Sri Lanka. The results revealed a strong positive correlation between self-talk and perceived team achievement, confirming the critical role of self-talk in sports performance. The findings are consistent with prior research, demonstrating that self-talk contributes to improved self-confidence, stress management, enhanced communication, self-motivation, resilience, team cohesion, and accountability. These psychological factors are essential for team success, promoting positive mindset, and effective collaboration. The study emphasizes the importance of psychological interventions in enhancing player achievements and, by extension, team performance. In conclusion, this research highlights the significant influence of self-talk on team player achievements. In an environment with budget constraints, prioritizing psychological strategies and self-talk interventions can offer a cost-effective approach to enhancing sports performance. These findings have broader implications for athletes, coaches, and sports psychologists seeking to optimize player and team potential.

Index Terms- Self-Talk, Perceived Achievement, Gender, psychological Intervention

I. INTRODUCTION

The world has recently experienced a global epidemic caused by the Covid-19 virus. This crisis led to a significant downturn in economic activities, and in Sri Lanka, cities were deserted due to government-imposed curfews as a precautionary measure for self-quarantine. Economic indicators showed negative trends during this period, and governments allocated substantial funds to address Covid-19-related challenges. Therefore, during next few years, many nations like Sri Lanka have to develop their expenditure budgets to enhance the primary, secondary and tertiary sector of the economy. Given the budget constraints, government and other officials must make strategic fund allocations in the realm of sports by prioritizing various requirements. There are cost-effective techniques available that demand minimal financial resources while delivering a substantial positive impact on sports performance. At this juncture, prioritizing the enhancement of players' achievements through psychological interventions stands as one of the most effective techniques. Sri Lanka's track record in team sports over the past few decades has been less than satisfactory (Perera, 2015; Perera & Pushpakumari, 2016; Perera & Pushpakumari, 2015; Perera, Jusoh, Azam, & Sudasinghe, 2019). Achieving peak team performance often hinges on a complex interplay of factors, and among these factors, psychological aspects play a pivotal role. Team members' mental resilience, motivation, and cohesion are crucial components in determining success. Building a strong team culture, instilling a sense of purpose, and fostering effective communication are essential psychological elements. Maintaining a positive mindset among individual players, even when facing challenges and setbacks, can exert a profound influence on the overall performance of the team. Moreover, the ability to manage stress, handle pressure, and exhibit emotional intelligence are vital psychological skills for team members. Harnessing these psychological factors can lead to enhanced team performance, enabling groups to adapt, collaborate, and excel in diverse and challenging situations.

Self-talk, the internal dialogue individuals engage in within their own minds, plays a significant role in enhancing team performance. Research in psychology and sports science has shown that harnessing the power of self-talk can lead to

improved outcomes in team settings. (a) Positive Mindset and Confidence: Self-talk can shape an individual's mindset, fostering positivity and boosting confidence. Research by Hardy, Hall, and Hardy (2005) highlights how positive self-talk can enhance self-confidence. When team members engage in constructive self-talk, they are more likely to believe in their abilities, leading to a more confident team overall. (b) Stress Management and Emotional Regulation: Effective self-talk can help individuals manage stress and regulate their emotions. In a study by Hatzigeorgiadis et al. (2011), athletes who employed self-talk to stay calm under pressure exhibited better emotional regulation. In a team context, this translates to better composure and decision-making during high-stress situations. (c) Enhanced Communication: Self-talk influences how individuals frame their thoughts and messages. By using self-talk to maintain a positive and solution-oriented outlook, team members can promote clear and effective communication within the team. As research by Theeboom et al. (2014) suggests, positive communication is a key driver of team performance. (d) Self-Motivation and Goal Setting: Self-talk serves as an intrinsic source of motivation. By engaging in self-talk that reminds them of their goals and the team's mission, individuals can stay motivated. A study by Zourbanos et al. (2013) highlights how self-talk is linked to enhanced motivation among athletes. This motivation can translate to sustained effort and dedication within the team. (e) Resilience and Adaptability: Resilience is essential in team settings, especially when facing adversity. Self-talk can help team members develop a resilient mindset. According to research by Gucciardi, Gordon, and Dimmock (2009), resilient athletes often employ self-talk as a tool for bouncing back from setbacks, which can be equally valuable for team resilience. (f) Team Cohesion: Self-talk often aligns with the team's goals and values, promoting a shared mindset. A cohesive team is more likely to succeed. In their study, Carron et al. (2002) found that shared beliefs and values within a team positively influenced cohesion, which is crucial for coordinated team efforts. (g) Accountability and Responsibility: Positive self-talk can promote personal accountability. When team members hold themselves responsible for their contributions, it fosters a sense of duty. This has been reinforced in organizational research, such as the work of Lepsinger and Lucia (1997), emphasizing the importance of individual accountability in team performance.

Applied sport psychology articles and reading materials conceals that aspects of self-talk practices includes in mental-skills training programs and is proposed by sport psychologists to normalize cognitions, emotions, behavior and achievement (Zinsser, Bunker, & Williams, 2006). Self-talk has been defined as "a multidimensional phenomenon concerned with athletes' verbalizations that are addressed to themselves (Hardy, Hall, & Hardy, 2005, p. 905; Hardy, Hall, & Hardy, 2004). Self-talk is being used for variety of practices where athletes used self-talk as a motivation strategy (Hardy, Gammage, & Hall, 2001), to boost skill acquisition (Landin & Hebert, 1999; Perkos, Theodorakis, & & Chroni, 2002; Papaioannou, Ballon, Theodorakis, & Auwelle, 2004), for controlling attention focus (Gould, Eklund, & & Jackson, 1992; Landin & Hebert, 1999), and to enhance self-confidence (Landin & Hebert, 1999). At the same time, self-talk has been found to effect achievement also

(Highlen & Bennett, 1983; Papaioannou, Ballon, Theodorakis, & Auwelle, 2004; Van-Raalte & Vincent, 2017). Grounded on above perspectives, this research is aimed at finding whether self-talk as a psychological dimension is affecting on sports achievement.

II.   RESEARCH ELOBORATIONS

Self-talk could be manifested in verbal or non-verbal ways, in the form of a word, a thought, a smile, a frown, etc. (Chroni, 1997). When digging the literature for self-talk theories, the most important theory cited relating to self- talk is Self-efficacy theory developed by Albert Bandura (1977). This theory has profoundly influenced the understanding of how self-talk impacts an individual's beliefs in their own capabilities, which, in turn, plays a pivotal role in shaping their behavior and performance across various domains. Bandura's work on self-efficacy has provided a theoretical framework for examining how self-talk influences an individual's sense of competence and, consequently, their achievements.

Self-talk is a powerful psychological phenomenon that shapes human cognition, emotions, and behavior. It refers to the internal dialogue, thoughts, and messages individuals engage in within their own minds. Self-talk is a dynamic process that influences various aspects of life, from sports performance to personal growth and well-being. It can be classified into different types, each with unique characteristics and effects.
Instructional self-talk involves providing oneself with specific guidance and instructions related to a task or activity. It is a critical tool for skill acquisition and improvement (Hardy, 2006). On the other hand motivational self-talk is a form of self-encouragement, featuring positive and motivating phrases that boost an individual's confidence and determination. This type of self-talk can enhance motivation and resilience (Hardy, Hall, & Hardy, 2005). Evaluative self-talk is a another form of self-talk type which includes self-assessment and reflection on one's performance or situation. It can be either positive or negative, shaping one's self-perception (Van Raalte, Brewer, Rivera, & Petitpas, 1994).

Positive self-talk fosters an optimistic and constructive mindset. It involves affirmations and encouraging statements that can enhance self-esteem and performance (Hatzigeorgiadis, Zourbanos, Galanis, & Theodorakis, 2011) and negative self-talk, conversely, consists of self-criticism, self-doubt, and pessimistic thoughts that undermine self-esteem and hinder performance (Hatzigeorgiadis, 2006). Imagery and visualization, though not verbal, involve creating mental images or scenarios related to achieving specific goals. Athletes frequently use this type of self-talk to enhance performance (Vealey, 1986). Coping self-talk is employed to manage emotions and anxiety, particularly in stressful situations. It helps individuals stay composed and focused (Mahoney & Avener, 1977).

Task-oriented self-talk centers on specific steps or aspects of a task or goal, facilitating performance by breaking it down into manageable parts (Papageorgiou & Plessner, 2004) whereas social self-talk pertains to thoughts related to how individuals

interact with others in social situations. It guides behavior in social interactions (Bunker & Rotella, 1993). Spiritual or affirmative self-talk includes statements related to one's beliefs and values, often used for motivation and resilience (Bilard, Gomillion, & Jowdy, 2013).

These diverse types of self-talk play a fundamental role in shaping an individual's mindset, emotions, and behavior, and are influential in various domains, including sports, personal development, and overall well-being. Understanding the nuances and implications of each type of self-talk can provide valuable insights into human performance and mental resilience.

The measurement of perceived achievement is a critical component in understanding an individual's or a team's assessment of their success. Researchers and psychologists have developed various methods to assess perceived achievement, often using self-report measures. These measurements typically involve individuals or teams rating their own accomplishments or evaluating their progress in a specific domain. In sports psychology, self-report questionnaires and interviews have been utilized to gauge athletes' perceptions of their achievements (Gould & Udry, 1994). Similarly, in educational settings, self-assessment and self-report surveys help students and educators evaluate perceived academic achievements (Zimmerman, 2002). These measurements allow for a more comprehensive understanding of achievement beyond just objective outcomes. By quantifying perceived achievement, researchers gain insights into an individual's internal evaluation of success, providing a valuable perspective on self-assessment and motivation (Kaplan & Maehr, 2007).

III. METHODOLOGY AND DATA COLLECTION

This research was a cross-sectional study, which involved collecting data at a single point in time. The primary aim of the study was to test hypotheses related to the correlation between self-talk and team achievements. The researchers maintained a minimal level of interference, as data collection was accomplished through a questionnaire, and the study environment was natural and unaltered. The unit of analysis was individual team players.

The study's target population consisted of individual team players representing Sri Lanka. Universal sampling technique was employed, resulting in a total of 311 valid respondents. Information was gathered using a pre-tested questionnaire, and data analysis was carried out using SPSS version 23. The Cronbach's Alpha values for the questionnaire sections assessing self-talk and perceived team achievement were found to be 0.896 and 0.880, respectively. These values exceed the commonly accepted threshold of 0.7, which indicates high reliability in the data collection process (Nunnally, 1978). Therefore, the questionnaire was considered as a reliable instrument for gathering data in this study.

The mean and the standard deviation of the age of the sample was 25.2 ± 0.2. Out of the total sample 57.6% (179 participants)

were male and 42.4% (132 participants) were female. 29.3% of the participants (218) reported as married and 6% reported as widow/widower category. The rest were reported as unmarried (70.1%). The Durbin-Watson value reported as 1.734 which is close to 2, which indicates that there is no problem of autocorrelation.

Table 01: Correlation of Self-Talk and Perceived Achievement

		Total_Selftalk	Total_Perceived_Achievement
Total_Selftalk	Pearson Correlation	1	.558**
	Sig. (2-tailed)		.000
	N	311	311
Total_Perceived_Achievement	Pearson Correlation	.558**	1
	Sig. (2-tailed)	.000	
	N	311	311

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between Self-talk (as measures by Total_Selftalk) and perceived achievement (as measures by Total_Perceived _Achievement) was investigated using Pearson correlation coefficient. The results are depicted in table 01. There was a strong positive correlation between the two variables, r =.558, n =311, p < .001.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.391[a]	.153	.150	.63909

a. Predictors: (Constant), Total_Selftalk
b. Dependent Variable: Total_Perceived _Achievement

Table 02 depicted the model summary of the analysis and it summarized that 15.3% of the variance is explained by Total Perceived Achievement.

Table 03:ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.544	1	22.544	55.195	.000[b]
	Residual	124.982	306	.408		
	Total	147.526	307			

a. Dependent Variable: Total_Perceived _Achievement
b. Predictors: (Constant), Total_Selftalk

Table 03 depicted the ANOVA table and the p value reported is less than 0.001 and thus can be concluded that Perceived Achievement is depending on Self-Talk.

Table 04: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.658	.230		11.574	.000
	Total_Selftalk	.396	.053	.391	7.429	.000

a. Dependent Variable: Total_Perceived_Achievement

The regression equation is;
Total Perceived Achievement = 2.658 + 0.396 (Self-Talk)
Statistically it could be concluded that, for every unit increase in Self-Talk, the Total Perceived Achievements expected to be increase in its log form by 0.396 units
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Calculating the moderation effect considering whether gender moderates the relationship between self-talk and perceived achievement

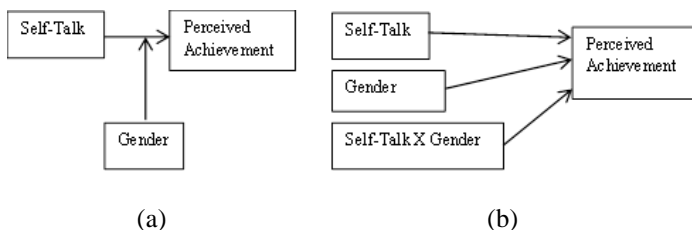(a)   (b)

Figure 1: (a) Conceptual Framework (b) Statistical Model

Standardized values were obtained via SPSS Version 23, after considering the collinearity issues persisted in unstandardized values.

Table 05: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.404ª	.163	.155	.63718

a. Predictors: (Constant), ST_Gen_, Zscore: Gender, Zscore(Total_Selftalk)

b. Dependent Variable: Total_Perceived _Achievement

The adjusted r square value of the model summary has slightly improved when compared with the model summary before considering the moderating effect.

Table 6: Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.347	.037		118.871	.000		
	Zscore: Gender	-.061	.037	-.089	-1.674	.095	.985	1.015
	Zscore(Total_Selftalk)	.285	.037	.411	7.659	.000	.956	1.046
	ST_Gen_	-.036	.036	-.053	-.987	.324	.969	1.032

a. Dependent Variable: Total_Perceived _Achievement

The interaction term depicted as ST_Gen (Self-talk*Gender) resulted as .324 where it can be concluded as gender does not moderate the relationship between Self-talk and Perceived Achievement.

IV. DISCUSSION AND PROPOSALS FOR FUTURE DEVELOPMENTS

This study delved into the often-underestimated role of self-talk in determining achievement in sports domain. The findings revealed that self-talk is a potent cognitive tool that significantly affecting on achievements of the team players.

The literature consistently affirms a positive relationship between self-talk and achievement across various domains. Numerous studies have highlighted the significant impact of self-talk on performance outcomes. For instance, in the field of sports psychology, Hardy, et al. (2013) demonstrated that positive self-talk can enhance athletic performance/achievements, contributing to greater success on the playing field. In educational settings, Zimmerman (2002) found that self-regulation through positive self-talk can lead to improved academic achievement and greater persistence in learning. Furthermore, the business and professional literature, as shown by Selingo (2016), underscores the role of self-talk in boosting career achievements, with the ability to maintain a positive internal dialogue being linked to career advancement and goal attainment. These findings from diverse domains collectively emphasize the crucial role of self-talk in shaping achievement, highlighting its universal significance in enhancing individual and collective success.

Harnessing self-talk among team sports players can have a significant impact on their individual and collective performance. Below are some suggestions that would help coaches and players to effectively utilize self-talk as a tool for motivation and success:

(a) Awareness and Monitoring: Encourage players to become aware of their self-talk. They should monitor their internal dialogue, identifying both positive and negative thoughts. Utilize video or audio recordings of games or practices to help players recognize patterns of self-talk during critical moments.

(b) Positive Affirmations: Teach players to replace negative self-talk with positive affirmations. These affirmations should be short, specific, and in the present tense. For example, a basketball player might replace "I can't make this shot" with "I'm confident in my shooting."

(c) Visualization: Encourage players to incorporate positive mental imagery into their self-talk. Visualization can help them see and feel their desired outcomes. For instance, a soccer player can visualize scoring a goal or making a crucial save during a penalty kick.

(d) Self-Talk Scripts: Coaches can work with sports psychologists to develop self-talk scripts tailored to each player's needs and goals. These scripts can be rehearsed during practice and become part of the player's mental routine before games.

(e) Self-Confidence Building: Help players build self-

confidence through self-talk. Emphasize the importance of believing in their abilities. Teach them to replace self-doubt with statements like "I am well-prepared, and I can handle this situation."

(f)   Focus on the Process: Shift the focus of self-talk from outcome-oriented thoughts to process-oriented thoughts. Instead of thinking, "I need to win this game," encourage players to think, "I need to focus on my performance and execute my skills."

(g)   Team Building: Foster positive self-talk within the team context. Encourage players to support each other with motivational self-talk. Teammates can use phrases like "We've got this" or "We work together as a unit."

(h)   Mental Toughness Training: Integrate mental toughness training into regular practices. This can involve controlled pressure situations and exercises to build resilience. Players can learn to stay composed and maintain positive self-talk in high-stress moments.

(i)   Self-Talk Rituals: Develop pre-game and pre-practice self-talk rituals that players can use to get into the right mental state. These rituals can include deep breathing, affirmations, or visualizations.

(j)   Review and Adjust: Periodically review and adjust self-talk strategies. Players' needs and challenges may change over time. Regularly discuss with players what is working and what needs modification.

(k)   Consult with a Sports Psychologist: Consider involving a sports psychologist who specializes in mental training to work with the team and individual players. A professional can provide personalized strategies and guidance.

(l)   Feedback and Support: Coaches should provide constructive feedback on players' self-talk during and after games. Offer support and encouragement to help them improve their self-talk skills.

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