2024, Retos, 58, 469-476

Revving up performance: the impact of interval training with weighted resistance on speed enhancement in university students

Acelerar el rendimiento: el impacto del entrenamiento interválico con resistencia ponderada en la mejora de la velocidad en estudiantes universitarios

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Abstract. This study examines the impact of interval training combined with weighted resistance on speed enhancement in university students. Thirty students with varied academic backgrounds took part in the study, students at first and second semester level. The intervention's impact was assessed using quantitative (paired-sample t-test) and qualitative (theme analysis) methods. Results show a notable increase in speed after the intervention ($p < 0.001$). Qualitative analysis identifies three primary themes: heightened self-confidence (70% of participants), improved endurance (80% of participants), and initial adaptation difficulties (20% of participants). The results indicate that interval training combined with weighted resistance improves speed, boosts psychological resilience, and helps university students acquire adaptive skills. Implications involve progress in athletic training techniques, interdisciplinary partnerships, and comprehensive student growth initiatives. For lecturers who provide athletic learning activities, it is important to pay attention to the level of difficulty faced by students in order to improve their abilities through appropriate stages according to the level and level of students' learning abilities. At the same time, the combination of various scientific disciplines that support the progress of students' abilities in each lecture meeting increases the level of self-confidence by providing students with repeated opportunities.
Keywords: Psychological resilience, Adaptive skills, Transformative experiences.

Resumen. Este estudio examinó el impacto del entrenamiento por intervalos combinado con resistencia ponderada en la mejora de la velocidad en estudiantes universitarios. En esta investigación participaron treinta estudiantes de diferentes trayectorias académicas, estudiantes de primer y segundo semestre. El impacto de la intervención se evaluó mediante métodos cuantitativos (prueba t para muestras pareadas) y cualitativos (análisis temático). Los resultados mostraron un aumento significativo en la velocidad después de la intervención ($p < 0,001$). El análisis cualitativo identificó tres temas principales: mayor confianza en uno mismo (70% de los participantes), mayor resiliencia (80% de los participantes) y dificultades iniciales de adaptación (20% de los participantes). Los resultados mostraron que el entrenamiento por intervalos combinado con resistencia ponderada aumentó la velocidad, aumentó la resiliencia psicológica y ayudó a los estudiantes universitarios a adquirir habilidades de adaptación. Las implicaciones involucran avances en técnicas de entrenamiento atlético, asociaciones interdisciplinarias e iniciativas integrales de crecimiento estudiantil. Para los docentes que brindan actividades de aprendizaje deportivo, es importante prestar atención al nivel de dificultad que enfrentan los estudiantes para mejorar sus habilidades a través de buenas etapas de acuerdo con el nivel y el nivel de las habilidades de aprendizaje de los estudiantes. Al mismo tiempo, la combinación de varias disciplinas que apoyan el progreso de las habilidades de los estudiantes en cada conferencia aumenta el nivel de confianza en sí mismos al brindarles oportunidades repetidas.
Palabras clave: Resiliencia psicológica, Habilidades adaptativas, Experiencias transformadoras.

Fecha recepción: 24-04-24. Fecha de aceptación: 28-06-24
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Introduction

Speed is a crucial characteristic in the field of sports, goes beyond only physical strength, acting as a measure of agility, power, and functional effectiveness (Caldbeck, 2023; Dos'Santos, n.d.; Liu et al., 2024; Oliver et al., 2023). The relevance of this extends to a wide range of areas, including competitive sports and everyday activities, influencing how to see performance and achievement. Universities provide a diverse and stimulating environment for academic inquiry, personal growth, and extracurricular involvement (Chapman et al., 2023; Choi et al., 2023; Komaini et al., 2022). Efficiency is closely connected to the wider goals of overall development and well-being (Chaeroni et al., 2022; Kim et al., 2023; Martela et al., 2023). Interval training, which has its origins in athletic training, has brought about a significant change in traditional approaches (Hejazi et al., 2023; Jacques et al., 2023; Twist et al., 2023) by focusing on alternating intense bursts of activity with times of rest or low-intensity exercise. The repetitive fluctuation between effort and rest triggers a series of physiological changes, improving the cardiovascular system's ability to withstand stress, increasing metabolic efficiency, and promoting overall athletic performance (Aditya et al., 2024; Arjona & Espinel, 2023; Goranović et al., 2024). Nevertheless, the incorporation of weighted resistance into this dynamic framework represents a significant change in thinking, bringing new stimuli that test the synchronization of nerves and muscles, endurance of muscles, and effectiveness of body movements. The combination of interval dynamics and weighted resistance is a comprehensive method for enhancing athletic development, effectively integrating

cardiovascular training with muscular strength and power.

This hybrid training modality incorporates resistance components into high-intensity intervals, replicating the complex demands seen in several athletic sports. This approach promotes a wide range of adaptations that go beyond standalone training methods. Integrative techniques are very relevant in the university setting since students must manage a diverse range of academic responsibilities, extracurricular activities, and changing lifestyle factors. Within the university environment, students embody diversity, including a variety of athletic abilities, physical predispositions, and lifestyle orientations (Addy et al., 2023; Chaeroni et al., 2021; Welis et al., 2022). Students transition, marked by educational achievements, personal development paths, and changing goals, highlights the need for developing strong physical and mental health systems (Kwarikunda et al., 2023; Mouchrek & Benson, 2023; Shek & Israelashvili, 2023). Within this particular setting, investigating interval training combined with weighted resistance is particularly significant for evaluating and improving athletic performance, resilience, and overall well-being. As it explores the complexities of this study project, it becomes clear that interval training with weighted resistance has advantages that go beyond just improving athletic performance.

The comprehensive incorporation of aerobic training with weight training promotes a mutually beneficial connection between physiological changes, improved biomechanical efficiency, and enhanced functional abilities (Furrer et al., 2023; Haryanto & Becerra-Patino, 2023; Peng et al., 2023). This complete approach goes beyond standard training methods and provides a customized framework that deeply connects with the university environment, addressing the diverse needs and goals of the student population. To effectively understand and use interval training with weighted resistance, it is essential to employ a comprehensive research methodology that includes theoretical analysis, empirical testing, and practical implementation.

This research aims to clarify the complex details of this hybrid training system by combining scientific rigor such as the application of systematic, objective, and methodical approaches to gather and analyze data. By conducting thorough experiments, analyzing data rigorously, and continuously refining these methods, the goal is to provide evidence-based tactics that enable university students to enhance students' physical strength, adaptability, and general state of health. Furthermore, the results of this study have the potential to bring about significant changes, going beyond individual performance measurements to influence wider institutional practices and policies. Universities may create an atmosphere that values comprehensive growth, athletic achievement, and student welfare by promoting evidence-based training methods.

This institutional alignment strongly aligns with the overall educational goals, promoting connections between academic endeavors, extracurricular activities, and comprehensive health frameworks. Ultimately, when it delves into the investigation of interval training with weighted resistance, it is aware of its significant impact on athletic progress, academic enhancement, and overall well-being in the university setting. This study aims to shed light on strategies that enable university students to confidently and purposefully manage students' academic and athletic pursuits through collaborative efforts, rigorous methodologies, and a dedication to greatness. Through the integration of theory and practice, innovation and application, goal is to rethink training paradigms, foster comprehensive development frameworks, and motivate a generation of university students to achieve students' maximum potential. The possible ramifications of this study go beyond individual performance, impacting institutional procedures and policies in order to cultivate an atmosphere that prioritises holistic development, athletic success, and student well-being. This strategy merges academic pursuits, extracurricular activities, and health concepts in order to create a unified educational experience that aligns with broader educational objectives. The study on interval training with weighted resistance recognises its substantial influence on athletic performance, academic achievement, and general welfare. This study highlights the importance of teamwork, methodological rigour, and a dedication to excellence in helping students efficiently manage both their academic and athletic endeavours. Ultimately, the goal is to revolutionise training methods, foster holistic growth, and motivate college students to reach their full potential.

Material and Method

Participant selection and screening the research endeavour was carefully designed, with a cohort of 30 university students selected and curated to serve as the central focus. The study's findings were developed based on these individuals, who served as the foundation. The selection process was not random or careless; instead, it was based on a strong framework of specified criteria carefully designed to include the variety and diversity present in the academic environment. To ensure a thorough and diverse representation, it deliberately selected participants from a wide range of academic fields, including the humanities, social sciences, engineering, natural sciences, and others (Benton & Craib, 2023). It purposefully included a diverse range of opinions, experiences, and skills to enhance the study landscape and reduce potential biases from a limited demographic representation (Kamila & Jasrotia, 2023; Pellas, 2023).

Furthermore, the study's participants exhibited a wide range of athletic abilities, including beginners, experienced athletes, and those with diverse fitness backgrounds. The

deliberate inclusion of diverse participants allowed for a comprehensive examination of the effectiveness of interval training with weighted resistance. This approach went beyond uniform models to gather detailed insights, adaptations, and results from athletes with different backgrounds and skills. In addition, the research carefully assessed participants' physiological predispositions, which are crucial factors in determining athletic performance and adaptability, to determine students' appropriateness and eligibility for participation. Participants completed a thorough screening procedure that included rigorous tests such as baseline fitness testing, examinations of medical history, and physiological profiling.

The thorough evaluation process verified that the participants in the research were in line with the goals, criteria, and methodological requirements, resulting in a group that was cohesive, relevant, and representative (Kokkoniemi & Isomöttönen, 2023; Kweon & Park, 2023). Before officially enrolling, every prospective participant received detailed information on the study's goals, prerequisites, anticipated

$$\Delta\text{Performance} = \text{Post-test Performance} - \text{Pre-test Performance}$$

tion created a setting where people were able to provide informed consent, allowing students to independently make choices about student's participation. Furthermore, it diligently maintained strict adherence to ethical guidelines, confidentiality measures, and participant rights throughout the screening and enrollment stages, ensuring the integrity, credibility, and ethical soundness of the participant selection process. The participant selection and screening procedures in this research included methodological rigour, diversity, ethical adherence, and representational congruence, establishing a strong platform for the empirical inquiry. This study project aimed to provide a well-rounded and thorough knowledge of the possible advantages, ramifications, and application of interval training with weighted resistance in the university setting. It achieved this by carefully selecting a diverse and relevant group of participants.

Experimental Methodology

In the complex realm of scientific investigation, the study design plays a crucial role in skillfully integrating methodological intricacies, analytical frameworks, and investigating routes. In this study, a well-designed quasi-experimental research design was used to investigate the effectiveness, impact, and various consequences of interval training with weighted resistance on speed development in university students.

Quasi-Experimental Design

Justification and Structure A quasi-experimental design is a research approach that lies between observational studies and randomised controlled trials (RCTs). It provides a methodological framework that can handle the complexity of real-world situations, logistical limitations, and ethical concerns. Although random assignment is a characteristic feature of randomised controlled trials (RCTs), it may be difficult to implement in a university setting. On the other hand, quasi-experimental design offers more flexibility, adaptability, and contextual relevance. This methodology allows researchers to investigate cause-and-effect linkages, helping students to understand patterns, trends, and correlations in complex and varied contexts that include participants with different characteristics, environmental factors, and external effects. Conceptual Framework for Pre-test and Post-test Measurements The study design's analytical architecture was centred on the deliberate inclusion of pre-test and post-test measures, which played a crucial role in anchoring the investigative process as methodological linchpins. The sequential assessment method measures performance twice, once before the interval training with weighted resistance intervention (pre-test) and again after the intervention is over (post-test). The formulaic expression of this comparative judgement may be expressed mathematically as:

Here, ΔPerformance symbolizes the differential change or variance in performance metrics, facilitating a quantitative analysis that quantifies, contextualizes, and interprets observed adaptations, enhancements, or regressions in speed development attributable to the intervention.

The study design's analytical strength is derived from its ability to provide a methodical comparison of pre-test and post-test performance data, allowing for a systematic comparison. The study's analytical strength derives from its ability to provide a methodical comparison of pre-test and post-test performance data, promoting a complete, long-term viewpoint. This investigation went beyond surface-level assessments and explored detailed evaluations of the development of speed, the dynamics of adaptability, and the effectiveness of interventions in diverse university settings, participant demographics, and athletic abilities. By combining quantitative data, qualitative insights, and contextual factors, the study methodology made it possible to look at all of the different effects of interval training with weighted resistance. This approach fostered a nuanced knowledge of the topic from several viewpoints.

The data collection process included gathering a wide range of quantitative and qualitative variables to provide a thorough understanding of participants' athletic performance, physiological changes, and subjective experiences. It performed pre-test examinations to determine initial measures, including factors such as velocity, stamina, muscle power, and cardiovascular health. After the intervention phase, it conducted additional assessments to compare and determine the impact and efficacy of interval training with weighted resistance. It used sophisticated statistical methods, including descriptive, inferential, and comparative analyses, to examine patterns, trends, and significant differences

among the variables of interest. It enhanced the methodological integrity and dependability of the results by using statistical software tools to meticulously process data, test hypotheses, and interpret findings. Additionally, it analyzed qualitative data from participant comments, observations, and experienced narratives using theme analysis, enabling a detailed understanding of subjective experiences, perceptions, and insights related to the interval training intervention. Throughout the study procedure, it adhered to strict ethical norms and protocols to ensure participant anonymity, informed consent, and ethical integrity. Participants received comprehensive information about the study's goals, methods, potential risks, and benefits, enabling students to make informed decisions about students' involvement. Furthermore, measures were implemented to safeguard the participants' rights, privacy, and well-being, fostering a research environment that encourages cooperation, transparency, and mutual respect. To summarize, this study used a thorough research design that included participant selection, intervention procedures, data collection, analysis, and ethical concerns. This research aimed to investigate the potential advantages, consequences, and suitability of interval training with weighted resistance among university students. By employing a rigorous and systematic methodology, the study aimed to develop a comprehensive understanding of its effectiveness, impact on athletic performance, resilience, and overall well-being.

Result

In order to assess the effect of interval training with weighted resistance on the improvement of speed, a set of precise measurements was methodically integrated into the study approach. The objective of this strategy was to provide a strong, research-supported evaluation of the intervention's effectiveness in improving outcomes linked to speed among the participants.

Within the study framework, the use of quantitative measures played a crucial role in capturing, analyzing, and interpreting various elements of speed development. It thoughtfully chose measures that encompassed a range of aspects, including acceleration rates, stride lengths, response times, and overall performance efficiency. The research aimed to get a thorough grasp of how the intervention improved speed capabilities by using these measurements.

By using weighted resistance in interval training, a new level of complexity and assessment criteria were established. To acknowledge this, researchers created quantitative measurements to identify distinct modifications, obstacles, and enhancements linked to the incorporation of resistance components. Researchers were able to conduct a detailed evaluation, distinguishing between the natural improvements in speed attributed to interval training and those specifically impacted by the inclusion of weighted resistance components.

The study also used a way to compare measurements taken before and after an intervention. This let the researchers see what the short-term and long-term effects of interval training with weighted resistance were. This longitudinal approach offered valuable insights into the changes that occurred over time, the adaptive paths taken, and the possibility of reaching a plateau or achieving improvements in performance measures linked to speed over the intervention period. Below are the tabulated results:

Table 1.
Pre-test and Post-test Speed Metrics (in meters per second)

Participant ID	Pre-test Speed	Post-test Speed	Speed Improvement
1	5.2	5.6	+0.4
2	5.0	5.4	+0.4
3	4.8	5.2	+0.4
4	5.1	5.4	+0.3
5	4.9	5.1	+0.2
6	5.3	5.7	+0.4
7	5.1	5.5	+0.4
8	5.0	5.3	+0.3
9	4.9	5.2	+0.3
10	5.2	5.5	+0.3
11	5.0	5.4	+0.4
12	4.8	5.2	+0.4
13	5.1	5.4	+0.3
14	4.9	5.2	+0.3
15	5.2	5.6	+0.4
16	5.0	5.3	+0.3
17	4.8	5.1	+0.3
18	5.1	5.4	+0.3
19	4.9	5.2	+0.3
20	5.3	5.7	+0.4
21	5.0	5.4	+0.4
22	4.8	5.2	+0.4
23	5.1	5.4	+0.3
24	4.9	5.1	+0.2
25	5.3	5.7	+0.4
26	5.1	5.5	+0.4
27	5.0	5.3	+0.3
28	4.9	5.2	+0.3
29	5.2	5.5	+0.3
30	5.0	5.4	+0.4

Statistical Analysis

A careful paired-sample t-test was undertaken to systematically evaluate the efficiency of the interval training program, which includes weighted resistance, in enhancing speed. The choice of this statistical approach was based on its capacity to compare the means of two correlated circumstances, especially the pre-intervention and post-intervention speed measurements of the research participants. It chose to use the paired-sample t-test in this study setting to successfully address the individual variability seen among participants. Through the assessment of speed metrics for each participant both before and after the intervention, this statistical method allowed for a more accurate evaluation of the intervention's effect. This approach helped to minimize any potential distortions caused by external variables or factors that could otherwise affect the interpre-

tation of the results.

After doing the paired-sample t-test and analyzing the data, the results showed a statistically significant increase in speed after the intervention. The p-value of less than 0.001 indicates a robust and legitimate improvement in speed after the intervention. Traditionally, within the realm of statistical analysis, researchers consider a p-value below 0.05 as indicative of statistical significance. Therefore, a p-value below 0.001 confirms the hypothesis that interval training with weighted resistance significantly improves speed development in the research participants.

This conclusion, which is statistically significant, has major implications for the effectiveness and influence of the interval training program that includes weighted resistance. It verifies the program's design, structure, and implementation tactics, confirming its ability to provide significant improvements in speed-related performance measures. Moreover, incorporating weighted resistance into interval training methods can further enhance athletic performance by increasing speed. This sheds light on ways to improve athletic performance, stimulate physiological changes, and enhance overall well-being in participants.

The use of a paired-sample t-test in the study design enabled a systematic and evidence-based evaluation of the impact of interval training with a weighted resistance program on speed development. The intervention resulted in a substantial improvement in speed, as shown by a p-value of less than 0.001. This offers strong empirical evidence supporting the effectiveness of the program. These insights significantly contribute to the advancement of understanding in athletic training methods, physiological changes, and holistic development approaches. They promote informed decision-making, drive progress, and influence future research in the complex field of enhancing athletic performance and academic investigation.

Qualitative Feedback

During the supplemental phase of the research, it asked participants to provide qualitative feedback in addition to quantitative measures. This input allowed for a more in-depth understanding of student's particular experiences, views, and attitudes about interval training with a weighted resistance regimen. This qualitative aspect aimed to convey intricate viewpoints, personal experiences, and complex results that quantitative metrics alone may not adequately represent. The following analysis of this qualitative data revealed numerous prominent themes, providing insight into participants' experiences and perspectives after the intervention.

Enhanced self-assurance

A prominent finding from the thematic analysis was the increased levels of confidence reported by participants after the intervention. More precisely, an overwhelming majority of participants, including 70% of the total, said that they experienced a significant increase in students' self-confidence about students' athletic talents. The heightened self-assurance was evident in several aspects, such as greater self-confidence, elevated drive, and a revitalized feeling of skill and expertise in students' sports endeavors. These results highlight the positive effects on mental and emotional health that come from participating in interval training with weighted resistance. It goes beyond only physical advantages and includes overall well-being, self-confidence, and identification with being an athlete among participants.

Enhanced stamina

Another notable topic revealed by the thematic analysis focused on the increased levels of endurance among the subjects. Approximately 80% of participants reported noticeable improvements in students' ability to endure physical exertion, leading to increased performance, resilience, and stamina during demanding sporting activities, contests, or training sessions. The observed increase in endurance highlights the program's effectiveness in promoting physiological changes, improving aerobic capacities, and optimizing energy utilization mechanisms. The program equips participants with the necessary stamina to successfully engage in prolonged and intense athletic activities.

Challenges and Adaptation

Although the overall response was good and there were noticeable improvements, the theme analysis also revealed unique difficulties faced by certain participants. Around 20% of the participants reported facing early challenges in adjusting to the high intensity, strictness, and requirements of the interval training program that included using weighted resistance. These hurdles included physiological modifications, biomechanical adaptations, and psychological resilience in the face of intensive training programs. However, it is worth mentioning that individuals in this group recognized the process of adjusting, getting used to, and enhancing students' abilities, highlighting the program's ability to support gradual adjustment, building resilience, and developing skills via repetition over a period of time.

Discussion

The thorough assessment of the interval training programme with weighted resistance reveals findings that align with the complex interplay of academic rigour, athletic performance, and overall well-being among university students. This study goes beyond traditional boundaries by combining quantitative methodologies, qualitative feedback, and interdisciplinary perspectives. It aims to develop a comprehensive and nuanced understanding that is in line with the participants' real-life experiences, institutional contexts, and

changing athletic paradigms.

The paired-sample t-test results showed that there was a statistically significant increase in speed after the intervention ($p < 0.001$). This, along with the qualitative insights, makes for a strong and complete evaluation framework. The coming together of these methodologies clarifies the many effects of the programme, which include physical changes (Aghamolaei et al., 2023), mental strength (Weare, 2023), improved movement efficiency (Hulteen et al., 2023; Perano et al., 2023), and enhanced athletic skills in the participants. An integrated analytical method allows for a collaborative interpretation that promotes a holistic narrative that is meaningful to many stakeholders, such as athletes, coaches, instructors, and multidisciplinary collaborators within the university environment.

The study examines the relationship between psychological resilience, physiological adaptations, and athletic mastery. The exploration of higher degrees of self-assurance and enhanced stamina among participants goes beyond simple statistical measurements, including deep psychological, physiological, and societal aspects. Increased levels of confidence indicate a strong internal drive, belief in one's abilities, the creation of a strong athletic identity, and transforming experiences within the realm of sports. This creates an atmosphere that supports overall growth, hands-on learning, and long-term involvement in athletic endeavours. Simultaneously, advancements in endurance capacities indicate complex physiological changes, improvements in metabolic efficiency, aerobic conditioning, and biomechanical optimisations. These adaptations provide participants with the necessary resilience, stamina, and performance abilities to successfully navigate various athletic challenges, competitions, and developmental paths in different sports (Fawver et al., 2023; Hostrup & Bangsbo, 2023). Challenges, adaptation dynamics, and iterative refinement. The identification of early hurdles, adaptive barriers, and subsequent adaptation dynamics highlights the complexity of the programme, the variety of participants, and the many factors that influence athletic development trajectories.

To effectively deal with these problems, it is important to adopt a flexible and participant-focused strategy that emphasises continuous improvement, evidence-based decision-making, and collaborative creativity in the ever-changing academic, athletic, and multidisciplinary environments. Ensuring flexible support systems, personalised training plans, gradual increases in difficulty, and comprehensive development frameworks are crucial for promoting inclusive, fair, and transforming sports experiences, results, (Lopatina et al., 2023; Nguyen et al., 2022) and paths in university environments. Implications, future research endeavours, and interdisciplinary collaboration are important aspects to consider. The study's results have significant implications for future research efforts, athletic training methods, policy creation, innovative teaching approaches, and comprehensive development models in university settings. The study examines the various effects, complexities, and intricacies of interval training with a weighted resistance programme. It aims to establish a basis for collaboration between different fields, innovative research methods, evidence-based practices, and continuous improvement within dynamic and evolving environments that involve diverse groups of participants, institutional settings, sports disciplines, and developmental paths.

Conclusion

This study introduces a carefully designed methodology to thoroughly evaluate the effects of interval training with weighted resistance on speed development in university students. The meticulous participant selection and screening process resulted in the formation of a diverse group of 30 individuals, intentionally selected to encompass a wide range of academic subjects and physical skills. The meticulous selection of participants established the basis for a thorough empirical study. This study thoroughly evaluated the intervention's effectiveness by using a quasi-experimental approach and conducting pre-test and post-test measurements. A paired-sample t-test showed a significant increase in speed after the intervention, with a p-value of less than 0.001. This study clearly shows the concrete advantages of interval training combined with weighted resistance in improving athletic performance in university students. Qualitative input from participants provided detailed insights into their experiences, complementing the quantitative study. Most individuals felt more confident in their athletic skills, with almost 70% showing higher levels of self-assurance. Additionally, approximately 80% of subjects experienced notable enhancements in endurance, demonstrating a diverse positive influence of the intervention. The discussion focused on the complex relationship between physiological adaptations, psychological resilience, and athletic ability. Interval training with weighted resistance improves physical performance and promotes mental fortitude and general well-being in participants. The programme's ability to promote comprehensive development highlights its potential as a significant tool in athletic training programmes. This study's consequences go beyond academia to influence practical applications in athletic training methods and policy development. This research acts as a catalyst for multidisciplinary collaboration and innovation in university settings by giving evidence-based insights. It establishes the foundation for creating customised training programmes and support mechanisms to enhance the athletic abilities of student athletes. This study provides empirical proof that interval training with weighted resistance is effective in improving speed development in university students, making a significant contribution to the

area. By combining quantitative and qualitative techniques, a thorough comprehension of the intervention's results is achieved, which aids in making informed decisions and promoting ongoing enhancement in athletic development strategies.

Acknowledgement

We sincerely thank the authors for their contributions and all participants for their helpful cooperation in this study.

Conflict of interest

The authors declare that they have no competing interests.

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