

Anxiety Levels In Early Childhood Swimmers Participating In Swimming Competitions At Asa Swimming Club In 2025

Ridhe Liana Rose Anggiana Simarmata^{1A-E*}, Lutfhi Abdil Khuddus^{2B-D}, Pudjijuniarto^{3B-D}, Mokh. Nur Bawono^{4B-D}

^{1,2,3,4} Universitas Negeri Surabaya, Jawa Timur, Indonesia

ridheliana.22003@mhs.unesa.ac.id^{1*}, lutfhikhuddus@unesa.ac.id², pudjijuniarto@unesa.ac.id³,
mokhamadnur@unesa.ac.id⁴

ABSTRACT

This study aimed to assess anxiety levels among young swimmers at the ASA Swimming Club and identify the manifestation of anxiety across somatic, cognitive, affective, and motor dimensions to provide evidence-based recommendations for psychological support in youth competitive swimming programs. A quantitative descriptive research design was employed to examine anxiety levels in 15 young swimmers aged 5-8 years participating in competitive swimming events in 2025. Data were collected using an anxiety questionnaire administered two hours before competition, assessing four key dimensions: somatic, cognitive, affective, and motor aspects of anxiety. The questionnaire was distributed with assistance from coaches and parents to ensure comprehension among young participants. Descriptive statistical techniques, including mean scores, frequency distributions, and categorical analysis, were used to analyze the data. The findings revealed that 80% of participants (n=12) experienced moderate anxiety levels, while 20% (n=3) demonstrated high anxiety. Analysis across the four dimensions showed that anxiety manifested differently, with somatic symptoms and emotional responses being commonly reported, while cognitive and motor anxiety remained generally manageable. The results suggest that pre-competition anxiety is an inherent aspect of early childhood competitive swimming, influenced by sport-specific demands, developmental factors, and external pressures. The study highlights the need for integrating systematic psychological assessment into youth sports programs and adopting child-centred coaching approaches that prioritize learning and enjoyment. Implementing mental skills training and creating supportive competitive environments can help young athletes manage anxiety effectively and maintain long-term engagement in competitive swimming.

ARTICLE HISTORY

Received: 2025/12/22
Accepted: 2026/01/23
Published: 2026/02/05

KEYWORDS

Competitive anxiety;
Early childhood athletes;
Swimming competition;
Youth swimming;
Psychological factors in sport.

AUTHORS' CONTRIBUTION

A. Conception and design of the study;
B. Acquisition of data;
C. Analysis and interpretation of data;
D. Manuscript preparation;
E. Obtaining funding

Cites this Article : Simarmata, R.L.R.A.; Khuddus, L.A.; Pudjijuniarto, P.; Bawono, M.N. (2026). Anxiety Levels In Early Childhood Swimmers Participating In Swimming Competitions at the ASA Swimming Club In 2025. **Competitor: Jurnal Pendidikan Kepeleatihan Olahraga**. 18 (1), p.0216-0227

INTRODUCTION

Competitive sports play a strategic role in supporting individual physical and mental development, particularly for young athletes who are in the development phase of character, emotions, and self-regulation. An athlete's success is not only determined by physical

readiness and technical mastery, but is also greatly influenced by psychological factors such as concentration, self-confidence, emotional regulation, and the ability to cope with competitive pressure. Various studies confirm that unstable psychological conditions can hinder an athlete's performance, even when physical and technical readiness is at an optimal level (Setiawan et al., 2020; Prasetyo et al., 2022; Putra & Pratama, 2025).

Swimming is an individual sport that demands a high level of consistent performance and self-control. Results in swimming competitions are determined objectively through recorded times, so even small errors can directly impact the final result. The lack of direct support from teammates on the track places the responsibility for performance entirely on the athlete (Bial, 2022). This situation has the potential to increase psychological stress, especially in young athletes who are still in the emotional and cognitive development stages.

Pressure in early childhood swimming is often exacerbated by coaches' and parents' expectations of achievement. The expectation of winning, improving a record, or maintaining a top-tier status can be a significant source of psychological stress for children (Fadluoh et al., 2024; Yusuf, 2024). If this pressure is not managed appropriately, child athletes are at risk of developing psychological disorders such as excessive competitive anxiety, decreased motivation, and even a desire to withdraw from competitive sports. Therefore, the main issue that arises is the lack of optimal attention to the anxiety levels of early childhood swimmers within the context of club development, despite this factor having direct implications for the performance and sustainability of children's sporting careers.

Competitive anxiety is a common psychological response in competitive situations and is characterized by feelings of worry, tension, and increased physiological activation. At moderate levels, anxiety can be adaptive because it increases an athlete's alertness and preparedness to face the demands of competition. However, excessive anxiety has been shown to negatively impact athletes' focus, decision-making, motor coordination, and emotional stability (Raibowo et al., 2023; S et al., 2024).

International research shows that competitive anxiety is significantly related to sports performance, particularly in individual sports such as swimming, athletics, and gymnastics (Craft et al., 2003; Mellalieu et al., 2009; Beenen et al., 2025). These studies confirm that young athletes are more susceptible to anxiety due to limited competitive experience and emotional immaturity. Furthermore, age, gender, competitive experience, and social support have been shown to influence anxiety levels in young athletes (Rice et al., 2016; Harwood et al., 2019).

In the swimming context, several Scopus studies report that pre-competition anxiety contributes to fluctuations in performance times, particularly in junior athletes (Nicholls et al., 2016; Pelka et al., 2017). Meanwhile, reputable national literature (SINTA) also highlights the importance of psychological aspects in youth sports development, but most of this still focuses on team sports or school physical education contexts (Raibowo et al., 2023; Ayranci & Aydin, 2025).

Despite increasing awareness of the importance of sports psychology, evaluation practices at the club level are still dominated by physical and technical indicators such as speed, endurance, and movement efficiency. Trinidad (2023) asserts that

psychological assessment, particularly competitive anxiety, is often overlooked in youth swimming development programs. As a result, anxiety is only identified after it has negatively impacted an athlete's performance or motivation, rather than as part of long-term prevention and development efforts.

Based on the literature review, three main research gaps exist. First, most research on competitive anxiety focuses on adolescent and adult athletes, while empirical studies on young swimmers are still limited, particularly in the context of sports clubs. Second, existing research tends to be general in nature and has not specifically explored contextual factors within the club environment, such as training patterns, coach expectations, and social dynamics that influence anxiety in young athletes.

Third, in the Indonesian context, studies on anxiety in young swimmers are relatively few and have not utilised systematic, evidence-based psychological assessment approaches. Yet, cultural characteristics, parenting styles, and the national sports development system have the potential to significantly influence the psychological experiences of young athletes. These limitations highlight the urgent need for more contextual, empirical, and focused research on young swimmers in club environments.

Therefore, there is a clear research gap related to the lack of empirical data on anxiety levels in young swimmers and the factors that influence them in competitive club settings, particularly in Indonesia. This research is expected to fill this gap and strengthen the scientific foundation for developing more holistic swimming development programs.

Based on the identified research problems and gaps, this study aims to assess the anxiety levels of young swimmers at the ASA Swimming Club and identify factors contributing to anxiety in a competitive context. This research also aims to provide an empirical basis for developing recommendations for applicable psychological support within early childhood swimmer development programs.

The novelty of this research lies in: (1) its specific focus on young swimmers within a competitive club context, (2) its integration of developmental psychology and sport psychology perspectives, and (3) its provision of empirical evidence based on the local Indonesian context, which is still limited in the literature. Thus, this research not only contributes to enriching academic research but also has practical implications for coaches, clubs, and parents in creating a more psychologically healthy and sustainable swimming development environment.

METHODS

This study employed a quantitative descriptive research design to examine anxiety levels in early childhood swimmers participating in competitive events. A descriptive approach was selected to provide an objective and systematic portrayal of children's psychological conditions without manipulating any variables. The research was conducted during an official swimming competition organized by the ASA Swimming Club in 2025, ensuring that data were collected in a natural competitive setting. To capture pre-competition psychological states, data collection was conducted shortly before the athletes entered the race environment.

The participants were young swimmers aged 5–8 years who were officially registered and actively competed in the event. A purposive sampling technique was applied based on inclusion criteria: (1) early childhood age category, (2) active membership in the ASA Swimming Club, and (3) participation in the official competition. This age range was selected because early childhood represents a critical period of emotional development in which children are particularly sensitive to competitive pressure and psychological stressors. Ethical procedures were strictly followed, including parental informed consent and approval from coaches and competition officials before data collection.

Anxiety data were collected using a competition anxiety questionnaire adapted for early childhood athletes. The instrument was developed based on theoretical frameworks of competitive anxiety in sports psychology, emphasizing both emotional (affective) and cognitive components of anxiety. The questionnaire consisted of simple, age-appropriate statements designed to measure children's feelings of worry, nervousness, tension, fear of failure, and perceived readiness to compete. Items were constructed using clear and concrete language to ensure comprehensibility for young children.

The questionnaire comprised two main dimensions: (1) Emotional anxiety, reflecting physiological and affective responses such as nervousness, fear, tension, and discomfort before competition, and (2) Cognitive anxiety, reflecting worry, negative expectations, and concerns related to performance outcomes.

Responses were measured using a three-point Likert-type scale adapted for early childhood comprehension (e.g., 1 = not felt, 2 = sometimes felt, 3 = strongly felt). This simplified scale was chosen to minimise cognitive burden and enhance response accuracy among young participants. Higher total scores indicated higher levels of competitive anxiety.

To ensure content validity, the instrument was reviewed by experts in sports psychology and early childhood education. Revisions were made based on expert feedback to improve clarity, relevance, and developmental appropriateness of the items. Before the main data collection, a pilot test was conducted with a small group of children of similar age characteristics to evaluate item comprehension and response consistency. Items that caused confusion or misinterpretation were revised or removed.

The reliability of the instrument was evaluated using internal consistency analysis, yielding an acceptable reliability coefficient for descriptive research involving young children. This indicates that the instrument consistently measured anxiety constructs within the target population. During administration, questionnaires were completed with the assistance of trained coaches and researchers, who provided neutral explanations without influencing participants' responses. This procedure was essential to ensure accurate data collection while maintaining the child-friendly nature of the assessment.

Data analysis was conducted using descriptive statistical techniques, including the calculation of mean scores, frequency distributions, and percentage categorizations of anxiety levels (low, moderate, and high). These analyses were intended to provide a comprehensive overview of anxiety profiles among young swimmers before competition and to support the interpretation of their psychological conditions within competitive swimming contexts.

RESULTS AND DISCUSSION

Result

This section presents the anxiety levels of 15 young swimmers (aged 5–8 years) at the ASA Swimming Club measured before competition in 2025. Findings are reported through descriptive statistics, frequency distributions, and categorical analysis of anxiety levels.

Description of Questionnaire Responses

The anxiety questionnaire was administered to 15 young swimmers from the ASA Swimming Club who participated in competitive swimming events in 2025. Two hours before these athletes entered their races, the questionnaire was distributed to Respondents, with the expectation that the anxiety levels obtained would align with the research objectives. The following presents the results of the anxiety questionnaire, which contains several statements and utilizes a test instrument consisting of several aspects: somatic, cognitive, affective, and motor aspects of athletes from the ASA Swimming Club who participated in swimming competitions in 2025.

The anxiety level scores of the 15 young swimmers from the ASA Swimming Club can be illustrated in the diagram below:

Table 1.
Anxiety Level Classification

Anxiety Scale	Anxiety Level
1-22	Low
23-44	Medium
45-66	High
67-88	Very High

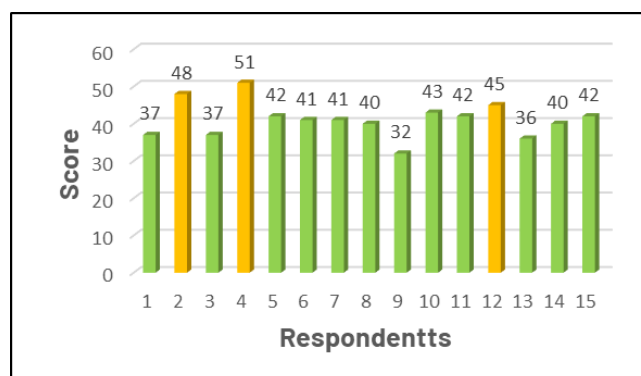


Figure 1.

Total Score Diagram of Respondents' Answers

Based on Figure 1, the distribution of total anxiety scores among Respondents is presented to describe anxiety levels in young swimmers. The results show that the highest score was obtained by Respondent 4 (51), while the lowest score was recorded by Respondent 9 (32). Of the 15 Respondents, most participants were classified in the moderate anxiety category, with several Respondents falling into the high anxiety category. The mean anxiety score was 41.6, indicating that the overall anxiety level of swimmers at the ASA Swimming Club was categorized as moderate.

Somatics Anxiety

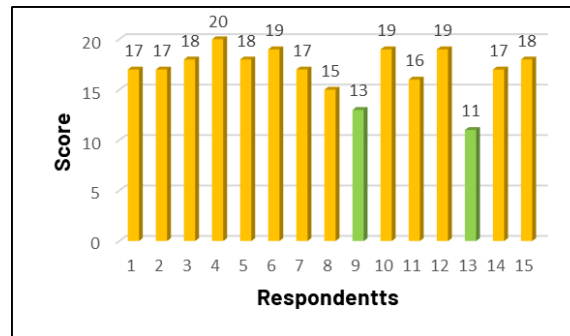


Figure 2.
Somatics Test Results

Based on Figure 2., the diagram presents the somatic anxiety scores of Respondents participating in swimming competitions. The results indicate that somatic anxiety scores ranged from 11 to 20, with the highest score of 20 obtained by Respondents 4 and the lowest score of 11 recorded by Respondents 13. Most Respondents showed relatively high somatic anxiety scores, while only a small number were classified in the moderate category. Overall, the distribution suggests that somatic symptoms of anxiety, such as physical tension and physiological discomfort, were commonly experienced by young swimmers before competition.

Table 2.
Criteria for Somatic Anxiety

Anxiety Scale	Anxiety Level
1-7	Low
8-14	Medium
15-21	High
22-28	Very High

Motor Skills Anxiety

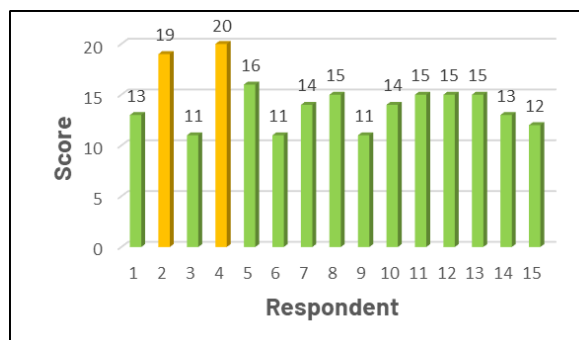


Figure 3.
Motor Skills Test Results

Based on Figure 3, the diagram illustrates the motor skills test results of the Respondents. The scores ranged from 11 to 20, with the highest score obtained by Respondent 4 (20) and the lowest score recorded by Respondents 3, 6, and 9 (11). Most Respondents achieved scores within the moderate range, while a small number demonstrated higher motor skill performance. Overall, the distribution of scores indicates that the motor skills of the swimmers were generally moderate, with some variation among individuals, reflecting differences in movement control and coordination during swimming performance.

Table 3.
 Criteria for Motor Skills Anxiety

Anxiety Scale	Anxiety Level
1-9	Low
10-18	Medium
19-27	High
28-36	Very High

Cognitive Anxiety

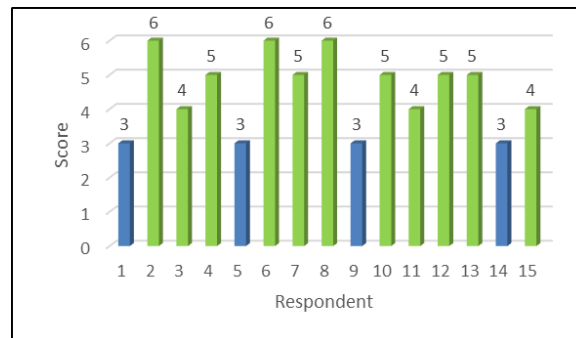


Figure 4.
 Cognitive Test Results

Based on Figure 4, the diagram presents the cognitive anxiety test results of the Respondents. The scores ranged from 3 to 6, with the highest score of 6 obtained by Respondents 2, 6, and 8, while the lowest score of 3 was recorded by Respondents 1, 5, 9, and 14. Most Respondents achieved scores in the moderate category, indicating that cognitive aspects of anxiety, such as worry and negative thoughts related to competition, were present but generally manageable. Overall, the results suggest that cognitive anxiety among young swimmers tended to be at a moderate level before competition.

Table 4.
 Criteria for Cognitive Anxiety

Anxiety Scale	Anxiety Level
1-3	Low
4-6	Medium
7-9	High
10-12	Very High

Affective Anxiety

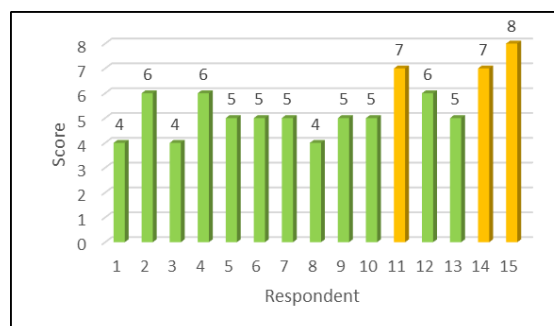


Figure 5.
 Affective Test Results

Based on Figure 5, the diagram presents the affective anxiety test results of the Respondents. The scores ranged from 4 to 8, with the highest score of 8 obtained by

Respondent 15, while the lowest score of 4 was recorded by Respondents 1, 3, and 8. Most Respondents achieved scores in the moderate category, indicating that affective aspects of anxiety, such as feelings of nervousness, fear, and emotional responses related to competition, were present but generally manageable. Overall, the results suggest that affective anxiety among young swimmers tended to be at a moderate level before competition.

Table 5.
Criteria for Affective Anxiety

Anxiety Scale	Anxiety Level
1-3	Low
4-6	Medium
7-9	High
10-12	Very High

The following table shows the percentage of athletes' anxiety levels according to the classification of anxiety levels.

Table 6.
Classification of anxiety levels

Anxiety Scale	Anxiety Level	Frequency	Percentage
1-22	Low	0	0
23-44	Medium	12	80
45-66	High	3	20
67-88	Very High	0	0
Total		15	100

According to Table 6, it is known that there are 12 athletes with a percentage of 80% who have anxiety levels in the medium category, 3 athletes in the high category with a percentage of 20%, and 0 athletes in the low and very high categories. For clarity, this will be presented in the following diagram:

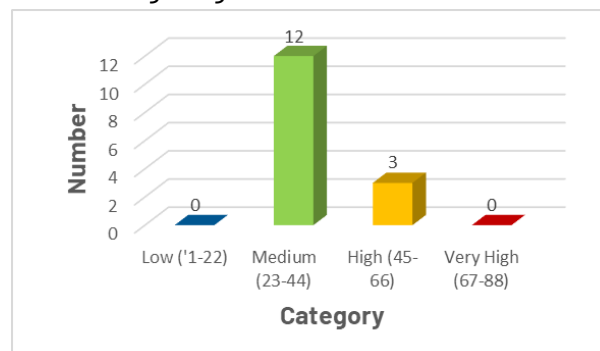


Figure 6.
Classification of anxiety levels

Discussion

The findings of this study confirm that anxiety is a salient psychological response experienced by young children participating in competitive swimming events at the ASA Swimming Club. The competitive environment characterized by race schedules, unfamiliar surroundings, spectators, and performance expectations acts as a significant psychological stimulus that can evoke feelings of worry, tension, and nervousness among young swimmers. At the early childhood stage, emotional regulation and coping skills are

still in the process of development, making children more vulnerable to competitive stressors than adolescent or adult athletes. This supports developmental psychology perspectives, which emphasize that young children have limited cognitive and emotional resources to interpret competitive pressure adaptively (Harwood et al., 2019; Beenen et al., 2025). Therefore, the presence of anxiety in this context should be understood as a developmentally plausible response rather than merely an individual weakness.

Swimming, as an individual sport, places a substantial burden of personal responsibility on athletes, as performance outcomes are solely attributed to the individual. Unlike team sports, young swimmers cannot rely on teammates during races, which intensifies self-evaluation, fear of mistakes, and concern over outcomes. The present findings are consistent with Pluhar et al. (2019), who reported that individual sports tend to elicit higher competitive anxiety than team sports, particularly among younger athletes who have not yet developed effective coping mechanisms. Similar evidence from recent studies indicates that individual-sport athletes experience heightened performance-related anxiety due to constant outcome accountability and direct social comparison (Nicholls et al., 2016; Sholiha et al., 2025). In swimming competitions, this pressure is further amplified by objective performance indicators such as time records, which leave little room for subjective interpretation of success.

Beyond sport-specific characteristics, environmental and social factors play a critical role in shaping anxiety responses among young athletes. Expectations from parents and coaches—whether explicitly communicated or implicitly perceived—can function as powerful sources of psychological pressure. Children at this age often struggle to differentiate competition as a learning-oriented experience from competition as an achievement-demanding situation. This finding aligns with Rice et al. (2019), who demonstrated that external expectations significantly influence emotional responses and anxiety levels in youth sports. Similarly, Akins (2025) emphasized that parental and coaching behaviours strongly shape children's competitive experiences, either by fostering enjoyment and confidence or by intensifying fear of failure and anxiety. These findings suggest that anxiety in young swimmers is not solely an individual psychological phenomenon, but also a reflection of the broader social environment surrounding the athlete.

Importantly, anxiety should not be viewed exclusively as a negative psychological state. The present findings support the notion that anxiety can be adaptive at low to moderate levels, enhancing alertness, focus, and readiness to compete. This interpretation is consistent with the multidimensional anxiety theory, which posits that cognitive and somatic anxiety may facilitate performance when maintained within optimal thresholds (Craft et al., 2003; Mellalieu et al., 2009). However, when anxiety exceeds manageable levels, it can disrupt concentration, impair motor coordination, and reduce self-confidence. This study's results align with Aouani et al. (2024), who reported that excessive anxiety negatively affects performance quality in swimming, particularly among younger and less experienced athletes. Thus, the critical issue lies not in eliminating anxiety, but in managing its intensity and direction.

The findings of this study also reinforce the urgent need to integrate psychological assessment into early childhood athlete development programs. Current evaluation practices at the club level tend to prioritize physical conditioning and technical mastery, while psychological states receive limited systematic attention. Such an imbalance may lead to delayed identification of anxiety-related issues, allowing negative competitive experiences to accumulate. Trinidad (2023) highlighted that insufficient early psychological monitoring can reduce children's motivation, enjoyment, and long-term engagement in competitive sports. Longitudinal studies further suggest that repeated exposure to high-anxiety competitive environments during childhood may increase the risk of burnout and sport dropout during adolescence (Gustafsson et al., 2017; Harwood et al., 2019).

From a practical perspective, these findings carry important implications for coaches, parents, and club managers. Child-centred coaching approaches that emphasize enjoyment, skill development, and effort rather than solely competition outcomes are essential in reducing maladaptive anxiety. Creating a supportive and psychologically safe competitive climate can help children interpret competitions as opportunities for learning rather than judgment. Moreover, integrating basic mental skills training, such as breathing exercises, relaxation techniques, positive verbal reinforcement, and simple pre-competition routines, may assist young swimmers in regulating anxiety more effectively (Weinberg & Gould, 2019; Raibowo et al., 2023). Such strategies are particularly suitable for early childhood athletes due to their simplicity and developmental appropriateness.

Overall, this study confirms that anxiety is an inherent component of young children's participation in competitive swimming. Understanding its levels, sources, and contextual influences is crucial for designing holistic training programs that balance physical performance development with psychological well-being. By acknowledging anxiety as a normal yet manageable aspect of early competitive experiences, swimming clubs can foster healthier, more enjoyable, and more sustainable pathways for young athlete development.

CONCLUSION

This study examined anxiety levels among 15 young swimmers aged 5-8 years at the ASA Swimming Club before competitive swimming events in 2025. The findings reveal that the majority of participants (80%) experienced moderate anxiety levels, while 20% demonstrated high anxiety, and none fell into the low or very high categories. The mean total anxiety score was 40.67, confirming that overall anxiety among young swimmers was in the moderate range. Analysis across four anxiety dimensions, somatic, cognitive, affective, and motor, showed that anxiety manifested differently across psychological and physical domains, with most participants demonstrating manageable levels of pre-competition stress. These findings confirm that anxiety is an inherent aspect of early childhood participation in competitive swimming, influenced by the individual nature of the sport, developmental characteristics of young children, and external pressures from coaches and parents.

The study underscores the importance of integrating psychological assessment and support into youth sports programs. Coaches, parents, and club managers should

adopt child-centred approaches that emphasize learning and enjoyment over achievement outcomes. Implementing mental skills training, such as relaxation techniques and positive reinforcement, can help young athletes develop effective coping strategies for managing competitive pressure. By addressing both physical and psychological aspects of athlete development, swimming programs can create more supportive environments that promote long-term engagement, performance enhancement, and overall well-being in young competitive swimmers. Future research should explore intervention strategies and the longitudinal effects of anxiety on young athletes' development in competitive sports settings.

Acknowledgments

The authors would like to express their sincere gratitude to the management of ASA Swimming Club for granting permission and providing full support for the implementation of this study. Special appreciation is extended to the coaches and competition officials for their assistance during the data collection process. The authors also thank the parents and young athletes who willingly participated in this research. Their cooperation and enthusiasm made this study possible. Finally, the authors acknowledge all parties who contributed, directly or indirectly, to the successful completion of this research.

REFERENCES

- Akines, S. A. (2025). Family and Coach Support on Motivation and Performance in Adolescent Athletes: A Systematic Review. *Majalah Ilmiah Fisioterapi Indonesia*, 13(3), 575–579. <https://doi.org/10.24843/mifi.000000377>
- Aouani, H., Amara, S., Sahli, F., Barbosa, T. M., Souissi, N., & van den Tillaar, R. (2024). Effect of intensity training block on anxiety state and performance in competitive swimmers. *PeerJ*, 12, e17708. <https://doi.org/10.7717/peerj.17708>
- Ayranci, M., & Aydin, M. K. (2025). The complex interplay between psychological factors and sports performance: A systematic review and meta-analysis. *PLOS ONE*, 20(8), e0330862. <https://doi.org/10.1371/journal.pone.0330862>
- Beenen, K. T., Vosters, J. A., & Patel, D. R. (2025). Sport-related performance anxiety in young athletes: A clinical practice review. *Translational Paediatrics*, 14(1), 12738–12138. <https://doi.org/10.21037/tp-24-258>
- Bial, T. (2022). Intervensi Goal Setting Dalam Cabang Olahraga Terukur: Systematic Literature Review. *Jurnal Sains Keolahragaan Dan Kesehatan*, 7(1), 46–55. <https://doi.org/10.5614/jskk.2022.7.1.5>
- Fadluoh, F. M., Komarudin, K., Saputra, M. Y., & Novian, G. (2024). Dukungan Orang Tua dan Motivasi Berprestasi Anak Usia Muda dalam Olahraga: Sebuah Studi Korelasi dalam Cabang Olahraga Renang. *Jurnal Sains Keolahragaan Dan Kesehatan*, 9(1), 87–99. <https://doi.org/10.5614/jskk.2024.9.1.8>
- Pluhar, E., McCracken, C., Griffith, K. L., Christino, M. A., Sugimoto, D., & Meehan, W. P. (2019). Team Sport Athletes May Be Less Likely To Suffer Anxiety or Depression than Individual Sport Athletes. *Journal of Sports Science & Medicine*, 18(3), 490–496.

- Prasetyo, R., Bayu, W. I., & Darisman, E. K. (2022). Psychological characteristics of athletes in a regional training center. *Journal Sport Area*, 7(2), 310–319. [https://doi.org/10.25299/sportarea.2022.vol7\(2\).7323](https://doi.org/10.25299/sportarea.2022.vol7(2).7323)
- Putra, A. A., & Pratama, R. S. (2025). Anxiety as a psychological factor in futsal athlete performance. *Sriwijaya Journal of Sport*, 4(3), 342–355. <https://doi.org/10.55379/sjs.v4i3.104>
- Raibowo, S., Wulandari, I., Prabowo, A., Permadi, A., & Rizky, O. B. (2023). KECEMASAN DAN KONSENTRASI PADA ATLET TENIS LAPANGAN POMNAS XVII SUMATERA BARAT 2022. *Jurnal Kejaora (Kesehatan Jasmani Dan Olah Raga)*, 8(1), 1–8. <https://doi.org/10.36526/kejaora.v8i1.2418>
- Rice, S. M., Gwyther, K., Santesteban-Echarri, O., Baron, D., Gorczynski, P., Gouttebarger, V., Reardon, C. L., Hitchcock, M. E., Hainline, B., & Purcell, R. (2019). Determinants of anxiety in elite athletes: A systematic review and meta-analysis. *British Journal of Sports Medicine*, 53(11), 722–730. <https://doi.org/10.1136/bjsports-2019-100620>
- S, A., Aliriad, H., Kusuma, D. W. Y., Arbanisa, W., & Winoto, A. (2024). Athletes' Stress and Anxiety Before The Match. *Indonesian Journal of Physical Education and Sport Science*, 4(1), 11–21. <https://doi.org/10.52188/ijpess.v4i1.535>
- Setiawan, E., Patah, I. A., Baptista, C., Winarno, M. E., Sabino, B., & Amalia, E. F. (2020). Self-efficacy dan mental toughness: Apakah faktor psikologis berkorelasi dengan performa atlet? *Jurnal Keolahragaan*, 8(2), 158–165. <https://doi.org/10.21831/jk.v8i2.33551>
- Sholiha, A. U., Suhariyanti, M., Bhakti, Y. H., & Yulisatria, G. (2025). Tinjauan Literatur Tentang Stres Pada Atlet: Analisis Berdasarkan Data Garuda. *Jurnal Ilmiah STOK Bina Guna Medan*, 13(2), 249–266. <https://doi.org/10.55081/jsbg.v13i2.3865>
- Trinidad, A. (2023). Variables and instruments for assessing mental health in competitive swimmers: A narrative review. *F1000Research*. <https://doi.org/10.12688/f1000research.140504.1>
- Yusuf, M. S. (2024). Pengaruh Emosi terhadap Performa Atlet dalam Psikologi Olahraga. *Journal of Sport Coaching and Physical Education*, 9(2), 162–169.