

PSYCHOLOGICAL RESILIENCE AND COMPETITIVE ANXIETY REGULATION IN YOUNG ATHLETES: AN IMRAD-BASED INTEGRATIVE STUDY

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Abstract

This article examines psychological resilience and competitive anxiety regulation in young athletes as interdependent determinants of sustainable sport performance, educational adaptation, and long-term athlete development. The central argument is that anxiety is not simply a negative emotional state to be suppressed, but a psychophysiological signal that becomes constructive or destructive depending on the athlete's coping repertoire, coaching climate, parental expectations, recovery habits, and interpretation of competitive pressure. On the basis of an integrative review of contemporary sport psychology literature, international physical activity guidelines, and applied recommendations for athlete mental health, the study develops a structured model in which resilience is treated as a dynamic capacity formed through self-regulation, meaning-making, social support, autonomy-supportive coaching, sleep discipline, load monitoring, and reflective learning. The article uses the IMRAD logic to synthesize evidence and proposes pedagogical and psychological mechanisms for reducing maladaptive anxiety without weakening competitive motivation. The findings indicate that resilient young athletes are not those who never experience fear, but those who can transform uncertainty into task-oriented attention and recover psychologically after defeat. Practical recommendations are offered for coaches, physical education teachers, parents, and sport institutions.

Keywords: Young athletes; sport psychology; psychological resilience; competitive anxiety; self-regulation; coaching climate; athlete development.

Introduction

ANNOTATSIYA

Ushbu maqolada yosh sportchilarda psixologik bardoshlilik va musobaqaviy xavotirni boshqarish barqaror sport natijasi, ta'limiy moslashuv va uzoq muddatli sportchi rivojlanishining o'zaro bog'liq omillari sifatida tahlil qilinadi. Tadqiqotda xavotir faqat salbiy holat emas, balki murabbiylik muhiti, oilaviy kutishlar, tiklanish tartibi va sportchining bosimni talqin qilishiga ko'ra konstruktiv yoki destruktiv kuchga aylanishi mumkin bo'lgan psixofiziologik signal sifatida talqin etiladi.

Kalit so'zlar: yosh sportchilar; sport psixologiyasi; psixologik bardoshlilik; musobaqaviy xavotir; o'zini boshqarish

АННОТАЦИЯ

В статье рассматриваются психологическая устойчивость и регуляция соревновательной тревожности у юных спортсменов как взаимосвязанные факторы стабильного спортивного результата, образовательной адаптации и долгосрочного развития спортсмена. Тревожность трактуется не только как отрицательное состояние, а как психофизиологический сигнал, значение которого зависит от копинг-стратегий, тренерского климата, семейных ожиданий и восстановления.

Ключевые слова: юные спортсмены; спортивная психология; психологическая устойчивость; соревновательная тревожность; саморегуляция

INTRODUCTION

Sport performance in youth and early specialization contexts is often described through technical proficiency, aerobic and anaerobic capacity, anthropometric suitability, and tactical intelligence, yet the psychological architecture that allows a young athlete to use these resources under pressure is just as decisive and sometimes more decisive than the visible motor component. Modern sport is not a neutral playground; even at school, club, and regional levels it already contains public ranking, selection anxiety, parental investment, social media comparison, fear of injury, conflict between education and training, and a persistent demand

to be measurable. The World Health Organization emphasizes that regular physical activity produces broad physical and mental health benefits, but the institutional environment in which sport is practiced determines whether participation becomes health-promoting or psychologically exhausting [1]. For young athletes, the contradiction is especially sharp: sport can strengthen self-esteem, belonging, discipline, and cognitive control, but it can also generate perfectionism, shame after failure, sleep disruption, burnout, and early dropout when achievement is managed through fear rather than development. Competitive anxiety is therefore not an accidental disturbance; it is a predictable psychological response to evaluation, uncertainty, identity threat, and anticipated loss. The more important question is not whether anxiety appears, because it inevitably appears before selection trials, finals, important examinations in sport schools, or public competitions, but whether the athlete has learned to interpret bodily arousal and intrusive thoughts as information that can be regulated. Psychological resilience, in this context, should not be simplified as toughness, emotional silence, or blind endurance. Resilience is a dynamic process through which the athlete preserves or restores functional adaptation when exposed to stressors. It combines cognitive appraisal, emotional modulation, attentional control, recovery behavior, social attachment, and value-based commitment. This is why the International Olympic Committee's consensus work on athlete mental health is important even for youth sport: it rejects the outdated assumption that athletic success protects a person from mental health difficulties and instead treats psychological support as part of responsible sport governance [3]. If elite athletes require structured mental health protection, then young athletes, whose identity and coping resources are still developing, require it even more. Theoretical sport psychology has long shown that anxiety has cognitive, somatic, and behavioral components; however, in everyday coaching practice these components are often collapsed into moral judgments such as 'weak character', 'lack of will', or 'insufficient motivation'. Such language is pedagogically convenient but scientifically poor. A young footballer who hesitates before a penalty, a wrestler who becomes rigid in the opening seconds, a gymnast who loses coordination after one mistake, or a runner who starts too fast because of pre-race tension is not necessarily weak; the athlete may be experiencing a mismatch between task demand and self-regulation skill. In this sense, psychological preparation must be designed with the same seriousness as physical conditioning. Warm-up protocols,

strength progression, tactical analysis, and nutrition planning are accepted as legitimate; breathing control, attentional refocusing, cognitive restructuring, reflective diaries, and recovery conversations should be treated with equal legitimacy. The aim of this article is to analyze the relationship between psychological resilience and competitive anxiety regulation in young athletes and to propose an integrative model for educational and coaching practice. The scientific problem is formulated as follows: how can coaches and sport educators reduce maladaptive competitive anxiety while preserving the motivational energy that makes competition meaningful? The object of the study is the psychological preparation of young athletes, and the subject is the interaction between resilience resources and anxiety-regulation mechanisms in competitive sport settings. The article is organized according to IMRAD logic: the Materials and Methods section explains the integrative review approach; the Results section synthesizes key mechanisms; the Discussion section interprets their pedagogical significance; and the Conclusion section presents practical implications for coaches, teachers, parents, and sport organizations.

MATERIALS AND METHODS

The study was conducted as an integrative theoretical review with applied pedagogical interpretation rather than as a laboratory experiment, because the aim was not to measure one isolated variable but to synthesize a complex interdisciplinary problem that belongs simultaneously to sport psychology, physical education, youth development, and health-oriented coaching. The methodological basis included four groups of sources: first, international guidelines and policy documents on physical activity and sport-related health, including the WHO guidelines on physical activity and sedentary behavior and the WHO global status report on physical activity [1; 2]; second, sport psychology literature on anxiety, coping, resilience, achievement motivation, and athlete mental health [3; 5; 6; 7; 8]; third, applied research on young athletes, coaching environments, long-term development, and mental health support [9; 10; 11]; and fourth, institutional recommendations that connect physical activity promotion with public health and educational responsibility [4; 12]. The review followed a conceptual triangulation procedure. At the first stage, the problem field was delimited by identifying recurring psychological stressors in youth sport: evaluation pressure, fear of failure, performance comparison, selection

uncertainty, injury risk, parental expectations, coach-athlete communication, and conflict between educational and training responsibilities. At the second stage, the literature was categorized according to the dominant mechanism addressed by each source: cognitive appraisal, emotional regulation, social support, motivational climate, recovery, mental health literacy, and pedagogical intervention. At the third stage, the categories were compared to determine whether resilience is best understood as a personality trait, a set of skills, a contextual outcome, or a developmental process. The conclusion of this analysis is that resilience in young athletes should be treated primarily as a developmental process supported by teachable skills and environmental conditions. This position avoids two methodological errors: the first is biological reductionism, which assumes that only naturally 'strong' athletes survive pressure; the second is environmental determinism, which assumes that supportive conditions alone guarantee psychological adaptation. In reality, resilience emerges through the interaction between internal regulation and external support. For analytical clarity, competitive anxiety was divided into three interrelated dimensions. Cognitive anxiety refers to worry, catastrophic expectation, self-doubt, and excessive concern with evaluation. Somatic anxiety refers to bodily activation such as increased heart rate, muscle tension, stomach discomfort, trembling, and breathing irregularity. Behavioral anxiety refers to avoidant actions, rushed decisions, technical rigidity, aggression, withdrawal, or overchecking rituals. The study did not treat these dimensions as clinical diagnoses; rather, they were used as pedagogical categories that coaches and teachers can observe and address. Resilience resources were likewise grouped into six clusters: self-awareness, attentional control, emotion-regulation strategies, mastery-oriented motivation, supportive relationships, and recovery discipline. Each cluster was evaluated according to its practical relevance for a coach or physical education teacher who works with adolescents or young adult athletes. The review also used a normative criterion: an intervention was considered educationally acceptable only if it improved performance without normalizing humiliation, excessive load, emotional neglect, or unhealthy dependence on victory. This criterion is necessary because sport sometimes hides harmful practices under the elegant costume of discipline; in poorly managed settings, the word 'character' becomes a small suitcase into which adults pack every inconvenient psychological problem. The methodological limitation of this review is that it does not provide new empirical

data from a local sample. Nevertheless, its value lies in structured synthesis and practical adaptation: it translates current evidence into a model that can be used in sport schools, university sport clubs, and physical education programs. The reliability of the synthesis was strengthened by prioritizing recognized international documents, consensus statements, and peer-reviewed academic literature, while avoiding unsupported motivational slogans. The final output of the method is an integrative model of competitive anxiety regulation through resilience development, consisting of diagnostic observation, skill training, motivational climate management, recovery monitoring, and referral awareness when symptoms exceed the competence of the coach.

RESULTS

The analysis produced five main findings. First, competitive anxiety in young athletes becomes maladaptive not because arousal exists, but because the athlete lacks a stable interpretation and regulation framework. Moderate pre-competition activation can sharpen attention, increase readiness, and signal that the event is meaningful, while uncontrolled cognitive worry fragments attention and makes the athlete monitor possible failure instead of executing the task. This distinction is critical in youth coaching. When a young athlete says 'I am nervous', the coach's response should not automatically be 'do not be nervous', because that command is both psychologically unrealistic and functionally empty. A more useful response is to teach the athlete to identify where anxiety is located, what thought accompanies it, what behavior follows it, and which regulation strategy can be applied before performance begins. Second, resilience was found to depend on the quality of repeated recovery from difficulty rather than on a single heroic reaction. The resilient athlete is not a statue; even statues crack in bad weather. Resilience is closer to a trained recovery rhythm: the athlete experiences pressure, recognizes it, chooses a task-oriented response, evaluates the result, and returns to learning after success or failure. This explains why resilience cannot be developed only through motivational speeches before competition. It must be embedded in daily training through small controlled stressors, constructive feedback after mistakes, reflective routines, and predictable emotional safety. Third, the coach-created motivational climate is a major moderator of anxiety. A mastery-oriented climate, in which progress, effort quality, tactical learning, and personal improvement are valued, reduces the threat value of mistakes and allows

athletes to experiment. By contrast, an ego-threatening climate, in which mistakes are ridiculed, substitutes are stigmatized, and selection is made opaque, amplifies anxiety because each training session becomes a trial of personal worth rather than a site of development. This does not mean that coaches should remove standards or make sport comfortable in a sentimental sense. High standards are necessary; the point is that standards should be clear, teachable, and connected to behavior, not to humiliation. Fourth, resilience is strengthened when athletes possess a practical set of self-regulation tools. The most transferable tools identified in the literature are controlled breathing, pre-performance routines, attention cues, imagery, self-talk, cognitive reframing, post-performance reflection, and sleep hygiene. These tools work best when they are taught before crisis, not after a poor result. A goalkeeper who first learns breathing control during a penalty shootout is learning too late; regulation must be rehearsed under moderate pressure until it becomes accessible under high pressure. Fifth, the social system around the athlete can either protect or destabilize psychological adaptation. Parents, coaches, peers, teachers, and sport administrators transmit explicit and implicit messages about success. If a young athlete hears that victory is the only acceptable proof of value, anxiety becomes identity anxiety. If the athlete hears that effort, learning, health, and responsibility are valued together with competitive ambition, anxiety becomes performance information rather than existential threat. The results also indicate that psychological support should be integrated into athlete development in three levels. The first level is universal prevention: all athletes receive basic education about anxiety, recovery, sleep, communication, and coping. The second level is targeted support: athletes who show recurrent maladaptive anxiety, avoidance, emotional volatility, or performance collapse receive individualized routines and coach-parent coordination. The third level is professional referral: athletes who show persistent depressive symptoms, disordered eating, panic attacks, self-harm thoughts, trauma responses, or severe sleep disruption are directed to qualified mental health professionals. This three-level logic is consistent with contemporary athlete mental health recommendations [3]. The review further showed that overtraining and psychological anxiety are often discussed separately but should be monitored together. Fatigue reduces emotional control, sleep loss intensifies threat perception, and repeated pain or injury fear can make the competitive situation feel unsafe. Therefore, anxiety regulation cannot be reduced to mental

tricks; it also depends on load management, recovery days, nutrition, and realistic scheduling. Finally, the analysis demonstrates that resilience has an ethical dimension. A sport system that teaches athletes to endure everything without complaint may produce short-term obedience, but it does not produce healthy resilience. True resilience allows the athlete to persist when persistence is meaningful and to communicate when a situation is harmful. This is a more mature and scientifically defensible model than the old culture of silence.

DISCUSSION

The findings have direct implications for sport pedagogy, because the psychological management of competition is not a private talent that either exists or does not exist; it is a teachable component of athlete development. In practice, many coaches already train psychological skills informally, but they often do so inconsistently and without a clear conceptual vocabulary. A coach may tell an athlete to 'focus', 'be confident', 'fight until the end', or 'forget the mistake', but these instructions are incomplete unless they are connected to concrete mental operations. Focus on what? Confidence based on which evidence? Fight with which tactical plan? Forget the mistake by using which attention cue? Scientific coaching requires that psychological commands be converted into teachable procedures. For example, instead of saying 'do not panic', the coach can teach a three-step routine: exhale slowly, identify one controllable action, and use a short cue word linked to the next movement. Instead of saying 'believe in yourself', the coach can ask the athlete to recall one recently mastered skill and connect confidence to preparation evidence rather than fantasy. This difference is not stylistic; it determines whether sport psychology becomes practice or decoration. The discussion also shows that resilience must be built through an autonomy-supportive yet demanding environment. Autonomy support does not mean permissiveness. It means that athletes understand the purpose of tasks, have space to reflect, are treated as learners, and can ask questions without being labeled weak. In such an environment, discipline becomes internalized rather than imposed only through fear. This is especially important for adolescents, whose identity formation is sensitive to adult evaluation. A young athlete who associates sport with humiliation may continue training for a while, but the long-term cost can be dropout, emotional fatigue, or hostility toward physical activity. From a public health perspective, this is problematic because youth sport should

contribute to lifelong engagement in movement, not only to the production of medals [1; 2]. The practical challenge is that coaches work under competition pressure themselves. They are evaluated by results, parents demand visible progress, institutions reward medals, and time for psychological education is limited. Therefore, the proposed model must be efficient. It does not require turning every coach into a psychologist; that would be both unrealistic and professionally incorrect. Rather, it requires that coaches become psychologically literate enough to recognize normal anxiety, teach basic regulation skills, design emotionally safe feedback, and refer serious symptoms. A useful weekly model can include five minutes of psychological skill rehearsal during warm-up, one reflective question after training, one pre-competition routine practiced consistently, and one recovery check after high-stress events. These small practices accumulate. In youth sport, micro-interventions are often more realistic than large seminars that sound impressive and then disappear like a stadium announcement after the final whistle. Another important issue is parental involvement. Parents are not external spectators in youth sport; they are part of the psychological climate. They pay fees, transport athletes, interpret results, and often become the emotional audience before and after competition. Parental communication should be aligned with coaching aims. If the coach promotes learning but parents punish poor results at home, the athlete receives contradictory messages and anxiety increases. Sport schools and clubs should therefore offer short parent education sessions on constructive feedback, sleep, nutrition, digital comparison, and emotional recovery. Discussion of digital media is also necessary. Social networks intensify comparison, expose young athletes to public judgment, and can make a single failure feel permanent. At the same time, digital tools can support reflection, training records, and communication when used responsibly. The key is not to demonize technology but to prevent it from becoming a second competition arena in which adolescents continuously evaluate their worth. The proposed model also has implications for talent identification. Selection systems that evaluate only current performance under pressure may confuse psychological maturity with long-term potential. Some athletes who appear less stable at age thirteen may develop excellent regulation skills by age seventeen if coached properly, while some early winners may become fragile when their advantage disappears. Talent systems should therefore include developmental indicators such as learning response, coachability, recovery after

mistakes, persistence, and social behavior. These indicators are not soft extras; they predict whether technical ability can survive real competitive conditions. Finally, the discussion supports an ethical redefinition of mental toughness. Mental toughness should not mean emotional suppression or obedience to harmful norms. It should mean the capacity to act effectively under pressure while preserving health, dignity, and learning orientation. In this sense, resilience and anxiety regulation are not only performance tools; they are educational outcomes of sport.

PRACTICAL RECOMMENDATIONS

On the basis of the synthesis, several practical recommendations can be formulated for implementation in sport schools, university clubs, and youth sport organizations. Coaches should begin each training cycle with a simple psychological observation map that records not only physical readiness but also typical anxiety triggers, recovery quality, communication style, and response to mistakes. This map does not need to be clinical; it can be a professional pedagogical tool that helps the coach notice patterns before they become crises. Training sessions should include small pressure simulations, such as time limits, score deficits, public execution of skills, or competitive drills, but these simulations must be followed by guided reflection rather than emotional punishment. Athletes should be taught to distinguish controllable and uncontrollable factors. Controllable factors include preparation, warm-up discipline, attention cues, effort quality, breathing rhythm, tactical decisions, communication with teammates, and recovery habits. Uncontrollable factors include referee mistakes, opponent behavior, weather, crowd reaction, and past results. This distinction is simple but powerful because anxiety often expands when the athlete mentally tries to control what cannot be controlled. Coaches should also build pre-performance routines that contain physical, cognitive, and emotional components: a short movement pattern, a breathing sequence, one task cue, and one acceptance phrase. For example, a sprinter may use the sequence 'feet-set-breathe-drive', while a basketball player may use 'balance-breathe-target-release'. The exact words are less important than consistency and personal meaning. Physical education teachers can adapt the same logic for ordinary students by teaching examination-like movement tasks without humiliation and by explaining that nervousness before performance is normal. Parents should

receive brief written guidance on post-competition communication: first ask about effort and learning, then about health, then about the result. This order is not sentimental; it protects the athlete's identity from being completely fused with performance. Clubs should establish referral pathways to psychologists or medical specialists when anxiety becomes persistent, disabling, or connected with sleep, eating, self-harm, panic, or depressive symptoms. Finally, sport institutions should evaluate coaches not only by medals but also by athlete retention, injury reduction, psychological safety, and educational development. A medal table is easy to count, but it is a poor x-ray of human growth. The strongest youth sport systems are those that can produce competitive athletes without burning the joy and health out of them. For this reason, psychological preparation should be documented in annual training plans together with technical, tactical, and conditioning objectives. When resilience work is written into the program, it stops being a pleasant slogan and becomes an accountable educational practice.

CONCLUSION

The study concludes that psychological resilience and competitive anxiety regulation must be treated as central components of young athlete development. Competitive anxiety is inevitable in meaningful sport, but its consequences depend on interpretation, regulation, coaching climate, recovery, and social support. Resilience is not a fixed heroic trait; it is a developmental process strengthened through repeated guided experiences of pressure, reflection, recovery, and adaptive action. The article proposed an integrative model consisting of diagnostic observation, self-regulation skill training, mastery-oriented coaching, family coordination, recovery discipline, and referral awareness. For coaches, the practical recommendation is to replace vague motivational language with concrete psychological routines: breathing protocols, attention cues, pre-performance rituals, constructive self-talk, imagery, and post-performance reflection. For physical education teachers, the recommendation is to create environments in which competition teaches responsibility and self-knowledge rather than fear of shame. For parents, the recommendation is to evaluate sport participation through effort, health, learning, and emotional growth as well as results. For sport institutions, the recommendation is to integrate mental health literacy and psychological skill development into training programs rather than treating them as emergency measures after failure. The central scientific

conclusion is clear: a young athlete becomes resilient not by being protected from all pressure, and not by being thrown into pressure without support, but by learning how to meet pressure with skills, meaning, and recoverable confidence.

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