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The causes of sports burnout in Taiwanese adolescent track and field athletes and its impact on future education and sports school pathway choices

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Abstract

This study explores the causes of sports burnout in Taiwanese adolescent track and field athletes and the factors influencing their decision not to pursue sports-oriented high schools. The participants were eight track and field graduates from junior high schools in New Taipei City and Taichung City. Through in-depth interviews, the study identified how athletic experiences, psychological and academic pressures, relationships with coaches and peers, and family support influenced athletes' performance and academic decisions. The main causes of burnout were physical factors (intense training and injuries), psychological factors (poor competition results, academic pressure, and monotonous training), and environmental factors (lack of support from coaches and peers). Conflicts between academic demands and family expectations also played a role in athletes' career decisions. The study suggests improving support systems, balancing training and academics, and strengthening family and school support to reduce burnout and enhance athletes' development.

Keywords: Sports burnout, adolescent track and field, academic pressure, family support

1. Introduction

Sports burnout is a psychological and physical fatigue phenomenon caused by long-term high pressure or overtraining, which is especially common in competitive sports. Junior high sports classes and school representative teams play a crucial role in the early training of adolescent athletes, where students not only face the pressures of intense sports training but also need to balance academic demands. However, many adolescent athletes do not pursue sports-focused high school programs after completing their junior high education, which is an issue worth further investigation. This study aims to:

- Explore the primary causes of sports burnout in adolescent athletes.
- Analyze the factors influencing students' decisions not to continue into high school sports programs.
- Provide relevant suggestions to address sports burnout and enhance the sustained development of adolescent athletes in their athletic careers.

2. Materials and Methods

2.1 Literature Review of Sports Burnout

Sports burnout is closely related to factors such as excessive training intensity, high pressure, and insufficient environmental support ^[1]. Long-term overtraining and high-pressure environments accumulate physical and psychological fatigue, ultimately leading to burnout ^[2]. Excessive physiological and psychological stress has negative effects on the physical and mental health of adolescents, as well as their athletic performance ^[3].

From a physiological perspective, high-intensity training places athletes' bodies in a state of constant fatigue, increasing the risk of injury and negatively impacting performance. Psychological stress, such as anxiety about results, can also reduce emotional stability and participation motivation ^[2, 3]. Lack of environmental support is another significant factor contributing to sports burnout. If athletes do not receive adequate guidance or positive feedback, they may feel isolated and lack motivation.

This is especially important for adolescents, as support from coaches, peers, and families is crucial [3, 4]. Excessive pressure can lead to anxiety, depression, and a loss of self-confidence, further impacting athletic performance and mental health. Therefore, preventing burnout requires adjustments to training plans, the creation of a supportive environment, and collaboration between families and schools to help young athletes maintain their physical and mental health and improve performance [4, 5].

2.2 Literature Review of Academic and Family Conflicts for Adolescent Athletes

Adolescent athletes often face the challenge of balancing their athletic training with academic pressures, which leads to severe time management challenges. They must balance academics, training, and rest, demanding high levels of time allocation and management skills [1, 6, 7]. Conflicts between schoolwork, exam preparation, and training schedules often leave adolescent athletes feeling exhausted, increasing their psychological stress [8, 9]. In such high-pressure environments, many adolescent athletes experience anxiety, fatigue, and emotional instability, which can affect both academic and athletic performance, further deepening their internal conflict and confusion [10].

Moreover, family support and expectations profoundly influence the decisions and future plans of adolescent athletes. Parents' expectations are often focused on academics or future career development, which can conflict with their children's

athletic goals. Some families may want their children to abandon sports in favor of focusing on academic studies, or worry about the instability of an athletic career, thereby increasing the psychological pressure between academics and sports [6, 8]. On the other hand, if families lack support for their children's athletic careers or have insufficient understanding of the value and potential of sports, this can negatively affect the athletes' confidence and motivation, impacting their future choices [9]. In such situations, adolescent athletes are often caught in a dilemma: they desire to achieve success in sports, yet they are forced to make choices under the pressure of academic and family expectations. This conflict not only affects their mental health but also potentially limits their athletic performance and academic development [10-12].

2.3 Research Methodology

This study selects 8 athletes who graduated from the athletics program in four junior high schools in Taiwan, located in the districts of Tucheng, Sanxia, Shulin in New Taipei City, and Tanzi in Taichung City. These participants consist of both students who are still on the path of athletic development and those who have chosen a regular academic path instead of continuing their professional sports training (Table 1). The selection of these subjects aims to explore their experiences and challenges within their sports careers, taking into account their different backgrounds. Additionally, it seeks to compare their mental and decision-making processes in relation to their sports career development and academic choices.

Table 1: Interviewee Information

ID	Specialization	Status	Performance and Honors	Admission to High School Sports Class
1	110 m Hurdles, 100 m	New Taipei City SX Junior High School Sports Class	Selected for regional competition finals	No
2	800 m, 1500 m	New Taipei City SX Junior High School Representative Team	Selected for national competition finals	No
3	100 m, 200 m	New Taipei City SL Junior High School Representative Team	Selected for regional competition finals	No
4	400 m, 800 m	New Taipei City SX Junior High School Sports Class	New Taipei City representative team, selected for national competition finals	No
5	3000 m Race Walk	New Taipei City SX Junior High School Sports Class	New Taipei City representative team, selected for national competition finals	Yes: New Taipei City MD High School Sports Class
6	1500 m, 3000 m	New Taipei City TC Junior High School Representative Team	New Taipei City representative team, selected for national competition finals	Yes: New Taipei City SC Commercial and Industrial School Sports Class
7	1500 m, 3000 m	Taichung City TZ Junior High School Sports Class	Taichung City representative team, selected for national competition semifinals	Yes: Taichung City HL High School Sports Class
8	800 m, 1500 m	New Taipei City TC Junior High School Representative Team	New Taipei City representative team, selected for national competition finals	Yes: New Taipei City SC Commercial and Industrial School Sports Class

2.4 Data Collection

This study uses semi-structured interviews for data collection. The interview questions are designed around the students' experiences and psychological states during their athletic careers. The specific areas of inquiry include the following:

- **Training and Physical Condition** [1-4, 13-15]: Explore the changes in students' physical condition during sports training, the intensity of training, and its impact on their athletic performance.
- **Psychological Stress and Changes in Interest** [1, 3, 6-9, 13, 14, 16, 17]: Understand the psychological stress, emotional fluctuations, and how these affect the students' interest in sports during their athletic careers.
- **Coach and Peer Relationships** [1, 5, 7, 10, 12, 15, 16]: Investigate the interactions between students and their coaches and peers, and how these relationships influence their level of commitment to sports and their decision-

making process.

- **Academics and Time Management** [10, 11, 14, 16]: Understand how students allocate time between academics and training, the academic pressures they face, and how they balance both aspects of their lives.
- **Family Support and Future Planning** [6, 11, 13, 14, 16]: Analyze the support and expectations from families regarding students' athletic careers, as well as the students' considerations for their future academic and career paths.

The design of the interview questions aims to provide a comprehensive understanding of the multiple sources of stress students face in their athletic journey and how these factors influence their choices and future plans.

2.5 Data Analysis: After organizing all the interview content,

thematic analysis was employed for data analysis. The specific process includes:

- **Preliminary Reading of Transcripts:** Carefully read the transcripts and highlight key information relevant to the research questions.
- **Inductive Theme Identification:** Based on the interview content, several core themes were identified, such as sports burnout, academic pressure, family support, etc.
- **Analysis of Themes Across Respondents:** Analyze the expression of these themes among different respondents, identifying the primary factors influencing whether students choose to continue their athletic careers or pursue general academic paths.
- **In-depth Exploration:** Based on the analysis, identify the main reasons for sports burnout and the decision to abandon enrollment in high school athletic programs, exploring the interconnections between these factors.

Through thematic analysis, this study aims to gain an in-depth understanding of the various factors influencing the decision-making process of adolescent athletes and provide empirical support for the conflict between sports burnout and the balance of academics and athletics.

3. Results & Discussion

3.1 Reasons for Adolescent Athletes' Sports Burnout

Based on the interviews with respondents and their peers, the following reasons for sports burnout were identified:

3.1.1 Physical Factors

- **High Intensity and Long Duration of Training:** Extended and high-intensity training sessions, including morning and afternoon practices, with daily training lasting 3 to 6 hours (including field preparation, warm-up, actual training, cooldown, and post-training cleanup and review), result in physical and mental exhaustion.
- **Injury Issues:** Long-term high-intensity exercise can lead to injuries, which not only limit participation but also place additional strain on the body.
- **Decreased Physical Fitness:** Due to a lack of scientifically structured training plans, excessive training intensity and time, coupled with balancing academic and athletic commitments, lead to insufficient energy, which impacts both sports performance and academic achievements.

3.1.2 Psychological Factors

- **Excessive Stress:** Unfavorable competition results and poor academic performance can lead to disappointment from coaches and parents, creating dual pressures on the students.
- **Loss of Interest:** Repetitive and monotonous training, such as extensive weight training or interval running, can cause fatigue, leading to a loss of enthusiasm for the sport.
- **Low Self-Confidence:** Stagnant progress or widening gaps in performance compared to peers can cause students to doubt their abilities, leading to a lack of confidence in continuing their participation.

3.1.3 Environmental Factors

- **Coach and Peer Relations**
 - **Coach's Strict Attitude or Lack of Positive Encouragement:** A harsh coaching style without sufficient motivation can place additional pressure and

frustration on students.

- **Intense Peer Competition:** Limited spots on the team increase internal competition, leading to tension and even conflicts among peers, further decreasing motivation.
- **Insufficient School Support**
 - **Imperfect Training Facilities:** Non-standardized tracks, damaged running tracks, and outdated equipment that are poorly maintained hinder effective training.
 - **Superficial Psychological Counseling:** Psychological support often only meets administrative requirements, and most students only seek counseling when considering quitting, limiting its effectiveness.

3.1.4 Conflict Between Academics and Sports

- **Time Management Difficulties:** Students' schedules are overloaded with morning training, academic study (Chinese, English, math, science, etc.), afternoon training, and homework, leaving them mentally and physically exhausted.
- **Academic Pressure:** Excessive time spent on sports training leads to difficulty concentrating during classes, and sometimes even causes students to fall asleep in class due to fatigue, resulting in declining academic performance and creating a vicious cycle.

3.1.5 Family Factors

- **Poor Parental Communication:** Parents may set excessively high expectations for their child's sports performance, but lack positive reinforcement, often using negative language to motivate, which inadvertently increases the student's psychological burden.
- **Lack of Family Support:** Some parents do not prioritize sports training, believing that the future prospects in sports are limited. The lack of emotional support weakens the student's motivation to remain engaged in their athletic activities.

3.1.6 Other Factors

- **Lack of Variety:** Monotonous training content, with little innovation or change, makes the sport feel boring and tiresome to the student.
- **Unclear Goals:** Students may lack a clear understanding of their sports goals and future development, and coaches may not provide sufficient guidance, further diminishing motivation.

3.2 Reasons for Not Joining Sports High School Programs

From the personal experiences of the respondents and the stories of their peers, the following reasons for not enrolling in sports high school programs were synthesized:

3.2.1 Personal Factors

- **Change in Interests:** As students grow and explore their identities, they may lose interest in their original sport or athletic career, seeking out new challenges or fields.
- **Prioritization of Academics:** Some students believe that academic development is more important for their long-term future, especially when sports performance does not meet expectations. They may choose to attend a regular high school and focus on academic subjects like automotive repair, electrical engineering, or mechanical processing, citing examples of former athletes who struggled to find ideal jobs even with good athletic records.
- **Physical and Health Limitations:** The physical fatigue

and injuries caused by intense training can lead students to lose the motivation and enthusiasm to continue in sports.

3.2.2 Environmental Factors

- **Coaching and Training Methods:** Harsh coaching attitudes or tense relationships between students and coaches can make students resent training. When training becomes too monotonous or demands are too high, students lose their passion and are unwilling to continue their sports studies.
- **Competitive Pressure:** Intense competition may prevent students from representing their school in events, leaving them without a sense of accomplishment, which leads to the abandonment of a sports-focused career path.

3.2.3 Family Factors

- **Different Parental Expectations:** Some parents place more importance on academics or other career prospects, with little expectation for their children to pursue a sports-focused future and even express opposition to it.
- **Lack of Support and Understanding:** Some parents do not recognize the potential future of a career in sports, failing to provide sufficient support for the child's athletic goals, which negatively impacts the student's confidence and decision-making.

3.2.4 Future Planning and Considerations

- **Limited Career Development Opportunities:** Some students feel that even if they continue in a sports high school, their chances of becoming professional athletes or working in sports-related fields are limited, with high risks. Negative cases of former athletes who struggled to find suitable jobs have influenced their decisions.
- **Admission Pressure for Sports High School:** The limited spots available in sports high school programs mean that when students' athletic abilities are insufficient, they may choose other educational paths.
- **Exploration of Other Possibilities:** Some students wish to attend a regular high school to gain exposure to a wider range of academic subjects, providing more opportunities for future university studies or exploring other interests.

3.2.5 Social and Cultural Factors

- **Social Perception of Sports Careers:** The public perception of sports professions (such as the instability of income or low social status) leads students to feel uncertain and lacking confidence in pursuing a career in sports. Many wish to become coaches or physical education teachers, but due to fierce competition and academic requirements, these positions are hard to attain. Furthermore, many students who manage to become coaches or teachers may have average athletic abilities but excel in academics. Since high school sports programs focus primarily on training, students often fail to meet academic standards.
- **Peer Pressure:** Many peers in sports programs or school teams view sports as having limited prospects and prefer to choose the route of a regular high school education. This atmosphere influences the decisions and future paths of students.

4. Conclusion

This study investigates the main causes of sports burnout

among Taiwanese adolescent track and field athletes and the factors influencing their decision not to pursue a sports-focused high school education. Through in-depth interviews with track and field athletes from multiple junior high school sports teams in New Taipei City and Taichung, the study identifies three key factors contributing to sports burnout: physical, psychological, and environmental.

Specifically, athletes face physical fatigue, injuries, and declining physical performance due to long hours of high-intensity training. These issues directly affect their athletic performance and academic results. Psychologically, excessive pressure, monotonous training content, and lack of self-confidence make athletes feel tired and unmotivated to continue their sports careers. Additionally, insufficient environmental support, especially from coaches, peers, and family, exacerbates burnout.

The study also reveals that the main reasons for not enrolling in sports-focused high school programs are related to academic pressures and family expectations. Many athletes, struggling to balance the demands of both sports and academics, choose to abandon the sports route in favor of general academic advancement. Family support and expectations significantly influence their decisions, with some families prioritizing academics and not recognizing the value of a sports career, further complicating the athlete's decision-making process.

In light of these findings, to reduce sports burnout and encourage adolescents to continue their athletic development, it is recommended that training plans be more scientific and individualized, with reasonable arrangements for training intensity and duration to reduce physical and psychological fatigue. Furthermore, athletes' mental health management should receive greater attention, particularly in areas such as stress management and emotional regulation. Additionally, cooperation between families, schools, and sports teams should be strengthened to provide a comprehensive support system for athletes, reduce conflicts between academic and athletic demands, and help athletes better plan their academic and athletic future paths.

The findings of this study not only enhance understanding of the challenges faced by adolescent athletes but also offer valuable insights for schools, coaches, families, and policymakers. This can contribute to advancing adolescent sports development and promoting greater attention to mental health.

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