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Anxiety And Fatigue Levels Of Volleyball Athletes In The 2025 Central Sulawesi Pre-National Games

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ABSTRACT

This study aimed to determine the anxiety and fatigue levels of athletes preparing for the 2025 Central Sulawesi Pre-National Games before competition. Volleyball Anxiety and fatigue are important psychological and physiological factors that can influence athlete performance, concentration, emotional stability, and physical readiness during competitive situations. High levels of anxiety and excessive fatigue may reduce athlete confidence, decision-making ability, and overall performance during matches. Therefore, identifying athlete psychological and physical conditions before competition is essential for optimizing training and recovery programs. This research employed a survey method using a quantitative descriptive approach. Data collection was conducted through questionnaires distributed to athletes preparing for the 2025 Central Sulawesi Pre-National Games. The sample consisted of 12 volleyball athletes selected using a total sampling technique. The instruments used in this study included validated anxiety and fatigue questionnaires. Data analysis was performed using descriptive statistical techniques, including mean, standard deviation, percentage distribution, and categorization analysis. The findings revealed that the average anxiety score of the athletes was 65.17. Based on the categorization results, 16.67% (2 athletes) were classified as having low anxiety, 58.33% (7 athletes) experienced moderate anxiety, and 25.00% (3 athletes) demonstrated high anxiety levels. Regarding fatigue, 41.67% (5 athletes) were categorized as experiencing light fatigue, while 58.33% (7 athletes) experienced moderate fatigue. No athletes were classified in the heavy fatigue category. These findings indicate that the anxiety and fatigue levels of the 2025 Central Sulawesi PRAPOPNAS volleyball athletes were generally within the moderate category. Therefore, mental training, recovery management, and psychological monitoring are recommended to optimize athlete readiness before competition.

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INTRODUCTION

Volleyball is one of the most popular team sports worldwide and has developed into a highly competitive performance sport requiring optimal physical, technical, tactical, and

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psychological preparation. Volleyball In modern volleyball, athletes are not only expected to demonstrate superior technical skills and physical endurance but also maintain psychological stability during training and competition phases. The increasing intensity of competition at regional and national levels has made psychological readiness and fatigue management critical determinants of athletic success. In Indonesia, volleyball continues to experience significant development through school competitions, regional championships, and elite athlete development programs organized by provincial sports institutions and clubs. The emergence of talented athletes from various regions, including Central Sulawesi, indicates that volleyball has become an important component of regional sports achievement development.

The preparation of athletes for the 2025 Pre-National Games in Central Sulawesi involves systematic training programs designed to improve physical fitness, technical mastery, tactical understanding, and competitive mentality. However, the intensive training process preceding major competitions often creates psychological and physiological burdens on athletes. One of the most common psychological problems experienced by athletes before competition is anxiety. Anxiety is generally characterized by feelings of fear, tension, worry, nervousness, and uncertainty regarding future performance outcomes. Competitive anxiety may negatively affect concentration, confidence, decision-making, and motor coordination during matches. Previous studies reported that excessive anxiety can impair athletic performance because athletes become unable to control emotional responses under competitive pressure.

In volleyball, psychological demands are particularly high because the game requires rapid decision-making, coordination, and communication among players. Each athlete occupies a specific role such as setter, spiker, libero, blocker, or defender, all of which require different tactical and cognitive responsibilities. Setters, for example, must rapidly analyze game situations and distribute the ball accurately under intense pressure. Consequently, psychological instability before matches may disrupt tactical execution and reduce overall team performance. Research by Widhiyanti et al. (2020) emphasized that cognitive and psychological readiness are essential components in volleyball performance because players must respond quickly to dynamic game situations.

Besides psychological factors, physical fatigue also becomes a major issue during pre-competition preparation. Fatigue refers to a multidimensional condition involving decreased physical and mental capacity due to prolonged activity, excessive training loads, inadequate recovery, or psychological stress. In sports settings, fatigue may manifest through reduced muscle strength, slower reaction time, decreased endurance, poor concentration, and diminished motivation. High-intensity training conducted continuously before competition can trigger accumulated fatigue, especially when recovery strategies are not optimally implemented. Studies in sports physiology explain that excessive fatigue contributes to decreased athletic performance and increases injury risk.

Anxiety and fatigue are interconnected conditions frequently experienced simultaneously by athletes before important competitions. Athletes facing high competitive expectations often experience psychological stress that contributes to mental fatigue,

while physical exhaustion from intensive training may increase emotional instability and anxiety symptoms. Internal factors influencing anxiety and fatigue include self-doubt, fear of failure, negative thinking, low confidence, and emotional pressure. External factors include audience pressure, coach expectations, environmental conditions, team demands, and the importance of competition outcomes. If these conditions are not managed effectively, athlete performance may decline significantly during competition.

Observations conducted among volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games indicated the emergence of pre-competition concerns related to anxiety and fatigue. Several athletes reported feelings of nervousness, excessive worry, sudden weakness, reduced confidence, and physical exhaustion during the final stages of preparation. Such conditions are important to investigate because psychological and physiological disturbances before competition may affect athlete readiness and achievement outcomes.

Recent developments in sports science increasingly recognize the importance of psychological and physiological monitoring in athlete preparation programs. Numerous studies have examined anxiety, fatigue, stress, and recovery in elite and amateur athletes across different sports contexts. Competitive anxiety has been widely discussed within sport psychology literature because it directly influences athletic performance, emotional regulation, and cognitive functioning. Contemporary theories divide competitive anxiety into cognitive anxiety, somatic anxiety, and self-confidence dimensions. Cognitive anxiety refers to worries and negative expectations, while somatic anxiety involves physiological responses such as increased heart rate, sweating, and muscle tension.

Several studies have demonstrated significant relationships between anxiety levels and sports performance outcomes. Research involving volleyball, basketball, soccer, and badminton athletes revealed that excessive anxiety negatively affects concentration, decision-making accuracy, motor coordination, and confidence during matches. Athletes experiencing uncontrolled anxiety often demonstrate inconsistent performance and reduced tactical efficiency. Conversely, moderate levels of anxiety may positively stimulate motivation and alertness when properly managed.

Fatigue has also become a major focus in sports performance research, particularly regarding training load monitoring and athlete recovery management. Modern training programs emphasize the importance of balancing exercise intensity and recovery to avoid overtraining syndrome. Physiological fatigue is commonly associated with muscle damage, glycogen depletion, neuromuscular dysfunction, and hormonal imbalance, while mental fatigue is linked to prolonged cognitive demands and psychological stress. Contemporary research indicates that mental fatigue can impair reaction time, decision-making speed, and technical performance in team sports.

Studies on volleyball athletes specifically found that intensive training periods before competitions frequently produce accumulated fatigue and emotional stress. Research among elite volleyball players reported that insufficient recovery strategies contributed to increased fatigue perception and decreased competitive readiness. Additionally, anxiety and fatigue are often correlated because psychological stress enhances physiological

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exhaustion through neuroendocrine responses. Athletes under competitive pressure may experience elevated cortisol levels, sleep disturbances, and emotional instability, all of which contribute to physical and mental fatigue.

Sports psychology interventions such as relaxation training, mental imagery, mindfulness, breathing exercises, and psychological counseling have been recommended to reduce anxiety and improve emotional regulation. Similarly, recovery interventions including sleep optimization, nutrition management, hydration, massage therapy, and periodized training have been widely implemented to minimize fatigue and optimize performance. Despite these advancements, athlete monitoring systems in many regional sports programs remain focused primarily on physical conditioning and technical skills, while psychological readiness receives comparatively less attention.

Although previous studies have extensively investigated anxiety and fatigue in sports contexts, several important gaps remain unresolved. First, most existing studies focus on elite national athletes or professional leagues, while limited research investigates regional athletes preparing for multi-event competitions such as the Pre-National Games in Indonesia. Athletes at the regional level often experience unique psychological pressures related to limited resources, high expectations for regional representation, and varying levels of psychological support systems.

Second, previous research commonly examines anxiety and fatigue separately rather than simultaneously exploring their coexistence in pre-competition settings. In reality, anxiety and fatigue are multidimensional conditions that interact dynamically and influence athlete performance collectively. Understanding both variables together provides a more comprehensive perspective regarding athlete readiness before major competitions.

Third, empirical studies focusing specifically on volleyball athletes in Central Sulawesi remain very limited. Differences in training culture, environmental conditions, competition experience, and athlete characteristics may produce distinct psychological and physiological responses. Therefore, findings from other regions or sports contexts may not fully represent the condition of Central Sulawesi volleyball athletes preparing for the 2025 Pre-National Games.

Fourth, many previous studies emphasize intervention effectiveness rather than descriptive profiling of athlete conditions before competition. Profiling anxiety and fatigue levels is essential as baseline information for coaches, sports psychologists, physiotherapists, and sports institutions in designing evidence-based athlete preparation programs. Without accurate assessment, training programs may overlook important psychological and physiological indicators affecting performance readiness.

Based on these problems and research gaps, this study aims to analyze the anxiety and fatigue levels of volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games. Specifically, the study seeks to identify the dominant dimensions of anxiety and fatigue experienced by athletes before competition and describe the overall readiness profile of athletes from psychological and physiological perspectives.

The novelty of this research lies in several aspects. First, this study simultaneously investigates anxiety and fatigue among regional volleyball athletes preparing for a major

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multi-event competition, providing a more integrated understanding of athlete readiness. Second, the research focuses specifically on Central Sulawesi volleyball athletes, a population rarely examined in previous sports science studies. Third, this study contributes empirical evidence regarding pre-competition psychological and physiological conditions within the Indonesian regional sports development context. Finally, the findings are expected to support the development of more comprehensive athlete preparation strategies integrating physical conditioning, psychological training, recovery management, and performance monitoring.

In conclusion, anxiety and fatigue represent crucial factors influencing volleyball athlete performance during pre-competition preparation. The increasing demands of competitive sports require athletes not only to possess excellent physical and technical abilities but also stable psychological conditions and adequate recovery capacity. Therefore, investigating anxiety and fatigue levels among Central Sulawesi volleyball athletes preparing for the 2025 Pre-National Games is important to provide scientific evidence supporting athlete development and performance optimization programs in Indonesian sports contexts.

METHODS

This study employed a quantitative descriptive research design to examine the anxiety and fatigue levels of volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games. Quantitative descriptive research is widely used in sports science to systematically describe phenomena through numerical data and statistical interpretation. The approach aims to provide factual, objective, and measurable descriptions of particular variables without manipulating research conditions. According to methodological perspectives in educational and sports research, descriptive quantitative methods are effective for identifying trends, patterns, and characteristics of populations in real contexts. Recent studies in sport psychology and exercise science have also emphasized the importance of descriptive approaches in profiling athletes' psychological and physiological conditions before competitions because such methods allow researchers to obtain valid baseline information regarding athlete readiness, emotional states, and recovery status.

The research was conducted at Gelora Bumi Kaktus, located in Palu City, Central Sulawesi Province, Indonesia. The selection of this venue was based on its relevance to the study population, namely volleyball athletes undergoing centralized training preparation for the 2025 Pre-National Games. Data collection began on Thursday, October 23, 2025, and continued until all research procedures were completed. Conducting the study during the pre-competition training phase was considered important because anxiety and fatigue levels tend to increase significantly during intensive preparation periods before major sporting events. Previous investigations in elite and regional sports settings demonstrated that athletes commonly experience heightened psychological tension and accumulated fatigue during the final weeks before competition due to increased training intensity, tactical pressure, and performance expectations.

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The population of this study consisted of all Central Sulawesi volleyball athletes preparing for the 2025 Pre-National Games competition. In quantitative research, population refers to a group of individuals or objects possessing specific characteristics relevant to the research objectives. The total population included 12 volleyball athletes registered in the official preparation program. Because the population size was relatively small, the study applied a total sampling technique in which all members of the population were included as research participants. Total sampling is frequently recommended in sports performance research involving elite or regional athletes because it allows comprehensive representation of the entire athlete group while minimizing sampling bias. Thus, the sample of this study consisted of 12 Central Sulawesi Pre-National Games volleyball athletes.

Data collection procedures utilized questionnaires and documentation methods. The questionnaire technique was selected because it enables researchers to obtain direct information from respondents regarding psychological and physical conditions efficiently and systematically. Closed-ended questionnaire items were used to measure athlete anxiety and fatigue levels based on standardized indicators commonly applied in sport psychology and sports physiology research. Anxiety assessment focused on emotional tension, nervousness, fear of failure, worry, and self-confidence disturbances before competition. Meanwhile, fatigue assessment included indicators related to physical exhaustion, muscle weakness, reduced concentration, decreased motivation, and recovery perception. Contemporary literature in sports science supports the use of self-report questionnaires for monitoring athlete well-being because subjective athlete perceptions are considered sensitive indicators of training stress and psychological readiness.

Documentation methods were additionally employed to support and validate questionnaire findings through training records, athlete participation data, and relevant institutional documents. Documentation techniques are important in quantitative sports research because they strengthen data credibility and provide contextual information regarding training conditions and athlete preparation programs. Several recent studies highlighted that combining questionnaire and documentation approaches improves the comprehensiveness of athlete monitoring systems, particularly in pre-competition environments.

The collected data were analyzed using descriptive statistical techniques. Quantitative data analysis involved organizing data based on variable categories, tabulating respondent responses, calculating percentages, means, and standard deviations, and interpreting findings according to established classification criteria. Descriptive statistical analysis is commonly used in athlete profiling studies because it provides a clear overview of participant conditions and identifies dominant trends within research variables. Data processing was conducted systematically to ensure accuracy and reliability of findings. The results were then interpreted conceptually and empirically by integrating contemporary literature in sport psychology, sports physiology, and volleyball performance research. Through this methodological approach, the study aimed to provide an objective description of anxiety and fatigue conditions among volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games.

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RESULTS AND DISCUSSION

Result

This study aimed to describe the anxiety and fatigue levels of volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games. Volleyball The research was conducted at Gelora Bumi Kaktus on Thursday, October 23, 2025. The respondents consisted of 12 PRAPOPNAS volleyball athletes from Central Sulawesi. Data collection was carried out using validated anxiety and fatigue questionnaires consisting of 27 anxiety items and 15 fatigue items. The collected data were analyzed using descriptive statistical techniques including minimum score, maximum score, mean, median, mode, standard deviation, and category distribution analysis.

Anxiety Level of Volleyball Athletes

The results of the anxiety questionnaire showed variations in anxiety scores among athletes. The detailed scores of each respondent are presented in Table 1.

Table 1.
Anxiety Level Scores of Each Respondent

No	Athlete Name	Score
1	Gerald Alfareza Putra	74
2	Rey Chris Anugrah	59
3	Fadly Pakaya	63
4	Gio Adi Putra Siabide	65
5	Igede Purnawan	64
6	Richard Andriano Likak	62
7	I Nengah Valdo Jovandra	57
8	Muh. Rafi A. Tola	72
9	Dika Putra Adity	67
10	Juan Albert Panggalua	65
11	Matthew Kenzi A.A	60
12	Fadil S. Tungko	74
Total		**782**

Based on Table 1, the anxiety scores of the athletes ranged from 57 to 74. Two athletes demonstrated the highest anxiety score of 74, while one athlete obtained the lowest score of 57. These findings indicate that athletes experienced varying levels of psychological pressure during the preparation period before competition.

Table 2.
Descriptive Statistics of Anxiety Levels

Statistics	Value
N	12
Mean	65.17
Median	64.50
Mode	65, 74
Standard Deviation	5.67
Minimum	57
Maximum	74

The descriptive statistical analysis showed that the average anxiety level of the athletes was 65.17, with a median value of 64.50. The modes were 65 and 74, indicating that these scores appeared most frequently among respondents. The standard deviation

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value of 5.67 demonstrated moderate variation in anxiety levels among athletes. The minimum score was 57, while the maximum score reached 74.

Table 3.
Frequency Distribution of Anxiety Levels

No	Category	Interval	Frequency	Percentage
1	Low	< 59.50	2	16.67%
2	Moderate	59.50 – 70.84	7	58.33%
3	High	> 70.84	3	25.00%
Total			**12**	**100%**

The categorization results revealed that 16.67% (2 athletes) were classified in the low anxiety category, 58.33% (7 athletes) were in the moderate category, and 25.00% (3 athletes) were in the high anxiety category. Therefore, the majority of PRAPOPNAS 2025 volleyball athletes experienced moderate anxiety levels before competition.

Fatigue Level of Volleyball Athletes

The fatigue questionnaire results demonstrated varying levels of perceived fatigue among respondents. The fatigue scores and Mean Rating of Perceived Exertion (RPE) values are shown in Table 4.

Table 4.
Fatigue Level Scores of Each Respondent

No	Athlete Name	Score	Mean RPE
1	Gerald Alfareza Putra	213	14.20
2	Rey Chris Anugrah	201	13.40
3	Fadly Pakaya	210	14.00
4	Gio Adi Putra Siabide	226	15.07
5	Igede Purnawan	173	11.53
6	Richard Andriano Likak	164	10.93
7	I Nengah Valdo Jovandra	157	10.47
8	Muh. Rafi A. Tola	154	10.27
9	Dika Putra Adity	196	13.07
10	Juan Albert Panggalua	184	12.27
11	Matthew Kenzi A.A	210	14.00
12	Fadil S. Tungko	160	10.67
Total		**2248**	**149.89**

Based on Table 4, the fatigue scores varied considerably among athletes. Gio Adi Putra Siabide obtained the highest fatigue score with an RPE value of 15.07, while Muh. Rafi A. Tola demonstrated the lowest fatigue score with an RPE value of 10.27.

Table 5.
Descriptive Statistics of Fatigue Levels

Statistics	Value
N	12
Mean	12.49
Median	12.67
Mode	14.00
Standard Deviation	1.77
Minimum	10.27
Maximum	15.07

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The descriptive statistical analysis indicated that the average fatigue level of the athletes was 12.49 based on the Borg Scale classification. The median value was 12.67, while the mode was 14.00. The standard deviation value of 1.77 indicated relatively small variation in fatigue levels among athletes. The minimum fatigue score was 10.27, whereas the maximum score reached 15.07.

Table 6.
Frequency Distribution of Fatigue Levels

No	Category	Interval	Frequency	Percentage
1	Light	6–11	5	41.67%
2	Moderate	12–15	7	58.33%
3	Heavy	16–20	0	0%
Total			**12**	**100%**

The results demonstrated that 41.67% (5 athletes) experienced light fatigue levels, while 58.33% (7 athletes) experienced moderate fatigue levels. No athletes were categorized within the heavy fatigue category. Thus, the majority of PRAPOPNAS 2025 volleyball athletes experienced moderate fatigue during the competition preparation period.

Overall, the findings of this study indicate that most volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games experienced moderate levels of both anxiety and fatigue. These results suggest that although athletes remained within manageable psychological and physiological conditions, continuous monitoring and recovery management are still necessary to maintain optimal performance readiness before competition.

Discussion

The purpose of this study was to determine the anxiety and fatigue levels of volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games before competition. Volleyball The findings demonstrated that the majority of athletes experienced moderate levels of anxiety and fatigue during the pre-competition phase. Specifically, 58.33% of athletes were categorized as having moderate anxiety levels, while 25.00% experienced high anxiety. In terms of fatigue, 58.33% of athletes were classified within the moderate fatigue category, whereas 41.67% experienced light fatigue. These findings indicate that psychological and physiological pressures remain significant issues during intensive competition preparation periods.

Anxiety is fundamentally an emotional response to threatening situations, uncertainty, and performance pressure. In sports contexts, competitive anxiety often emerges when athletes perceive competitions as highly demanding or fear failing to achieve expected outcomes. Contemporary sport psychology literature explains that anxiety affects athletes cognitively, emotionally, and physiologically. Cognitive anxiety includes negative thoughts, excessive worry, and fear of failure, while somatic anxiety manifests through increased heart rate, muscle tension, sweating, and restlessness. Research published in recent Scopus-indexed journals has consistently shown that elevated anxiety levels negatively influence concentration, confidence, tactical decision-making, and motor coordination during competition. Therefore, anxiety

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management has become an essential component of modern athlete preparation programs.

The results of this study revealed an average anxiety score of 65.17 with a standard deviation of 5.67, indicating moderate variation among athletes. These findings suggest that although most athletes were still capable of controlling emotional responses, several athletes experienced relatively high psychological pressure before competition. This condition is understandable considering that PRAPOPNAS represents an important multi-event competition involving regional prestige and athlete career opportunities. Previous studies reported that athletes preparing for national qualification tournaments frequently experience heightened anxiety due to expectations from coaches, teammates, institutions, and families. Similar findings were also reported among elite volleyball and basketball athletes, where pre-competition anxiety significantly increased during the final preparation phase.

The existence of athletes within the high anxiety category (25.00%) indicates that certain athletes may possess lower emotional regulation abilities or greater perceived pressure compared to others. Psychological theories explain that anxiety responses are influenced by internal and external factors. Internal factors include self-confidence, motivation, perfectionism, emotional stability, previous competitive experience, and fear of failure. Athletes with low self-confidence often interpret competitions as threats rather than opportunities, thereby increasing anxiety intensity. Meanwhile, external factors such as audience pressure, coach expectations, media attention, and training intensity also contribute significantly to athlete anxiety. Several studies in sports psychology emphasized that team sport athletes often experience social-performance pressure because their mistakes directly affect overall team outcomes.

Interestingly, most athletes in this study remained within the moderate anxiety category rather than severe anxiety levels. This finding may indicate that the athletes had already developed adaptive coping mechanisms through regular training exposure and competitive experience. Moderate anxiety is often considered beneficial in sports because it may increase alertness, motivation, and readiness to perform. According to the multidimensional anxiety theory, moderate anxiety can stimulate attentional focus and competitive intensity when athletes maintain sufficient self-confidence and emotional control. Therefore, anxiety does not always negatively affect performance if managed appropriately.

Besides anxiety, fatigue was another important variable identified in this study. The average fatigue score based on the Borg Rating of Perceived Exertion scale was 12.49, which falls within the moderate fatigue category. The relatively low standard deviation value (1.77) indicated that fatigue levels among athletes were relatively homogeneous. These findings reflect the physiological consequences of intensive training loads implemented before competition. Contemporary sports physiology literature explains that athletes preparing for major competitions commonly experience accumulated fatigue due to high training volume, repetitive technical drills, tactical sessions, strength conditioning, and insufficient recovery time.

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Fatigue in athletes is multidimensional and not limited to physical exhaustion alone. Modern sports science recognizes the interaction between physical fatigue and psychological fatigue. Physical fatigue generally involves reduced muscle capacity, neuromuscular inefficiency, glycogen depletion, and decreased endurance performance. Psychological fatigue, meanwhile, includes emotional exhaustion, reduced concentration, lowered motivation, irritability, and impaired cognitive function. Previous studies demonstrated that mental fatigue may impair reaction time, technical execution accuracy, and decision-making abilities in team sports such as volleyball and soccer. Consequently, fatigue management becomes crucial for maintaining athlete readiness before competitions.

The findings showing that no athletes were categorized within the heavy fatigue category indicate that the training program may still have been relatively well-controlled. This suggests that coaches likely implemented appropriate load distribution and recovery strategies during preparation. However, the dominance of moderate fatigue levels still requires attention because prolonged moderate fatigue may eventually progress into overtraining syndrome if recovery is inadequate. Sports performance studies emphasized that accumulated fatigue negatively influences explosive power, agility, vertical jump performance, and tactical responsiveness in volleyball athletes. Therefore, recovery management should remain a central component of athlete preparation programs.

Another important finding from this study is the possible interaction between anxiety and fatigue. Psychological stress before competition may intensify fatigue perception because emotional tension activates physiological stress responses involving cortisol release, autonomic nervous system activation, and sleep disturbances. Athletes experiencing anxiety often report poor sleep quality, muscle tension, reduced recovery capacity, and emotional exhaustion. Similarly, excessive fatigue may worsen anxiety because physically exhausted athletes tend to perceive themselves as less prepared for competition. Recent literature in sport psychology and exercise physiology increasingly highlights the bidirectional relationship between psychological stress and physiological fatigue among elite athletes.

The findings of this study are consistent with previous investigations involving volleyball athletes, soccer players, martial arts athletes, and endurance competitors. Many studies reported that pre-competition periods are characterized by elevated anxiety and moderate-to-high fatigue levels due to intensified training demands and psychological expectations. In volleyball specifically, athletes must maintain rapid cognitive processing, teamwork coordination, and explosive movement performance throughout matches. Consequently, psychological instability and fatigue accumulation may substantially affect competitive outcomes.

From a practical perspective, these findings emphasize the importance of integrating psychological support and fatigue monitoring into athlete development programs. Coaches should not focus exclusively on physical conditioning and technical drills but also prioritize psychological readiness and recovery quality. Psychological

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interventions such as relaxation techniques, breathing exercises, mindfulness training, self-talk regulation, and mental imagery have been shown to reduce competitive anxiety effectively. Likewise, fatigue management strategies including sleep optimization, hydration monitoring, nutritional support, massage therapy, active recovery, and periodized training programs are essential for minimizing excessive fatigue before competition.

Furthermore, sports organizations and coaching staff should conduct regular psychological and physiological assessments throughout training camps to identify athletes experiencing excessive stress or fatigue. Early detection allows coaches to adjust training intensity and provide individualized support before performance deterioration occurs. Contemporary athlete monitoring systems increasingly recommend combining subjective measures such as wellness questionnaires and RPE scales with objective physiological indicators to optimize athlete readiness.

Overall, this study confirms that anxiety and fatigue are important aspects influencing volleyball athlete preparedness before major competitions. Although most PRAPOPNAS 2025 Central Sulawesi volleyball athletes demonstrated moderate anxiety and fatigue levels, continuous monitoring and evidence-based intervention remain necessary to maintain optimal physical and psychological conditions. Proper management of these factors is expected to enhance athlete readiness, reduce performance decline risks, and improve competitive achievement during the 2025 Pre-National Games.

CONCLUSION

Based on the results of the data analysis, descriptive statistical calculations, and discussion findings, it can be concluded that the anxiety and fatigue levels of volleyball athletes preparing for the 2025 Central Sulawesi Pre-National Games were generally categorized at a moderate level. Volleyball The findings indicate that psychological and physiological pressures remain important aspects influencing athlete readiness before competition.

The analysis of anxiety levels revealed that 16.67% (2 athletes) were classified in the low anxiety category, 58.33% (7 athletes) were categorized as having moderate anxiety, and 25.00% (3 athletes) experienced high anxiety levels. The descriptive statistical analysis further showed that the mean anxiety score was 65.17, with a standard deviation of 5.67, indicating moderate variation among athletes. These results demonstrate that most athletes experienced psychological tension before competition, although the majority were still within manageable emotional conditions. The emergence of athletes in the high anxiety category suggests that competitive pressure, expectations, and emotional responses before matches remain significant challenges for some athletes.

Regarding fatigue levels, the results showed that 41.67% (5 athletes) experienced light fatigue, while 58.33% (7 athletes) were categorized as having moderate fatigue levels. No athletes (0%) were classified within the heavy fatigue category. The average

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fatigue score based on the Borg Rating of Perceived Exertion scale was 12.49, with a standard deviation of 1.77, indicating relatively homogeneous fatigue conditions among athletes. These findings suggest that the training program implemented during the preparation phase produced moderate physical and mental fatigue, but still remained within acceptable limits for athlete performance readiness.

Overall, this study concludes that the anxiety and fatigue conditions of Central Sulawesi PRAPOPNAS volleyball athletes in 2025 were predominantly moderate. Therefore, coaches and sports institutions are encouraged to continuously monitor athlete psychological and physiological conditions through structured recovery programs, mental training interventions, and balanced training load management in order to optimize athlete performance before competition.

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