

# REVITALIZING MENTAL READINESS: MINDSPORT NAVIGATOR APPLICATION (MINNA) TO STRIVE FOR THE BEST PERFORMANCE OF UNDIKSHA FC

I MADE SATYAWAN<sup>1</sup>, I NYOMAN LABA JAYANTA<sup>1</sup>, NI LUH PUTU SPYANAWATI<sup>1</sup>, GEDE DODDY TISNA<sup>1</sup>, I GUSTI PUTU SUHARTA<sup>1</sup>, NI PUTU DWI SUCITA DARTINI<sup>1</sup>, PRISCA WIDIATI<sup>1</sup>, YOVHANDRA OCKTA<sup>2</sup>

<sup>1</sup>Universitas Pendidikan Ganesha, Indonesia

<sup>2</sup>Universitas Teuku Umar, Indonesia

## Correspondence:

I Made Satyawan

Universitas Pendidikan Ganesha, Indonesia, [made.satyawan@undiksha.ac.id](mailto:made.satyawan@undiksha.ac.id)

**Abstract:** This study aims to develop the Mindsport Navigator Application (MINNA) as a digital tool to systematically assess and enhance the mental readiness of Undiksha FC athletes. The research was conducted using a development model adapted from Borg and Gall, consisting of ten stages including product design, expert validation, small group trials, large group trials, and final product refinement. The MINNA application integrates three psychological measurement instruments: the Sport Competition Anxiety Test (SCAT), Athlete Burnout Questionnaire (ABQ), and Perceived Stress Scale (PSS). The results from 60 athletes show that anxiety and stress levels fall into the moderate category, while burnout levels indicate no significant signs of emotional exhaustion. Descriptive analysis reveals varying levels of anxiety and stress, but relatively stable burnout conditions. Correlation analysis indicates a significant positive relationship between anxiety and stress, whereas burnout shows no significant relationship with either variable. Overall, the MINNA application effectively provides personalized psychological assessments and coping recommendations, making it a useful tool for continuous mental monitoring and for supporting optimal athletic performance. The application demonstrates strong potential to be integrated into training programs to maintain athletes' psychological well-being and enhance performance outcomes.

**Keywords:** MINNA application; psychological readiness; athlete anxiety; athlete burnout; perceived stress; mental training; sport psychology; mobile application development

## INTRODUCTION

When learning resources and media are limited, starting with a lack of innovation and renewal as well as the utilization of media to be applied, this will certainly have an impact on the learning outcomes of students or athletes themselves. In addition, there are many factors that can influence success, including psychological factors, learning outcomes, level of understanding, available facilities, curriculum, and media used by educators and trainers in the learning and training process. One factor that will be emphasized is the development of media in the form of applications to facilitate students or athletes in learning and training. The achievement of students or athletes in the world of sports is closely related to psychological factors.

Achieving success in the world of sports is closely related to psychological factors. In an increasingly competitive sporting world, mental health is a key factor in determining success. Psychological skills training is the systematic learning and practice of psychological skills through self-regulation strategies to help athletes consistently achieve peak performance (Weinberg & Gould, 2018). In particular, techniques such as goal setting, imagery, self-talk, and arousal are considered to improve performance (Morris, 2003). The most commonly implemented psychological skill training is self-talk (Johnson et al., 2004; Maynard et al., 1995) and *goal setting* (Ann Boyce, 1992). Self-talk is when athletes engage in self-instruction to perform specific tasks or regulate emotional stimuli (Hardy et al., 2001). Emotional motivation helps athletes maintain focus and build confidence (Chroni et al., 2007) and in enhancing the positive effects of the competitive level of physiological stimulation. This proves that sports psychology plays an important role in achieving optimal athletic performance. However, both professional and amateur athletes face high pressure and demands from various parties, which can lead to burnout. Burnout was initially popularized as a tripartite concept, which includes exhaustion, rejection, and a decline in personal performance (Maslach & Jackson, 1981; Maslach et al., 2001). Burnout has been defined as a syndrome consisting of three factors: depersonalization, emotional exhaustion, and reduced personal accomplishment (Maslach & Jackson, 1981).

Meanwhile, (C. A. Johnson & Gilbert, 2004) highlight that youth sports budgets often prevent the recruitment of sports psychologists, resulting in coaches taking on roles related to psychological skill training. Meanwhile, mental health and psychological aspects are crucial elements that support overall athlete performance. The literature has identified a positive relationship between psychological empowerment and individual performance outcomes such as performance satisfaction (M. T. Maynard et al., 2012), organizational commitment (Avolio et al., 2004) and task performance (Chamberlin et al., 2018; Huang et al., 2010). Psychological abilities have also been shown to influence creativity (Zhang, 2010), innovative behavior (Spreitzer et al., 1999) and career success (Dust et al., 2018).

Therefore, personalization in psychological training is becoming increasingly important to help students or athletes overcome the psychological challenges they face. Unfortunately, psychological training is still often overlooked. Developing training programs that are tailored to individual needs and follow the principles of periodization is often a challenge for educators, coaches, athletes, and students. This process requires a deep understanding of the psychological needs, psychological conditions, and specific goals of each individual. For this reason, the development of mobile applications to analyze the psychological training needs of athletes has emerged as an effective solution. Previous researchers quickly recognized the potential of mobile applications in health (Mosa et al., 2012) and mental health (Luxton et al., 2011), with a systematic review of related research, namely mobile health applications (mHealth), emerged since 2011 (Luxton et al., 2011). By utilizing mobile technology, this application can offer personalized solutions for each individual athlete, helping them overcome psychological barriers and improve their overall performance. With this application, coaches and athletes can find psychological exercises that suit the athlete's needs, accessible anytime and anywhere. Coaches and athletes can monitor progress and receive appropriate training recommendations to help athletes achieve optimal performance. Thus, the development of a mobile application to analyze athletes' psychological training needs is highly relevant in supporting athletes' mental health and performance. This study will examine the application's functionality as a medium for identifying psychological training programs that suit athletes' conditions, while also serving as a tool for coaches to improve their ability to design psychological training programs.

### RESEARCH METHODS

This research is a development study designed in three stages. The first stage is the design projection and development of features in the MINNA application. The second stage is testing by experts to refine the MINNA application product, while the third stage is refinement and field testing. The approach in this development research adopts the steps developed by Borg and Gall, namely 10 stages of product development research consisting of: (1) Conducting research and gathering information (2) Planning (3) Designing the initial product (4) Validating the product with three experts (5) Revising the product (6) Conducting small group trials (7) Revising the product (based on suggestions and small group trial results) (8) Conducting large group trials (9) Revising the final product, and (10) Finalizing the product.

### RESULTS & DISCUSSIONS

The results of this study are in the form of a web-based application that can be accessed at <https://minna.sehato.my.id/> using a smartphone or laptop connected to the internet. The Mindsport Navigator Application (MINNA) serves to revitalize mental readiness in order to achieve the best performance for Undiksha FC. The following are the results of the development of the MINNA application:

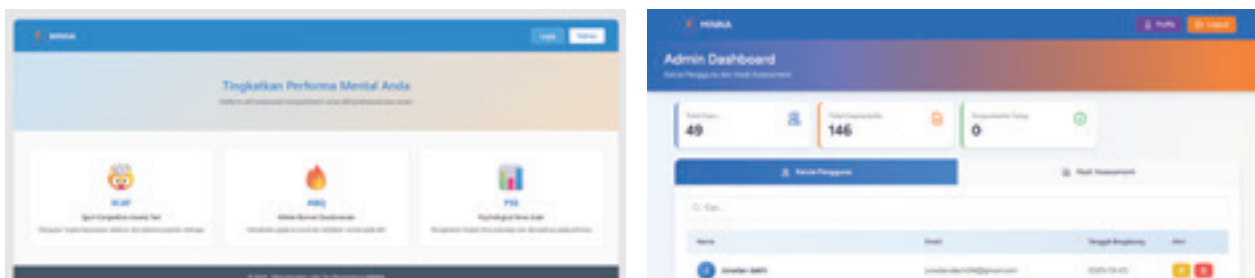


Figure 1. MINNA Application

In this study, data was obtained using three types of psychological measurements, namely the Sport Competition Anxiety Test (SCAT), Athlete Burnout Questionnaire (ABQ), and Psychological Stress Scale (PSS). The Sport Competition Anxiety Test (SCAT) instrument was used to measure the level of anxiety athletes experience when facing sports competitions. The aim was to determine whether athletes tended to have low, moderate, or high anxiety levels when competing, thereby providing a basis for coaches or researchers to understand the psychological condition of athletes and design appropriate strategies to improve their performance. The Athlete Burnout Questionnaire (ABQ) instrument serves to measure the level of burnout in athletes. The aim is to determine the extent to which athletes experience emotional exhaustion, a reduced sense of accomplishment, and negative attitudes towards their sport, so that the results can be used by coaches or researchers to identify psychological problems and develop prevention and treatment strategies to maintain optimal athlete performance. The Perceived Stress Scale (PSS) instrument is used to assess the level of stress felt by individuals in the past month. The aim is to determine the extent to which a person feels depressed, unable to control the situation, or able to cope with the problems they are experiencing, so that the results can help researchers and practitioners understand the psychological condition of respondents and design more appropriate stress management strategies.

Based on the results of the SCAT test conducted on 60 athletes using the MINNA application, the average test result was 18.6, which falls into the “Moderate Anxiety” category. A total of 18 athletes were categorized as having low anxiety, 36 athletes had moderate anxiety, and 6 athletes were classified as having high anxiety. Based on the results of the ABQ test conducted on 60 athletes using the MINNA application, the average score was 2.45, indicating “No Indication of Burnout.” A total of 54 athletes were in the No Indication of Burnout category, 3 athletes were categorized as Mild Burnout, and 3 athletes were categorized as Severe Burnout. Based on the PSS test results conducted on 60 athletes using the MINNA application, the average score was 18.5, categorized as “Moderate Stress.” The distribution showed that 10 athletes experienced low stress, 50 athletes experienced moderate stress, and none were categorized as having high stress.

*Table 1. Descriptive Statistics*

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
SCAT	30	10.00	27.00	1116.00	18.6000	4.25000
ABQ	30	1.53	3.67	147.00	2.4500	0.41000
PSS	30	5.00	24.00	1110.00	18.5000	4.05000
Valid N (listwise)	30					

Overall, the descriptive analysis results show that athletes are in varying psychological conditions. The Sport Competition Anxiety Test (SCAT) and Perceived Stress Scale (PSS) are in the moderate category with considerable score variation, indicating differences in anxiety and stress levels among athletes, ranging from low to moderately high. Meanwhile, the Athlete Burnout Questionnaire (ABQ) showed no indication of burnout with low variation, indicating that the athletes’ emotional exhaustion was relatively uniform and at a safe level. These findings suggest that, in general, athletes have stable burnout levels, but they still experience moderate levels of anxiety and stress that require attention in their mental training.

**Table 2. Correlations Test**

		Correlations		
		SCAT	ABQ	PSS
SCAT	Pearson Correlation	1	.063	.447*
	Sig. (2-tailed)		.740	.013
	N	30	30	30
ABQ	Pearson Correlation	.063	1	.216
	Sig. (2-tailed)	.740		.251
	N	30	30	30
PSS	Pearson Correlation	.447*	.216	1
	Sig. (2-tailed)	.013	.251	
	N	30	30	30

\*. Correlation is significant at the 0.05 level (2-tailed)

Based on the results of the correlation analysis, it is known that the relationship between sports anxiety (SCAT) and burnout (ABQ) shows a very weak correlation value ( $r = 0.063$ ) with a significance of 0.740. This indicates that there is no significant relationship between the level of anxiety experienced by athletes and their level of burnout. Meanwhile, the relationship between sports anxiety (SCAT) and stress levels (PSS) shows a moderate positive correlation ( $r = 0.447$ ) and is statistically significant ( $p = 0.013$ ). This finding indicates that the higher the competitive anxiety felt by athletes, the higher their stress levels. The relationship between burnout (ABQ) and stress (PSS) showed a weak correlation ( $r = 0.216$ ) with a significance value of 0.251, so it can be concluded that burnout has no significant relationship with athletes' stress levels. Overall, only anxiety has a significant relationship with stress, while burnout does not show a meaningful relationship with either anxiety or stress.

The development of the Mindsport Navigator Application (MINNA) in this study shows that digital media can be an effective tool for analyzing and mapping athletes' mental readiness more systematically. The results of using the application on 30 Undiksha FC athletes provide a comprehensive picture of three important psychological aspects, namely the Sport Competition Anxiety Test (SCAT), Athlete Burnout Questionnaire (ABQ), and Perceived Stress Scale (PSS). In general, the research findings show that the athletes' anxiety and stress levels are in the moderate category, while their burnout levels tend to be low/non-existent. This indicates that although the athletes do not experience serious emotional exhaustion, they still face considerable mental pressure, especially in the context of competition.

On the Sport Competition Anxiety Test (SCAT) instrument, the average score of 18.40 indicates a predominance of moderate anxiety. The large variation in scores ( $SD = 4.30$ ) illustrates the significant differences between athletes with low to high anxiety levels. This condition is common in sports teams, given that individuals often have different levels of readiness to face competitive pressure. These findings reinforce the theory of sports psychology which states that anxiety is one of the main factors that affect athletes' readiness to compete and their performance (Weinberg & Gould, 2018). Therefore, the coping feature in the MINNA application plays a crucial role in helping athletes manage anxiety through breathing exercises, visualization, and positive self-talk.

The Athlete Burnout Questionnaire (ABQ) instrument showed an average burnout score of 2.41, which falls into the "No Indication of Burnout" category. The low standard deviation (0.41) indicates that the athletes' burnout levels are relatively uniform and within safe limits. Although two athletes showed mild and severe burnout, this number is not significant overall. These findings suggest that training programs, team support, and the coaching environment have likely been effective in maintaining athletes' emotional stability. Cognitive emotion regulation plays an important mediating role in how stress affects burnout. Athletes who use adaptive strategies tend not to experience increased burnout (Ma et al., 2025). Therefore, the MINNA application can serve as a continuous monitoring tool to detect burnout symptoms earlier.

Meanwhile, the Perceived Stress Scale (PSS) instrument produced an average score of 18.37, which falls into the moderate stress category. The considerable variation in scores ( $SD = 4.08$ ) indicates differences in stress levels among athletes, ranging from mild to moderate. The moderate stress experienced by most athletes can be caused by various factors, such as academic workload, training demands, competitive pressure, and social dynamics. Through

the coping recommendations feature on the MINNA app, athletes can obtain self-guided guidance on managing stress, such as relaxation techniques, emotional journaling, or time management.

The relationship between the three instruments shows an interesting pattern. Correlation analysis reveals that the Sport Competition Anxiety Test (SCAT) has a significant relationship with the Perceived Stress Scale (PSS) ( $r = 0.447$ ;  $p = 0.013$ ). This shows that athletes with higher anxiety tend to feel greater stress, in line with the view that the two variables are closely related in the psychological dynamics of athletes. However, no significant relationship was found between the Athlete Burnout Questionnaire (ABQ) and anxiety or stress. The absence of this relationship can be interpreted as meaning that burnout among Undiksha FC athletes is not at a level that interferes with other psychological conditions, so it does not contribute significantly to anxiety or stress. Thus, anxiety is the most dominant psychological factor and requires special attention in the mental training of athletes.

Overall, this discussion confirms that the MINNA app has successfully provided a comprehensive overview of athletes' mental health and offered practical guidance through its coping features. The research results show that although burnout is not a significant problem, anxiety and stress still require systematic handling. Therefore, the use of the MINNA application can be continued as a medium for regular mental monitoring and assistance to support the best performance of Undiksha FC athletes. If integrated into physical training and team training programs, this application has the potential to improve mental readiness while preventing more serious psychological problems in the future.

## CONCLUSIONS

Based on the research that has been conducted, it can be concluded that the Mindsport Navigator Application (MINNA) has been successfully developed as a digital medium to systematically map and revitalize the mental readiness of Undiksha FC athletes. This application is able to provide a comprehensive overview of three important psychological aspects, namely the Sport Competition Anxiety Test (SCAT), Athlete Burnout Questionnaire (ABQ), and Perceived Stress Scale (PSS). In general, the test results show that athletes are in a fairly stable psychological condition, characterized by moderate levels of anxiety and stress, and no indication of burnout. The variation in SCAT and PSS scores is quite large, indicating differences in psychological states among athletes, while the variation in ABQ scores is relatively small, indicating stability in terms of burnout.

The correlation results show that anxiety has a significant and positive relationship with stress, so that the higher the athlete's anxiety, the higher the level of stress experienced. However, burnout does not show a significant relationship with either anxiety or stress. These findings confirm that anxiety is the most dominant psychological factor affecting the mental condition of athletes, while burnout does not emerge as a major problem. Overall, the MINNA app has been proven to help athletes recognize their mental state, while providing adaptive coping recommendations to help manage anxiety, stress, and potential burnout. MINNA can be used as a continuous monitoring tool to improve mental readiness and optimize athlete performance.

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