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Content Validity of Self-Talk Guidance as a Psychological Skill Training Tool for Athletes

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Abstract

Psychological factors that can potentially improve athlete performance are called Psychological Skills Training (PST). PST refers to psychological skill training that is systematic and consistent in improving the athlete's performance and achievement. Studies on the effectiveness of psychological techniques, such as self-talk, imagery, and goal setting, are often used as training tools for athletes. This study aimed to determine the content validity of the Self-talk Guide Book developed as a guide for implementing psychological exercises for athletes. This Book contained the types of self-talk, how to apply it, and ways for athletes to easily respond to any negative self-talk arising in their minds. The research used Research and Development method with the ADDIE design which focused on the "Development" stage. The target of this research was experts, including psychologists and mental coaches, to examine the content validity of the book. The analysis used was Aiken Validity and Combat Alpha. The Aiken Validity formula test gained a score of 0.700 to 1.000. The result indicates that the resulting content validity is High. The results of this study can be used as a guide to carry out the next stage of the "Self-talk Guidance" development, namely the Implementation and Evaluation stages so that the resulting book has good quality and is suitable for guiding athletes in practicing self-talk.

INTRODUCTION

In recent years, “self-talk” in the sport psychology literature has shown an increase and provided an interesting prospect to study the relationship between sport behavior and cognition ((Hatzigeorgiadis & Galanis, 2017). Exploring the problem of self-talk in sports, the results of studies often show that self-talk is often used during competition periods and positive thoughts are intended to improve skills, strategy, confidence, and motivation (Miles & Neil, 2013).

Self-talk is often used by using alternative methods, such as video recall to improve the athlete performance (Theodorakis et al., 2012). A person speaks not only to others but also to themselves. Communications that athletes often make to themselves during their daily lives include “will the program be tough tomorrow?”, “can I do it?”, “this exercise is difficult”, “I must sleep early tonight”, and other self-directed expressions. This kind of action functions as a way of thinking, asking questions while making decisions, motivating themselves, strengthening themselves, and so on (De Mynck et al., 2020; Geurts, 2018). That is how athletes communicate with themselves, but this is less understood by athletes.

Previous studies have shown that self-talk has an influence on an athlete performance and psychophysiological responses. The psychophysiological response is related to self-change that occurs as a result of threats that apply to the athletes. In this case, athletes have succeeded in showing a better performance in facing threats and challenges. It is evidenced by the results of a study showing that motivational self-talk is effective in changing internal psychophysiological control within oneself and plays a role in increasing endurance and executive function in the head (Hase et al., 2019; Wallace et al., 2017). There are 5 components of self-talk classification according to Hardy, (2006) including (a) verbalization or self-statement, (b) multidimensional nature, (c) interpretive elements related to the content of the statement used, (d) something dynamic, (e) serving at least two functions, motivational and instructional functions for athletes. In point “E”, there are two functions of self-talk, namely motivational and instructional self-talk. Previous research revealed that motivational self-talk has more influence on improving an athlete performance. Motivational self-talk also influences the relationship between challenging situations and

threats to performance (Hase et al., 2019). Although many studies and data show that athletes often use self-talk, research on why athletes use self-talk, what is disclosed, and how to do self-talk, have not been widely explained. Self-talk is a strategy often used in mental skill trainings combining actions in mental and physical exercises. Previous research investigated what athletes said when doing self-talk, how athletes used self-talk, and the stages of using self-talk. Meanwhile, this research was carried out to develop practical steps for using self-talk through the “Self-talk Guidance” manual book. In this study, the manual was examined for its content validity.

The implicit question about self-talk intervention strategies is “why self-talk?”. Previous literature had shown that self-talk could help improve focus and also help counter the effects of ego disorders. The findings had provided a strong support that self-talk strategies could improve sport performance (Hatzigeorgiadis & Galanis, 2017). However, this self-talk cue cannot be understood by athletes if the stage of self-talk implementation is not explained. Self-talk cues may be different if used in different contexts, thus how self-talk stimulation should be carried out/developed through sport skills trainings must be studied (Hatzigeorgiadis et al., 2014). These findings conclude the need to develop and construct a self-talk intervention strategy. In line with this, previous literatures revealed that there was no list of materials used as an intervention strategy and its structure, both procedures and steps for the use of self-talk were still rare to explain, although many studies had revealed the effectiveness of self-talk on sport performance (Behnke et al., 2019; Latinjak et al., 2018). Considering the evidence related to the effectiveness of self-talk which focuses on measuring the psychological skills of athletes and the use of self-talk intervention strategies, the procedure for effectively implementing the self-talk intervention should be examined. Some recommendations state that improving athlete psychological skills requires guidance or guidelines containing procedures and stages of implementing self-talk intervention strategies for athletes both in trainings and in competitions.

The focus of this study was to develop practical steps for using self-talk through the self-talk practice method compiled in a practical guidance. The practical guidance in this research referred to the formation of

the structure of self-talk intervention technique compiled in the book entitled "Self-Talk Guidance". The procedure of the early stages of this research development was to assess the material and the construction with experts. This initial development stage is commonly called the content validity stage (Yudhistira et al., 2021; Yulianto et al., 2021).

content validity of the book that had been developed. In the second stage, the researcher met the 5 experts in the field of psychology and sport psychology again to assess the content quality of the "Self-talk Guidance" book. In the third stage, the researchers analyzed the assessment results of the five experts.

METHODS

This research is a Research and Development research for reviewing and developing products as well as validating products being developed. The product developed was a Self-talk Guidance which had been designed in the previous study by applying the ADDIE development model. The development procedure used the ADDIE development model, namely Analyze, Design, Develop, Implement, and Evaluate. The development model focused on the Instructional development model centered on individual learning and performance, had a direct and systematic phase, and used a system approach to human knowledge and learning (Branch, 1978). The ADDIE concept is described in Figure 1, while the explanation of every step is described in Table 1.

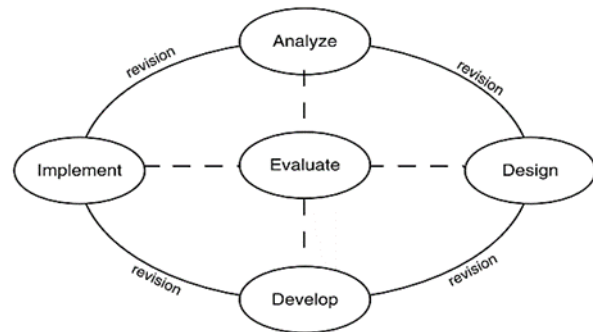


Figure 1. The ADDIE Concept

Materials and Apparatus

This study validated the book design using the product validation questionnaire. The product validation questionnaire was used to test whether the content

Table 1. Common instructional design procedures organized by ADDIE

	<i>Analyze</i>	<i>Design</i>	<i>Develop</i>	<i>Implement</i>	<i>Evaluate</i>
Concept	Identify the Probable cause for a performance gap	Verify the desired performance and appropriate testing methods	Generate and validate the learning resources	Prepare the learning environment and engage the students	Assess the quality of the instructional products and processes, both before and after implementation
Procedures	1. Validate the performance gap 2. Determine instructional goals 3. Confirm the intended audience 4. Identify required resources 5. Determine potential delivery 6. Compose a project management plan	7. Conduct a task 8. Compose performance objectives 9. Generate testing strategies 10. Calculate return on investment	11. Generate content 12. Select or develop supporting media 13. Develop guidance for the student 14. Develop guidance for the teacher 15. Conduct formative revisions 16. Conduct a Pilot test	17. Prepare the teacher 18. Prepare the student	19. Determine evaluation criteria 20. Select evaluation tools 21. Conduct evaluations
	<i>Analysis Summary</i>	<i>Design Brief</i>	<i>Learning Resources</i>	<i>Implementation Strategy</i>	<i>Evaluation plan</i>

Table 1 and Figure 1 describe the stages of the ADDIE concept procedure. This study focused on the development stage to generate and validate the product being developed. This research was a continuation research and consisted of three stages. In the first stage, the researcher communicated with the experts to test the

of the book could be continued or still needed improvement. Data collection was officially and systematically administered. The product was assessed by the five experts involved in this research.

Procedure

The ADDIE research includes 5 stages, namely Analyze, Design, Develop, Implement, and Evaluate. This study was at the “Develop” stage. The development stage has five steps, including producing contents, developing supporting materials and media, developing guidelines, conducting formative revisions, and conducting trial tests (Shelton & Saltsman, 2008). From this stage, the products and contents are completed and ready to be tested. Below are the design and content that were validated in this study:

- Chapter 1. Instructions for understanding the Guidebook
- Chapter 2. Definitions and general descriptions of sport psychology, as well as psychology techniques in sports
- Chapter 3. Descriptions of the definition of self-talk and the types of self-talk.
- Chapter 4. A strategy for implementing self-talk

The validated contents in this research were the contents in Chapter 3 and 4 which were directly related to self-talk and intervention strategies for implementing self-talk in sports. Chapter 3 helped athletes identify the types of self-talk and understand each type of self-talk, while Chapter 4 focused on the implementation of developing self-talk techniques which were developed into 4 types, namely goal-setting self-talk, cooling and calming self-talk, coaching self-talk, and corrective self-talk (Jones, 2003;2005).

Data Collection

The participants of this study were 2 experts in the field of Psychology, 2 experts in the field of sport psychology with doctoral academic degrees, and 1 licensed mental trainer who actively guided and trained athletes in Central Java Province. Data collection used the Delphi technique. The data analysis of this research used the Aiken Formula technique. The following is the Aiken formula:

$$V = \frac{s}{[n9c-1]}$$

$$S = r-lo$$

$$Lo = \text{Lowest validity scoring number (1)}$$

$$C = \text{Highest validity scoring number (5)}$$

$$R = \text{Number given by the appraiser}$$

RESULT

Descriptive Analysis

The research conducted in this study focused on the "Develop" stage of the ADDIE research and development design. At this stage, the content of the book was assessed and validated by the experts. After meeting with experts and conducting discussions, the results obtained were very good. The analysis carried out by experts included elements of the book, the suitability of the book contents with the purpose, and the explanation of the book about sport activities to show the relevance of the activity. The assessment results of the experts were analyzed using the Aiken Validity formula shown in Table 2.

Based on Table 2 and Figure 2, results of validation test using the Aiken formula showed that more than 10 statements gained a score of 0,700 to 1,000, indicating that the validity of the content generated was High and Very High. This result is reinforced in the literature by Lawshe (1975) that if the ratio value is close to 1, it can be concluded that the validity is high (Yulianto et al., 2021). Likewise, according to Hendy-adi (2017), if the value of the content validity ratio is greater than 0, the content validity can be said to be high. The result of the study implies that the content of the “Self-talk Guidance” book is worthy to go to the next stage and worthy to be tested for its effectiveness.

The Result of Self-Talk Guidance Concepts

Based on the result of this research, the concept of the book content and structure had reached the final. Table 3 showed the final concept of the book content and structure in chapter 3 and 4 as the focus of this study. The concept of self-talk guidance can be seen in Table 3.

Table 3. shows the contents of the book developed as a structure and steps in performing the technique or method of self-talk exercise. The structure had several divisions, consisting of educational explanations for athletes and implementations of self-talk practice for athletes. The concept had been compiled and received expert validation beforehand. The details of the clear picture of the book can be seen in the designs that have been made and explained in Figure 3 to 11.

Table 2. Aiken Validation Results on the Implementation of Self-Talk Techniques

No.	Question	Assessment (Expert)					S = r-lo					ΣS	N*(C - 1)	V=S/(N*(C-1))
		1	2	3	4	5	1	2	3	4	5			
1.	Complete material according to the concept of Self-talk	5	4	4	5	3	4	3	3	4	2	16	20	0,800
2.	The breadth of self-talk material	4	4	4	4	5	3	3	3	3	4	16	20	0,800
3	Depth of Material includes the appropriate concept of Self-talk	4	3	4	4	5	3	2	3	3	4	15	20	0,750
4	The concept and definition of self-talk are accurate and to the point	4	5	4	4	5	3	4	3	3	4	17	20	0,850
5	Illustrations and descriptions of the situation have been shown in this book	5	5	5	5	5	4	4	4	4	4	20	20	1,000
6	Guidelines for presenting psychological terms in sports	4	4	5	5	4	3	3	4	4	3	17	20	0,850
7	Self-talk training objectives are relevant with regard to the content and materials	5	5	5	4	4	4	4	4	3	3	18	20	0,900
8	Descriptions of the implementation of the developed technique in accordance with the objectives of the self-talk training	4	4	5	5	5	3	3	4	4	4	18	20	0,900
9	The form of activity is relevant in addressing the problems that arise in practice and match situations	5	5	4	5	4	4	4	3	4	3	18	20	0,900
10	The accuracy of sentence structure and grammar are appropriate	4	4	4	5	4	3	3	3	4	3	16	20	0,800
11	The language used is communicative and effective	4	4	4	3	4	3	3	3	2	3	14	20	0,700
12	The self-rejecting technique is easy to understand and learn	5	5	4	4	5	4	4	3	3	4	18	20	0,900

Table 3. Table of Content Structure of Self-Talk Guidance

No.	STRUCTURE OF THE BOOK	CONTENT OF EACH CHAPTER (FOCUS ON CHAPTER 3 AND 4)
1.	CHAPTER 1 PREFACE	A. Rationale B. Objective C. Instruction for Use
2.	CHAPTER 2 SPORT PSYCHOLOGY FOR ATHLETES	A. Introduction of Sport Psychology B. Sport Psychological Factors C. Mental Skill Exercise and Intervention Strategies D. The Urgency of Sport Psychology for Athletes E. Summary F. Individual Task and Exercise
3	CHAPTER 3 SELF-TALK	A. Recognizing Self-Talk B. Types of Self-Talk C. The Urgency of Self-Talk for Athletes D. Summary E. Individual Task and Exercise
4	CHAPTER 4 SELF-TALK IMPLEMENTATION	A. Implementation and Practice of Goal Setting Self-Talk B. Implementation and Practice of Cooling and Calming Self-talk C. Implementation and Practice of Coaching Self-Talk D. Implementation and Practice of Corrective Self-Talk E. Summary F. Individual Task and Exercise

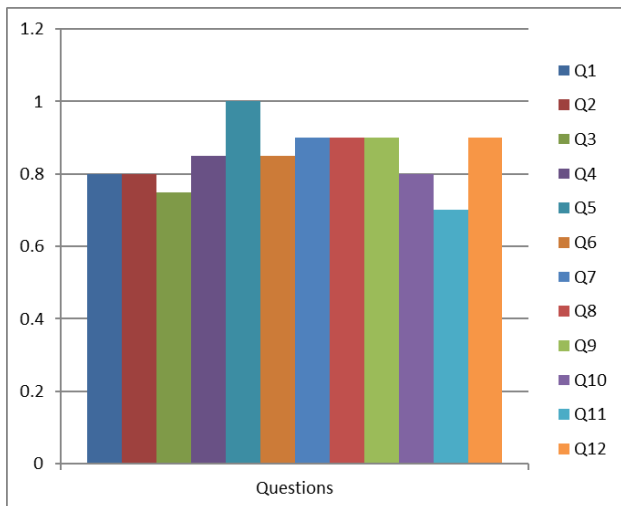


Figure 2. Data of Aiken Validity Result

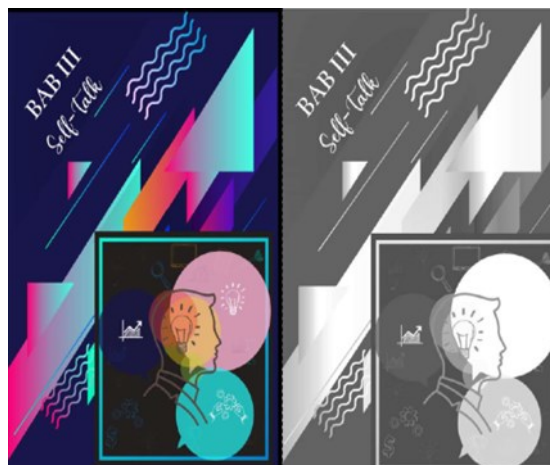


Figure 5. Chapter 4 Homepage



Figure 3. Desain and Cover of Self-Talk Guidance



Figure 6. Overview of exercises and assignments for athletes to identify the types of self-talk that often occur



Figure 4. Chapter 3 Homepage



Figure 7. Descriptions and Explanations of the implementation of each self-talk type and the training tasks for athletes

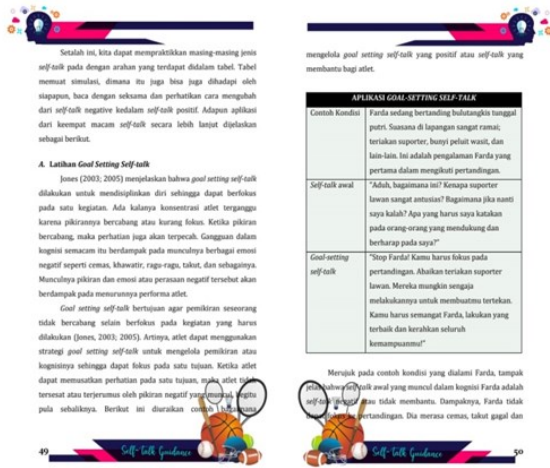


Figure 8. Implementation and Practice of Goal Setting Self-Talk

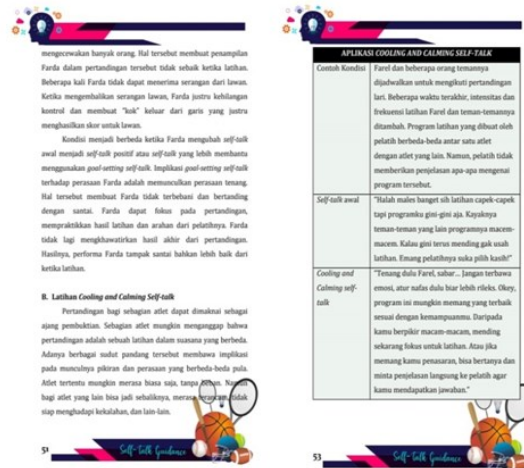


Figure 9. Implementation and Practice of Cooling and Calming Self-Talk

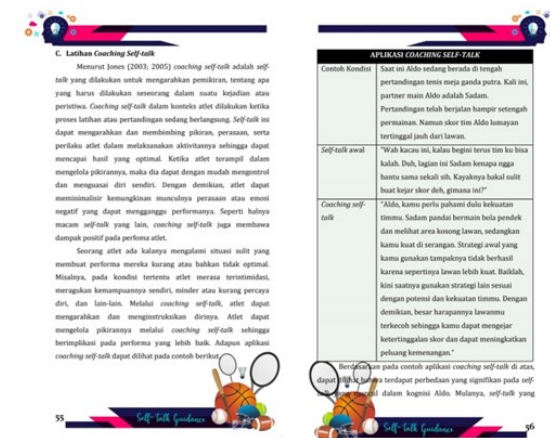


Figure 10. Implementation and Practice of Coaching Self-Talk



Figure 11. Implementation and Practice of Corrective Self-Talk

The pictures in Figure 6 to 11 show the content of the book. Pictures in Figure 7 to 10 show explanations and structured tasks that athletes must do to practice self-talk techniques according to the directions given by the manual to help athletes understand the concept of each self-talk and get used to speaking positively to provide a reinforcement, motivation, and good direction for themselves.

DISCUSSION

This study aimed to see the validity of the book contents to go further to the effectiveness testing stage. Guidelines in performing mental training techniques are considered necessary to be compiled and given to athletes. Psychological Skill Training (PST) refers to the systematic and consistent psychological practice aimed

at improving performance, increasing comforts, and achieving satisfactions (Saputra, 2022). Psychological skill training uses methods and techniques that are standardized on the original elements of PST (Weinberg & Daniel, 2015). Several psychologists provide literature on PST using the terms of psychological skills and psychological techniques, but these two have been distinguished. For example, psychological skills refer to concentration, self-confidence, drive, motivation, and others. Meanwhile, methods to improve these skills are called psychological techniques which include imagery, self-talk, goal setting, relaxation, and others (Birrre & Morgan, 2010).

The study and application of self-talk can have a significant effect on sport participations. Hardy states that self-talk can influence attentional motivation, a

behaviour that inhibits similar challenges faced previously by athletes. The results of previous studies stated that self-talk could improve concentration, reduce distracting thoughts, increase self-efficacy, increase anxiety and anxiety interpretation, and maximize movement and execution of sport performance (Hase et al., 2019; Saputra, 2022).

The results of this study showed that the content of the self-talk exercise method, after going through the content validity test, obtained a score of 0,700 to 1,000. It indicates that the book is ready to be tested at the next stage. The development on self-talk psychological techniques was carried out in line with the given recommendations, namely the guidelines for athletes to be able to practice psychological techniques as a form of experience for themselves. In addition, mental training, by applying this self-talk technique, can help athletes to understand data and conditions to make decisions according to what they feel in accordance with the dialogue during the competition (Zervas et al., 2007). Previous studies had developed a number of questionnaires to measure how self-talk worked on athletes by developing measuring instruments called S-TQ (Self-Talk Questionnaire) and ASTQ (Automatically Self-Talk Questionnaire) for identifying the type of content and frequency of distracting thoughts or thoughts of the athlete during a competition. In addition, the Self-talk Guidance was developed to help athletes understand the structure, types, and multidimensionality of self-talk in a sport competition (Zourbanos et al., 2009).

Self-talk does not only improve psychological skills. According to (Cooper et al., 2021), the mental toughness felt by athletes can be increased through self-talk. Athletes use self-talk to optimize their performance and it will positively affect their perceived mental toughness (such as belief that they can achieve their goals to the fullest and control their attentions and emotions). Furthermore, in another study, self-talk was used as a method to offset the deleterious effect of sleep deprivation and motivate oneself (Cooper et al., 2020).

This study answers the clinical question in previous studies about how individuals can be taught to be more aware of their self-talk (Brinlhaupt et al., 2009). Through this research, the Self-Talk Guidance will help athletes apply self-talk according to the athlete needs to deal with psychological situations and conditions that apply to them.

CONCLUSION

Self-talk is a psychological technique that can improve mental sport skills through psychological skill training (PST). Self-talk is often used by athletes when they are training to communicate with themselves. Athletes do not only talk to others but also to themselves that sometimes interfere with their sport performance. This research helps athletes understand the construct, type, and multidimensionality of self-talk as an exercise method to be applied by athletes either independently or accompanied by a coach. This study had developed a manual guide for athletes and obtained high results for its content validity. The product of this research is ready to be used as a guide and tested at the next research stage to improve the "Self Talk Guidance" book so that it can be useful for athletes and coaches. In addition, this guide is useful for providing a clear picture for athletes and helping athletes understand situations and conditions to make decisions relevant with their feelings.

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

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