METHODS OF TRAINING AND LONG TERM DEVELOPMENT OF SHORT DISTANCE ATHLETE'S IN WEST WOLLEGA ZONE ATHLETE'S PROJECT'S

SPORT ACADEMY

DEPARTMENT OF SPORT SCIENCE

BY: TARIKU TESGERA HUNDE

A THESIS REPORT WAS SUBMITTED TO JIMMA UNIVERSITY SPORT ACADEMY DEPARTMENT OF SPORT SCIENCE FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER'S DEGREE IN ATHLETICS SCIENCE OF COACHING

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JIMMA UNIVERSITY

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ADVISOR: Dr. MELKAMU DUGASSA (PhD)

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JIMMA UNIVERSITY SPORT ACADEMY

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As members of the examining board of the final MSc. open defense we certify that we have read and evaluated the thesis prepared by Tariku Tesgera entitled: Methods of training and long-term development of short distance athlete's in West Wollega Zone athlete's projects we recommended that it could be accepted as fulfilling the thesis requirement for the degree of master of science in athletic coaching specialization.

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As member of the examining board of the final M Sc. open defense, we certify that we have read and evaluated the thesis prepared by Tariku Tesgera Hunde and examine the candidate. We recommend that the thesis be accepted as fulfilling the thesis requirement for the degree of Master of Science in coaching athletics specialization.

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DECLARATION

By my signature below, I declared and affirm that this thesis is my own work. I have followed all ethical and technical principles of scholar ship in the preparation, data collection data analysis and completion of this thesis. Any scholar matter that is included in the thesis has been given recognition through citation.

Name: Tariku Tesgera Hunde

Signature _____

Date _____

Department: Sport Science

Table of Contents **Page**

LIST OF TABLES

LIST PAGE

LIST OF FIGURE PAGE

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First of all, I would like to thank God for helping me to this day. Next, I would like to express my sincere gratitude to my mentor, Dr. Melkamu Dugasaa (PhD). Counseling mode, polite manner, in-depth, knowledgeable advice, and constructive feedback have shaped my thesis in an immeasurable way. I always appreciate his commitment and his insightful comments and criticism for further improvement.

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BIOGRAPHY OF THE RESEARCHER

The author was born in April, 1980 E.C. Oromia Regional state, west wollega zone, Homa woreda Siba Metos kebele. He entered primary school in 1987; he attended primary school (1-8) at Homi Xabela Elementry School from 1987- 1995. He also attended secondary school (9-10) at Gimbi Comprehensive high school from 1996-1997 and in 1998 he completed primary teacher training (TTI) at Teachers College of Mickey Leland attended. Subsequently, in 2001-2004, consequentially the author learned at Dambi Dollo Teacher Training College (TTC); major HPE, minor in Biology. He also studied for a Bachelor's degree in Sport Science(BSc) in the summer program at Jimma University from 2008-2013E.C. and again come to Jimma University in 2015 E.C to pursue a Master's program (MSc) in Athletics Coaching.

ABSTRACT

Methods of training athletes can vary from place to place. In particular, science-based training methods are not applicable in some cases. Therefore, the main purpose of this study is to investigate the methods of training and long-term development of short distance athletes of the West Wollega Zone athlete's projects. Therefore, the total study of the population was 124 participants. A mixed method was used on research methodology. Sampling technique of the study 60 participants and 28 short distance athletes, 4 coaches and assistant coaches, 2 head office, 26 office technician in West Wollega zone were selected using purposive sampling technique. Data were collected through questionnaires, interviews and observations. To verify the content reliability and validity of the questionnaire, a pilot study was implemented with a subsample of 10 participants. The collected data were analyzed using descriptive statistics and on discussion the 3rd specific objective and class 2nd specific objectives appear to be the most positive classes, with high mean values and low standard deviations. The 4th presents a more mixed image, with some areas receiving a lot of positive feedback and others receiving negative feedback. results obtained: no clear and structured training program plan as well as evidence-based, Lack of importance on specific training methods and the disconnect observation between the coaches , athletes, and sports administrators, as evidenced by the lack of support, motivation, and cohesive relationships, is a concern that can adversely affect the overall well-being and performance of the athletes. Lack of implementation of these constitutional factors is the main factor affecting the long-term development of athletes in West Wollega Zone.

***Keywords**: Athlete development, Long term athlete, Methods of training, Short-distance athletes.*

ABRIVETION

BSc= Bachelor of Science.

E.C= Ethiopian Colander.

FMS = Functional Movement Screening

HIIT = High-Intensity Interval Training

HPE= Health and Physical Education

MSc= Masters of Science

SPSS= Statistical Package for the Social Sciences

SWOT= Strengths, Weaknesses, Opportunities, and Threats

TTC= Teacher's Training Collage

TTI= Teacher's Training Institute

VBT= Velocity-Based Training

CHAPTER ONE

1.1 Back ground of the Study

Short-distance running has a long history, dating back to ancient civilizations. When we look at these one by one;

Ancient Olympics: Short-distance running has its roots in ancient Greece, where it was an integral part of the Olympic Games. The ancient Olympics, which began in 776 BCE, featured various running events, including the stadium (a sprint over approximately 200 meters), diaulos (a race twice the length of the stadium), and dolichos (a long-distance race). These events were held in high regard and showcased the athletic prowess of ancient Greek competitors(Woff, 1999).

Roman Influence: With the rise of the Roman Empire, short-distance running continued to be popular. The Romans adopted many Greek sporting traditions, including running, and incorporated them into their own athletic contests. The Roman Games, such as the Ludi Romani, featured various races, including the sprint-like cursus, which was a straight-line race over a short distance (El-Harami, 2015).

Modern Athletics: Short-distance running remained prominent during the Renaissance and the subsequent centuries. However, it was in the late 19th and early 20th centuries that organized athletics and competitive sprinting gained significant momentum. The formation of athletic clubs and the standardization of rules led to the establishment of track and field events, including the 100-meter and 200-meter sprints (Games et al., n.d.)

Evolution of Techniques: Over time, advancements in training methods, equipment, and scientific understanding of human physiology have influenced the development of short-distance running. Techniques like the crouch start, introduced in the early 20th century, and the subsequent adoption of blocks for starting in the 1930s, have significantly improved sprinting performance (Mann, 2015).

Short-distance running has a rich history in Africa, with the continent producing numerous world-class sprinters and establishing a strong presence in international competitions.

Early African Sprinters: African athletes have been competing in short-distance running events since the early 20th century. Notable pioneers include Arthur Wharton from Ghana, who became the first

officially recognized black professional footballer in the 19th century and competed in sprinting events in the 1880s and 1890s (Famous People from Alaska, 2010).

Rise of African Sprinters in the 1990s: The 1990s marked a turning point for African sprinters, as they began to dominate short-distance events at the global level. Athletes like Frankie Fredericks from Namibia, who won multiple Olympic silver medals in the 100 meters and 200 meters, and Merlene Ottey from Jamaica, who competed for Slovenia in later years, achieved great success and became household names (Columbus, 1962).

The Usain Bolt Era: The emergence of Usain Bolt from Jamaica brought a new level of dominance to African sprinting. Bolt set numerous world records and won multiple Olympic and World Championship gold medals in the 100 meters and 200 meters. His performances elevated the profile of African sprinting and inspired a new generation of athletes(Usain-Bolt.Pdf, n.d.)

African Sprinters in the 21st Century: African countries, including Nigeria, South Africa, Ivory Coast, and others, continue to produce world-class sprinters. Athletes like Blessing Okagbare from Nigeria, Wayde van Niekerk from South Africa, and Marie-Josée Ta Lou from Ivory Coast have achieved remarkable success in short-distance events, showcasing Africa's ongoing presence in global sprinting (Lategan, L., Burnett, A., & Bartlett, R. (2020).

Ethiopian Athletics: The roots of Ethiopian athletics can be traced back to the 1940s and 1950s when the country began participating in international competitions. At the 1968 Olympics, Tegegne Bezabeh set an official Ethiopian 400m record of 45.42 seconds, showing the country had elite short-distance talent even then. In the 1970s, Egzi Gebre-Gebre ran a hand-timed 100m of 10.1 seconds in Addis Ababa. In 1998, Negussie Gechamo recorded a 20.7 second 200m, also in Addis Ababa. Moving to the 2000s, Wetere Galcha set the official Ethiopian 200m record of 21.30 seconds in Kampala, Uganda in 2007. He later set the current 100m record of 10.61 seconds at the 2008 African Championships in Addis Ababa. These achievements demonstrate Ethiopia's long-standing success across sprint and middle-distance events, complementing the country's renowned long-distance prowess(Flynn & Lenaghan, 2013).

Training and Environmental Factors: Ethiopia's high-altitude training locations, such as Addis Ababa and Bekoji, have played a significant role in the country's success in distance running. The combination

of challenging terrain, altitude, and a culture that values running has contributed to the development of exceptional short-distance runners (Gebregiorgis & CK, 2022).

Generally when considering training methods for short distance athletes in general, the following key points may provide guidance. These are:

Sprint-Specific Training: Short-distance athletes focus on developing their speed and explosiveness through sprint-specific training. This includes various drills such as block starts, acceleration runs, and top-speed sprints to improve technique, stride length, and stride frequency (Diss & Parmar, 2021).

Strength and Power Training: Short-distance athletes engage in resistance training exercises targeting lower body, core, and upper body muscles. This type of training helps build strength and power, improving stride power, acceleration, and overall athletic performance(Suchomel et al., 2018).

Plyometric Training: Plyometric exercises involve explosive movements to enhance muscular power and reactive strength. Short-distance athletes incorporate exercises like bounding, box jumps, and medicine ball throws to develop explosive power and improve ground contact time (Shaji & Isha, 2009).

Speed Endurance Training: Short-distance races require athletes to maintain high speeds for a relatively short duration. Speed endurance training involves high-intensity intervals at near race pace, improving the ability to sustain speed and delay fatigue(Buchheit, 2008).

Flexibility and Mobility Training: Short-distance athletes prioritize flexibility and mobility to optimize sprinting technique. Regular stretching, warm-up routines, and mobility exercises improve joint flexibility, reduce the risk of injuries, and enhance movement efficiency (Chaouachi et al., 2010).

1.2 Statement of the Problem

The long-term development and sustained success of short-distance athletes, such as sprinters and hurdlers, are heavily dependent on the effective implementation of training methodologies that cater to their unique physiological and performance demands. Existing research has highlighted the multifaceted nature of training for short-distance athletes, emphasizing the importance of components like strength development, speed and power enhancement, technique refinement, and injury prevention strategies. However, there is a need for a more comprehensive understanding of how these training elements can be optimally integrated and sequenced to foster the long-term growth and performance of these athletes(Samozino, P. 2021).

Short-distance athletes face a complex set of challenges in their pursuit of sustained excellence. These challenges include balancing the development of physical capacities, navigating the various developmental stages from youth to elite levels, minimizing the risk of injuries, and incorporating holistic approaches that address sports science, sport psychology, and athlete well-being considerations. Achieving optimal performance often requires carefully sequencing and integrating these training components, which can be a significant challenge for coaches and practitioners(Armstrong, N.2015).

Recent studies have addressed various aspects of training methodologies for short-distance athletes. Emphasize the importance of integrating strength, power, and speed training to enhance performance in short-distance events. Provide a comprehensive framework for the long-term development of speed and power athletes, highlighting the need for periodized training and stage-specific adaptations. Review the injury risk factors and prevention strategies for short-distance athletes, underscoring the importance of holistic training approaches. Advocate for the integration of sports science, psychology, and athlete well-being considerations into the training and development of elite short-distance athletes(Talpey and Siesmaa 2017).

According Cronin et al. (2020) and Cissik (2004) who examined their work on a strength and power training program for running performance in young men and examined the importance of carefully planned strength training and timing to enhance the performance of short-distance, in a study of

children aged 10-15 years. Then the researcher added women and conducted a project on athletes aged 19-20 years in West Wollega Zone.

Accordingly, the researcher takes into account various researcher gaps that can provide valuable insights for coaches, athletes and sport organizations to work together to develop holistic science-based training to support the long-term development and performance of short-distance athletes.

1.3. Research Questions

1. What are the long-term development strategies of short-distance athletes?

2. What training methods are being used for long-term development of short-distance athletes?

3. What are the challenges of training methods and athlete development of long-term short distance?

1.4. Objectives of the study

1.4.1. General Objective of the Study

The objective of this study is to assess the methods of training and long term development of short distance athlete's in west wollega zone projects.

1.4.2. Specific Objectives

The Specific Objectives of the study was:

1. To assess the long term development strategies of short distance athlete's in the West Wollega Zone athletics projects.
2. To identify training methods used for the long-term development of short distance athletes in West Wollega Zone.
3. Identify the challenges of training methods and athlete development of long-term short distance athletes in West Wollega Zone.

1.5. Significance of the Study

This study investigated the long-term training and development methods of short distance athletes in the athletics projects of West Wollega zone. While the researcher states that more research is still needed in this area, the most important significance of this study include new research findings in short-distance athletes; presents methods for improving future training and information. This study also strengthens the acceptability of the findings as it is believed to provide an important approach to the training and development of long-term athletes. Additionally, this study may have generated policy recommendations to improve support systems and infrastructure for these athletes, suggesting potential organizational and institutional changes.

This research can raise awareness and build capacity around athletic development, which provides great input for the local community, young athletes and various researchers. Overall, this study serves as an important reference to guide and inform future research in terms of athletic training methods and long-term development of athletes so that the project or organization behind the study can make informed decisions and action it empowers the corrector to accept.

1.6. Delimitation of the Study

The delimitations of the study were training methods and long-term development of short distance athletes in West Wollega Zone are the main delimitations of the study. Besides, the researcher was able to focus on this area for some key reasons. These include: no research closely related to this topic has been done in this area; that the researcher focused on this area in order to closely follow the issue**.**

1.7. Definitions of Term

Athlete: is an individual who engages in regular physical training and participates in sports or athletic competitions(Dictionary, 2021).

Athletics: - also known as track and field, is a collection of sporting events that involve running, jumping, throwing, and walking(Ashbolt et al., 2018).

Long term athlete's development: - is a systematic and evidence-based approach to athlete development that recognizes the importance of age-appropriate training, skill acquisition, and overall well-being(Catlett, 2018).

Method of training athletes: - refers to the systematic approach used to develop and enhance the physical, technical, tactical, and mental abilities of athletes(Siekańska et al., 2021).

Short distance athletes: - refer to individuals who specialize in sprinting events in athletics or track and field(Haugen et al., 2019).

Training athletes: refers to the process of preparing individuals who participate in sports or physical activities for improved performance and achievement of their goals(Lumintuarso et al., 2021).

CHAPTER TWO

2. Review of Related Literature

2.1 The long- term Development Strategies of Short-distance Athlete’s

The optimization of training methods has been a central focus in the development of short-distance athletes. Recent literature has highlighted the effectiveness of various training modalities, including resistance training, plyometric, and sprint-specific training (Sellathurai, 2023).

For instance, the inclusion of strength and power exercises such as squats, deadlifts, and Olympic lifts has been shown to enhance sprint performance by improving muscle strength and power output. Additionally, the implementation of plyometric exercises, such as bounding and depth jumps, has been found to enhance reactive strength and sprinting mechanics. These training methods, when integrated effectively into a comprehensive training program, have the potential to enhance the long-term development of short-distance athletes(Granacher & Borde, 2017).

2.1.1 Long-Term Planning

Long-term planning is a critical component of short-distance athletes' development, as it allows them to set realistic goals, create a structured training program, and make informed decisions about their training and competition schedule. A recent study found that athletes who engaged in long-term planning had better performance outcomes than those who did not(Pinto-Escalona et al., 2022).

A long-term plan should include specific goals, both short-term and long-term, as well as a detailed training program that aligns with those goals. This plan should also take into account the athlete's strengths, weaknesses, opportunities, and threats (SWOT analysis) (Özbey et al., 2020).

Effective long-term planning also requires regular evaluation and adjustment of the training program. This includes monitoring progress, identifying areas for improvement, and making adjustments to the training program as needed. A study published in the Journal of Sports Sciences found that athletes who regularly reviewed and adjusted their training program had better performance outcomes than those who did not(Clemente-Suárez et al., 2021).

In addition to individualized planning, long-term planning can also involve collaboration with coaches, trainers, and other support staff. A recent study published in the International Journal of Sports Physiology and Performance found that athletes who worked with a coach or trainer had better performance outcomes than those who did not (Erickson & Côté, 2016).

2.1.2 Resistance Training

Resistance training is a vital component of a short-distance athlete's training program, particularly for sprinters. This type of training helps to improve an athlete's ability to generate power and speed, which are essential for rapid acceleration and deceleration. A recent review of resistance training programs in sprinters found that a combination of exercises targeting the lower body, core, and upper body was effective in improving sprint performance (Bolger et al., 2015).

Recent studies have demonstrated the effectiveness of resistance training in improving sprint performance. For example, a study published in the Journal of Strength and Conditioning Research found that a 10-week resistance training program improved 40-meter sprint time by 0.13 seconds in collegiate sprinters(Bolger et al., 2015).

2.1.3 Plyometric Training

Plyometric training is a form of exercise that involves rapid, powerful movements such as jumping and bounding to improve an athlete's power and explosiveness. This type of training is particularly beneficial for short-distance athletes, such as sprinters, as it can enhance their ability to generate force and speed. A review of plyometric training programs in short-distance athletes found that it was effective in improving vertical jump height and sprint performance. This is because plyometric exercises, such as box jumps and depth jumps, help to develop the fast-twitch muscle fibers responsible for generating rapid, powerful movements (Stojanović et al., 2017).

Recent studies have demonstrated the effectiveness of plyometric training in improving sprint performance. For example, a study published in the Journal of Strength and Conditioning Research found that 8 weeks of plyometric training increased vertical jump height by 10.4% and improved 40-meter sprint time by 0.21 seconds in collegiate athletes (Mondin, 2021).

2.1.4 Agility Training

Agility training is a crucial component of a short-distance athlete's training program, as it helps to improve their ability to quickly change direction and accelerate. Agility exercises, such as shuttle runs, cone drills, and ladder drills, require athletes to rapidly change direction and speed, which is essential for success in short-distance events. A review of agility training programs in short-distance athletes found that it was effective in improving agility performance, with significant improvements in reaction time, acceleration, and deceleration. By incorporating agility training into their routine, short-distance athletes can enhance their ability to quickly respond to changing situations on the track or field (Jackson, 2021).

2.1.5 Flexibility and Mobility

Flexibility and mobility are crucial components of a short-distance athlete's training program, as they help to improve range of motion and reduce the risk of injury. Short-distance athletes, such as sprinters and hurdlers, require a wide range of motion to generate power and speed, and flexibility exercises can help to improve their ability to achieve this. Additionally, improving flexibility can also help to reduce the risk of injury by allowing for more efficient movement patterns and reducing the stress placed on joints. A review of flexibility and mobility exercises in short-distance athletes found that they were effective in improving flexibility and reducing injury risk(Selam, 2022).

Recent studies have demonstrated the effectiveness of flexibility and mobility exercises in improving performance and reducing injury risk in short-distance athletes. For example, a study published in the Journal of Strength and Conditioning Research found that a 6-week flexibility training program improved hip flexion range of motion by 14.1% and reduced knee flexion angle at maximum sprint speed by 5.3% in collegiate sprinters(Mondin, 2021).

2.1.6 Mental Skills Training

Mental skills training is a crucial component of a short-distance athlete's training program, as it helps to improve their focus, concentration, and confidence. Short-distance athletes, such as sprinters and hurdlers, require a high level of mental toughness to perform at their best, as they must be able to maintain their focus and composure under pressure. Mental skills training can help athletes develop the skills they need to stay focused and motivated, even in high-stress situations. This can include

techniques such as visualization, positive self-talk, and relaxation exercises(Chow, G. M., & Luzzeri, M. 2019).

2.1.7 Multilateral Development

In the context of long-term short distance athlete development, the concept of multilateral development is crucial. Multilateral development refers to the systematic and comprehensive training of a wide range of physical, technical, and cognitive abilities to establish a broad foundation for future specialization(Bergeron, M. F 2015).

Moreover, (Brenner & Watson, 2024)suggest that many countries development can contribute to the prevention of overuse injuries and burnout by exposing the athlete to a varied training stimulus and reducing the risk of excessive repetitive loading on specific body systems. By diversifying the training regimen, coaches can help their short distance athletes develop a more resilient and adaptive physical and mental profile, better equipped to withstand the demands of high-level competition.

2.1.8 Technical Proficiency

In the short distance events, the development of technical proficiency is a crucial component of an athlete's long-term success. Technical proficiency encompasses the mastery of the specific movement patterns, biomechanics, and execution of the event-specific skills required for optimal performance (Nagahara, R., Mizutani, 2018).

Furthermore, (Haugen et al . 2021) suggest that technical proficiency is a key differentiator between elite and sub-elite short distance athletes. Their research indicates that the most successful athletes exhibit a higher level of technical execution, which allows them to maintain optimal form and efficiency under the intense physiological demands of competition. This technical advantage can be a significant factor in determining the outcomes of closely contested short distance events.

As short distance athletes progress through their long-term development, the emphasis on technical proficiency should remain a central focus. Baechle et al. (2021) recommend that coaches continually refine and reinforce the athlete's technical skills, even as they work to develop other physical and cognitive capacities. This ongoing technical training ensures that the athlete's movement patterns

become deeply ingrained and adaptable, enabling them to maintain optimal execution under various competitive conditions(Baechle et al. 2021).

2.1.9 Monitoring and Individualization

In the pursuit of long-term success for short distance athletes, the continuous monitoring of individual progress and the implementation of personalized training programs are essential. Emphasize the need for a comprehensive assessment framework that examines the athlete's physical, technical, and psychological attributes throughout their development(Bourdon et al. 20179).

By closely monitoring the athlete's performance, coaches can identify areas of strength, weakness, and potential imbalances. This information allows them to tailor the training plan to the individual's unique needs and characteristics, as highlighted. For example, an athlete with exceptional speed but limited strength may require a greater emphasis on power development, while another athlete may need to focus on improving their technical execution to maximize their potential(Mujika et al., 2018).

2.1.10 Holistic Approach

In the context of long-term short distance athlete development, a holistic approach is essential for ensuring comprehensive and sustainable growth. This approach encompasses the integration of physical, technical, tactical, psychological, and lifestyle factors, recognizing that the athlete's performance is influenced by a multitude of interconnected elements (Zatsiorsky and Kraemer, 2020).

Researchers have emphasized the benefits of this holistic perspective in short distance athlete development. The need to address not only the physical and technical aspects of training but also the psychological and social well-being of the athlete. This encompasses factors such as mental resilience, emotional regulation, and the management of stress and recovery, which can have a significant impact on the athlete's long-term success (Mujika et al. 2019).

2.2. Training Methods Used for Short-distance Athletes Development

2.2.1 Psychological Factors

The psychological aspect plays a significant role in the performance of short-distance athletes. Psychological interventions help athletes develop mental skills and optimize their mindset for competition. Techniques such as visualization, goal setting and self-talk have been found to positively impact performance. Visualization involves mentally rehearsing the race, imagining one executing perfect technique and achieving desired outcomes. Goal setting helps athletes set specific, measurable, attainable, relevant, and time-bound (SMART) goals to stay motivated and focused. Self-talk involves using positive and constructive internal dialogue to maintain confidence and manage stress (McGreary et al., 2021).

2.2.2 Over speed Training

Over speed training is a method that involves using assistance, such as downhill running or towing devices, to enable athletes to run at speeds faster than their usual capabilities. This technique aims to enhance neuromuscular coordination and stride frequency. A recent study published in the International Journal of Sports Physiology and Performance examined the effects of over speed training on sprint performance in elite female athletes. The results showed that a six-week over speed training program resulted in significant improvements in 20-meter sprint times and stride frequency compared to a control group. This research supports the efficacy of over speed training for short-distance athletes (Loturco et al., 2020).

2.2.3 Periodization Strategies

Periodization is a systematic approach to training that involves dividing the training program into distinct phases or periods, each with specific goals and training focuses. The purpose of periodization is to optimize performance while managing fatigue and preventing overtraining. Short-distance athletes typically follow a periodization model that includes phases such as the preparatory phase (focused on building a foundation of strength and endurance), the specific phase (targeting sport-specific skills and speed development), and the competition phase (aimed at peaking performance for key events) (González-Ravé et al., 2021).

2.2.4 Recovery and Regeneration

Adequate recovery and regeneration strategies are essential for short-distance athletes to optimize their training adaptations and prevent injuries. Recent research has highlighted the importance of incorporating recovery techniques such as foam rolling, massage, compression garments, and contrast water therapy into training programs. These methods help reduce muscle soreness, improve blood flow, and promote tissue repair. Additionally, proper nutrition, hydration, and sleep play vital roles in recovery and should be prioritized to support the demands of intense training (Suppiah et al., 2021).

2.2.5 Strength Training

Strength training is crucial for short-distance athletes to improve muscular strength, power, and force production. It typically includes exercises that target the major muscle groups involved in sprinting, such as the quadriceps, hamstrings, glutes, and calves. Common strength training exercises include squats, deadlifts, lunges, leg presses, and Olympic lifts. Strength training helps increase force production, muscular endurance, and injury prevention (Vrublevskiy et al., 2019).

2.2.6. Technical and Movement Skill Development

As short distance athletes advance in their careers, the emphasis on technical and movement skill development should remain a central focus, even as the training becomes more specialized. Baechle et al. (2021) recommend that coaches continually refine and reinforce the athlete's technical skills, ensuring that their movement patterns remain adaptable and resilient to the changing demands of the sport. This ongoing technical training can help short distance athletes maintain their competitive edge and continue to push the boundaries of their performance(Baechle et al. 2021).

2.2.7. Functional Movement Screening

The implementation of functional movement screening (FMS) is a crucial component in the long-term development of short distance athletes. FMS is a comprehensive assessment tool that evaluates an individual's fundamental movement patterns, identifying potential imbalances, asymmetries, and areas of weakness that may impact athletic performance and increase the risk of injury (Reiman and Manske, 2022).

In the context of short distance events, where the demands on the body are intense and the margin for error is small, FMS can provide invaluable insights into an athlete's movement quality and physical readiness. The early detection and remediation of movement deficiencies can help short distance athletes develop a strong foundation for long-term success, minimizing the risk of injury and optimizing their physical capabilities(Akenhead and Nassis (2016).

2.3. Challenges of Training Methods and Athlete Development of Long-term Short distance.

Challenges and limitations in the training and development of long-term short-distance athletes refer to the obstacles and constraints that can impede the progress and optimal development of athletes focused on short-distance events such as sprints. These challenges can include factors such as early specialization and the risk of overuse injuries, performance plateaus and diminishing returns, injury risk and rehabilitation, psychological factors and lack of individualization and monitoring and ongoing monitoring in training programs. These challenges can affect the long-term development, performance, and overall well-being of short-distance athletes, requiring careful management and strategies to overcome them and maximize their potential(Sellathurai, 2023).

2.3.1. Early Specialization and Overuse Injuries

One of the challenges in the training and development of long-term short-distance athletes is early specialization, which refers to focusing on a single sport at a young age. This can lead to overuse injuries and burnout, as young athletes may face excessive training loads and limited exposure to diverse movement patterns (Bell et al., 2018).

2.3.2. Declining Performance and Profit Fields

As short-distance athletes progress in their training, they may encounter performance plateaus and experience diminishing returns. This can occur when the athlete reaches a point where further improvements become increasingly difficult to achieve despite continued training efforts (National Strength & Conditioning Association (U.S.) & Hoffman, 2012).

2.3.3. Injury Risk and Rehabilitation

The training and development of short-distance athletes are often hindered by the risk of injuries and the subsequent rehabilitation process. Injuries can disrupt training routines, lead to physical imbalances, and impact performance in both the short and long term (Lauersen et al., 2014).

2.3.4. Psychological Factors and Mental Health

Psychological factors and mental health challenges can also pose limitations in the training and development of short-distance athletes. High-pressure competitive environments, performance anxiety, and the demands of balancing sports with other life responsibilities can impact an athlete's well-being and performance (Rice et al., 2024).

2.3.5. Lack of Individualization and Monitoring

The lack of individualization and ongoing monitoring in training programs is another limitation for long-term short-distance athlete development. Training plans that do not consider individual differences in physiology, biomechanics, and response to training may not fully optimize an athlete's potential (Saw et al., 2015).

2.3.6. Balancing Physical Capacities

In the pursuit of long-term success in short distance events, the careful balance and development of an athlete's physical capacities are essential. This multifaceted approach encompasses the optimization of various physical attributes, including speed, power, strength, endurance, and flexibility, ensuring that the athlete's overall physical profile is well-rounded and tailored to the demands of their sport (Mikkelsen et al., 2019).

Researchers have emphasized the need for a holistic approach to physical development, where each component is addressed and integrated seamlessly. The importance of identifying and addressing potential imbalances or weaknesses in an athlete's physical profile, as these can limit their overall performance and increase the risk of injury. By adopting a balanced training regimen, coaches can help short distance athletes develop a comprehensive physical foundation that supports their event-specific needs (Sandbakk et al. (2018).

2.3.7. Skill Acquisition and Technical Development

The acquisition and continuous development of technical skills are pivotal in the long-term success of short distance athletes. These technical proficiencies, which encompass the efficient execution of event-specific techniques and the mastery of fundamental movement patterns, serve as the foundation upon which an athlete's performance can be built and refined over time (Makaruk et al., 2020).

Researchers have emphasized the crucial role of skill acquisition and technical development in the early stages of a short distance athlete's career. Highlight the importance of establishing sound biomechanical principles and movement patterns, as these serve as the building blocks for more advanced skills and adaptations. By focusing on the development of proper technique and movement efficiency, coaches can help young athletes lay the groundwork for long-term success, enabling them to build a strong technical foundation that can be optimized and refined as they progress through their athletic journey(Exell et al. (2017).

2.3.8. Environmental and Contextual Considerations

The long-term development of short distance athletes must take into account the diverse environmental and contextual factors that can influence their performance and overall well-being. These factors can range from the physical training environment to the socio-cultural and psychological contexts in which the athletes operate, all of which can have a significant impact on their ability to reach their full potential (Dobršák et al., 2021).

Researchers have highlighted the significance of the training environment in shaping an athlete's long-term development. Emphasize the importance of providing a safe, well-equipped, and appropriately challenging training facility that caters to the specific needs of short distance athletes. By ensuring that the training environment is conducive to skill acquisition, physical development, and injury prevention, coaches can create a supportive ecosystem that fosters the athlete's long-term growth and success (Daub et al. 2018).

CHAPTER THREE

3. Research Methodology

The researcher method refers to the systematic process and approach employed to conduct the study and address the research objectives. In the case of studying Methods of training and long-term development of short distance athlete's in west wollega zone athlete's projects a mixed research method combining both quantitative and qualitative approaches, triangulation was employed.

3.1. Research Design

In this study, methods of training and long term development of short distance athletes in west welega zone athlete's projects. Was examined using descriptive method.

This study aims to investigate methods of training and long term development of short distance athlete's in West Wollega Zone athlete's projects. Thus, the researcher was use the descriptive design giving the researcher access to particular objectives.

3.2. Study Area

It was one of the twenty (20) Woreda/ and three (3) town Administration /Zone of Oromia. This study will be conducted in West Wollega Zone was selected for this study.

The West Wollega Zone was established many years ago; it consists of Twenty (20) Woredas and Three (3) Municipalities and with an area of 10,833.19 square kilometers hectares and is bordered by Kelam Wollega Zone to the West, Benishangul-Gumuz Region to the north, East Welega to the East and on the southeast it is led by Ilubabor

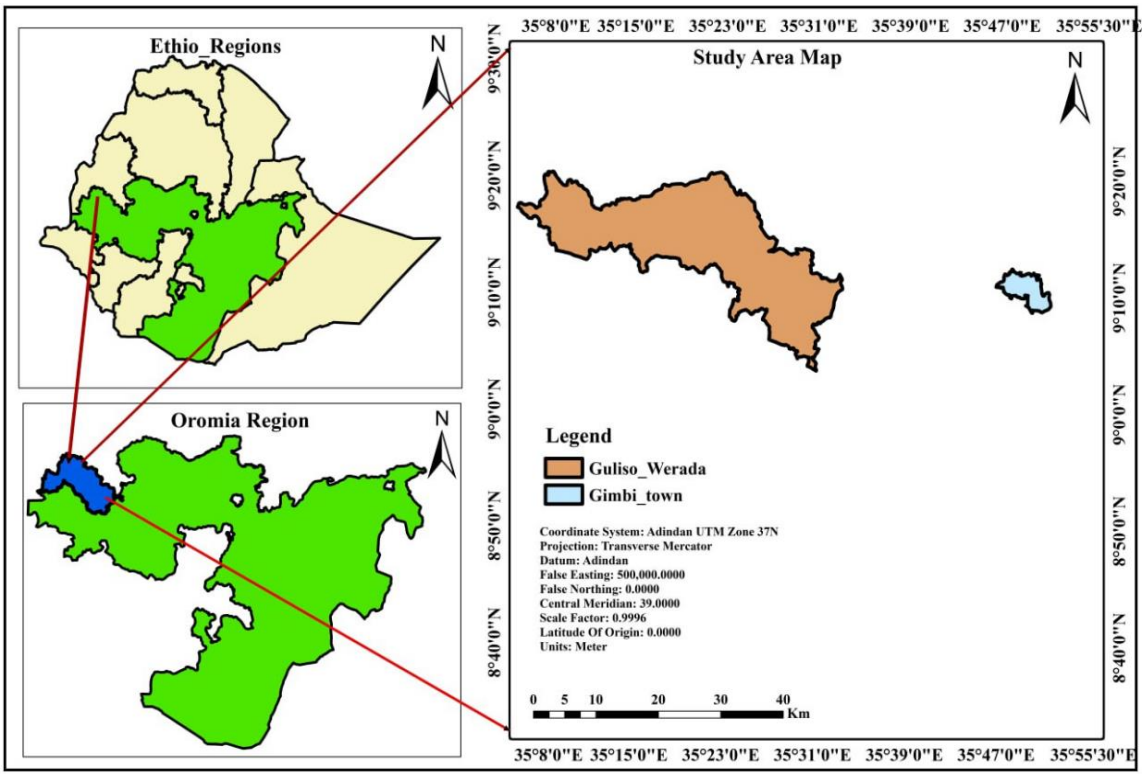

Figure 1. Study Area map. Source: Extracted From Ethio-GIS Data, (2024).

3.3. The population of the Study

The target population of the study was focused on one woreda and one city administration. These are the only recognized athletic projects established in the West Wollega Zone.

Due to this reason, the researcher focused on the Gimbi City Administration's athlete's project and the Guliso woreda athlete's project. From those two athletes' projects, the researcher focused on athletes who participated in short-distance running training methods and long-term short-distance athlete's development programs.

The target population of the study was the entire short-distance athlete's projects in the West Wollega Zone, coaches, sports professionals, and the heads of both offices. Thus, the entire short-distance runners, middle-distance runners, and long-distance runners of 2 projects athletes among their projects total 124 populations, of which 66 male and 58 female total = 124. There are also long-distance, middle-distance, and short-distance runners in both projects (male = 45, female = 47, total = 92, coaches of both projects male = 2, female no, assistants of both athletes projects male = 2, no female, sports experts both office male = 15, female = 11, total 26 and both Sport offices Administration male = 2 and no female total population of participants are researcher members 124 (one hundred twenty-four) are the target populations of the researcher.

Generally, a total of 122 respondents had questionnaires. It was used for the qualitative research method. They were also prepared to respond to a structured interview for both coaches, which were used for qualitative research methodology.

Table 1 Population, Sample and Sampling techniques

No	Gimbi city and Guliso Woreda athletes' project members	Total Population			Sample Size				Sampling techniques'
		M	F	T	M	F	T	%	
1	Gimbi city Administration athletics' project	21	22	43	8	6	14	100	Purposive
2	Guliso Woreda athletics' project	24	25	49	5	9	14	100	
3	Coaches'	2	-	2	2	-	2	100	
4	Assistant coaches'	2	-	2	2	-	2	100	
5	Experts	15	11	26	15	11	26	100	
6	Sport offices Administration	2	-	2	2	-	2	100	
Total		66	58	124	34	26	60	100	

3.4. Sample Size and Sampling Technique

The researcher used a purposive sampling depend on non-probability sampling technique to select the study participants. It is purposive sampling in order to focus on information-rich cases that can provide a deeper, more comprehensive understanding of the phenomenon under study. As a result, the researcher selected short-distance athletes' male -13, female -15, total = 28. Coach male = 2, no female, total = 2; both projects assistant coach male = 2, no female, total = 2; both office experts male = 15, female -11, total = 26, both Office Administration male = 2, no female total = 2. Then total of sample male = 34, female = 26, total 60. So the researcher selected 60 (sixty) populations of respondents as the sample size.

3.5. Source of Data

For this study, the researcher used primary sources of data. Data reliability increases the findings of the study from primary sources or using multiple instruments of data collection techniques, minimizing the risk of erroneous conclusions. Interpretation is required to extract meaning from the data as the data itself cannot be understood by them. The researcher employed primary data sources to achieve the objectives of the study.

3.5.1. Primary Source

The data source used by the researcher was collected from systematically documented project questionnaires and interviews with coaches, athletes, office technician and sport management in the project sites.

3.6. Data Collection Instruments

In order to obtain dependable data from research participants, data collection instruments from the sample population was include questionnaires, interviews, and observations.

3.6.1. Questionnaire

The researcher self-developed the questionnaire consisting of closed and open-ended structures, prepared by English which were translated into Afan Oromo and distributed to athletes, assistant coaches, professionals, and sport administrators; we did not include the two project coaches. Interviews were conducted for the coaches. Once all the paperwork was received and submitted to the athletics project, the next step was to introduce myself to the participant and explain the benefits of the study to the projects and players on the due date to begin data collection with the respondents. Then, the rights of the participants were very politely explained. In doing so, participants willing to participate in the study was given a self-administered questionnaire. However, it is short, relevant, and unambiguous (avoiding negative questions, acronyms, or ambiguous terms, and specific questions that are about the research questions of the researcher). Moreover, the researcher, taking into consideration the educational level of the respondents, generally asked logically prescribed questions that were filtered to guide the respondents and be interesting to the participants.

3.6.2. Interview

To get full and deep information through direct interaction with coaches from each athletics' project center. Some structure in the interview would be conducted by two coaches. To get full and deep information through direct interaction with coaches from each athletic project center. The structure of the interview would be determined by two coaches' projects'. A schedule would be prepared with suggested questions. The location for an interview should be organized in advance and should be in a quiet place so that the interview can concentrate on the questions, but also in an open place where neither the researcher nor the interview can be compromised. As a qualitative collection tool, semi-structured or semi-directive interviews were conducted with a detailed, standardized schedule. The same questions are put to all the respondents in the same order. Each question is asked in the same way in each interview. But the researcher will encourage the respondents to talk freely about a given topic with a minimum of timely guidance. Since an interview is a specific type of conversation between the interviewer and the respondent, an interview guide was prepared and conducted with the current coaches. Finally, before starting the interview, the objective of the interview and all necessary ethical considerations are explained to the interviewees for confidentiality.

3.6.3. Observation

The observation was a long-term training and development of short distance athletes in the West Wollega Zone Athletes Projects. The questionnaire was designed by the researcher and the observational assessment checklist guided the observational process. Accordingly, the researcher used a type of direct visit. Specifically, focus areas such as training programs under planning, accelerated development, endurance training, strength training, training planning and execution, under equipment: running tracks, starting blocks, running lines, gymnasiums and medical service athletes, and finally under benefits: it focuses on uniforms for athletes, benefits for coaches and assistant coaches, motivation for athletes, and the relationship between athletes and coach. Accordingly, once the handout was presented to the two project coaches, the next step was to introduce myself as a participant and explain the benefits of the study to the project on a specific date to begin data collection with the respondents. Then, the two coaches' rights were very politely explained. In doing so, participants willing to participate in the study were asked self-administered questionnaires. The researcher used a structured and closed questionnaire to collect data from the respondents of selected athletics project coaches. It is, short, relevant, clear. Furthermore, the researcher took into account the educational level of the respondents, the questions were logically sequenced, filtered to guide the respondents and were interesting to the participants.

3.7. Pilot Study

Before collecting the data and developing the main questionnaire, the researcher took some pilot study questionnaires, identified potential problems, examined the language and content of the questionnaire and informed the researcher whether changes to the questionnaire instructions were needed. In this case, 10 respondents were selected from the group and then distributed to the respondents who were not part of the sample. Accordingly, the questionnaires are actually based on experimental ideas. Finally, the questionnaire results yielded normal Cronbach alpha values for the total score (average 0.82).

3.8. Procedure of Data Collection

The researcher developed questionnaires, interviews and checklists in English. It was then converted into the preferred language of the respondents and became more translating, the preferred language of the respondents. After the relevant literature was developed, questionnaires were administered to

trainers and trainees at their training centers and to trainers, office technicians and office managers in their offices. With the aforementioned data collection tools, once the researcher built the infrastructure required for literature review and data collection, the tools were verified, adjusted and revised accordingly before being used for data collection and transmission. Accordingly, the researcher explains the purpose of the study to all respondents through questionnaires, interviews, and observations of project athletes, coaches of project athletes, assistant coaches, and heads of sport offices. Once revealed they will distribute the questionnaire to the project athletes; gave interviews' to the coaches. Finally, data collected from real respondents were interpreted based on the findings of the study.

3.9. Method of Data Analysis

Data were collected in a structured and in-depth manner by including the three specific objectives of the questionnaire; mixed methods were analyzed using SPSS Version 26 software and the number of items from the open -ended and closed-ended questionnaire was analyzed using frequency counts, percentages, means and standard deviations. Furthermore the qualitative data collected from the interviews and observations were analyzed through descriptive descriptions and narrative methods, complementing the quantitative findings. The data were organized into separate tables based on the nature of the issues addressed in the questionnaires and interviews. Finally, the evaluated data were used to generate the findings of the study.

3.10. Ethical Consideration of the Study

The researcher provided a common understanding that to protect the respondents from any potential harm by involving them in this study; the research and voluntary participation are free from confidentiality and naming. Thus, the researcher presents the research objective of the research program for participation in part and encourages the respondents to participate in comments. Accordingly, the respondent gave an answer. These questions respect social ethics and value human dignity, and after respondents have calmly observed and organized their opinions with self-discipline, they move on to responding or expressing a fair opinion.

CHAPTER FOUR

4.1. Data Analysis and Discussion and Result

This chapter was about analyzing, interpreting, and discussing data. Questionnaires, interviews and observations were also collected and a pilot study was used to ensure the fairness of the questionnaire and the results were transparent. A total of 42 questionnaires, including interview and observation questionnaires, were translated from English into Oromo and distributed to 90 athletes, 26 professionals, 2 managers, 4 coaches, and their assistants. All distributed questionnaires (100%) were completed and returned to the researcher by all respondents. Based on the respondents from the analysis, the interpretation of the data collected is presented in the table below.

Table 2 Cronbach's alpha values table

No.	Item of questionnaires	Number of items	Cronbach's alpha values
1	Long Term development for short distance athletes.	8	0.89
2	Training methods used for short distance athlete's development.	8	0.78
3	Challenges and limitations in the training and development of long-term short distance athletes.	8	0.79

The participants were asked to respond to the questionnaires on 5- a point Likert scale, ranging from 5(strongly agree to 1(strongly disagree)

Table 3. Demographic Characteristics of the Respondents

The overall results in this table 4.1 were the demographic characteristics of the project athletes. The researcher included six variables with their respective categories.

Item1. Sex of respondents; the table shows that the sample consists of 66 male respondents (53.2%) and 58 female respondents (46.8%), indicating a slightly higher proportion of males compared to females.

Item2. Age of respondents; the majority of the respondents (39.5%) are in the 19-20 age groups, followed by the 21-30 age groups (33.1%) and the 16-18 age groups (27.4%). This suggests that the sample is primarily composed of young adults.

Item3. Educational level; the educational level of the respondents is fairly evenly distributed, with 33.1% having an educational level of 9-10, 34.7% having an educational level of 11-12, and 32.3% having an educational level of 12 and above. This indicates a diverse educational background within the sample.

Item4. Duration of with the athletics project; the respondents have been involved with the athletics project for varying durations, with 27.4% having been with the project for 2 years and another 27.4% having been with the project for 3 years. The remaining respondents are evenly split between 1 year (22.6%) and 4 years (22.6%) of involvement.

Item5. Other sport Project training before you join athletics project; the vast majority of respondents (96.0%) have not been involved in any other sport project training before joining the athletics project, while only a small proportion (4.0%) have had prior experience in other sport projects.

Item6. Family athlete background: The majority of respondents (95.2%) do not have any family members who were athletes, while a small percentage (4.8%) does have an athlete in their family.

No	Item	Alternatives	Frequency	Percent
1	Sex of Respondents	Male	66	53.2
		Female	58	46.8
		Total	124	100.0
2	Age of Respondents	16-18	34	27.4
		19-20	49	39.5
		21-30	41	33.1
		Total	124	100.0
3	Educational level	9-10	41	33.1
		11-12	43	34.7
		12 above	40	32.3
		Total	124	100.0
4	How long have you been with the athletics' project?	1year	28	22.6
		2year	34	27.4
		3year	34	27.4
		4year	28	22.6
		Total	124	100.0
5	Have you been in other sport project training before you join athletics project?	Yes	5	4.0
		No	119	96.0
		Total	124	100.0
6	Is anyone from your family an athlete before?	Yes	6	4.8
		No	118	95.2
		Total	124	100.0

4.2. Data Analysis and Interpretation of Respondents Response

Long term Development Strategies of Short-distance athlete's

Item1: Long-term planning is essential for the successful development of short-distance athletes:

The survey results show that the majority of respondents 97(79.5%) strongly disagree that long-term planning is essential for the successful development of short-distance athletes. This suggests that most of the surveyed individuals do not believe long-term planning is a critical factor in the career development of these types of athletes.

Item2: The survey data shows that the majority of respondents, 96.8% (48.4% strongly disagree, 48.4% disagree), do not believe that plyometric training is a crucial component of a well-rounded training program for short-distance athletes. This is a very strong consensus against the importance of

plyometric for this population. However plyometric training is often associated with the development of explosive power, which is crucial in short-distance athletes.

Item3: Agility training should be a primary focus in the training program of short-distance athletes: A significant majority 70(57.4%) of respondents agree or strongly agree that agility training should be a primary focus. This suggests that respondents recognize the importance of agility in short-distance events.

Item4: Mental skills training, such as visualization, goal-setting, and self-regulation, should be a key focus in the development of short-distance athletes: Over (60%) of respondents agree or strongly agree that mental skills training are essential. This highlights the importance of psychological factors in the development of short-distance athletes.

Item5: Technical proficiency is a critical factor for the long-term success of short-distance athletes: A significant majority 77(63.1%) of respondents agree or strongly agree that technical proficiency is critical. This emphasizes the importance of proper technique in achieving success in short-distance events.

Item6: Comprehensive monitoring and individualized training approaches are essential for the long-term development of short-distance athletes: Over 56% of respondents agree or strongly agree that comprehensive monitoring and individualized approaches are essential. This suggests that respondents recognize the need for a tailored approach to each athlete's development.

Item7: Resistance training should be a core component of the long-term development program for short-distance athletes: A significant majority 77(63.1%) of respondents agree or strongly agree that resistance training should be included. This highlights the importance of strength and power development in short-distance events.

Item8: A holistic approach, considering physical, mental, and lifestyle factors, is essential for the long-term development of short-distance athletes: Over 54.9% of respondents agree or strongly agree that a holistic approach is essential. This emphasizes the importance of considering multiple factors when developing short-distance athletes.

Table 4 . Long term Development Strategies of Short-distance athlete's

Part 2	Items	Alternatives	Frequency	Percent	Mean	St. Div.
1	Long-term planning is essential for the successful development of short-distance athletes over the course of their careers.	Strongly Disagree	97	79.5	4.53	1.085
		Disagree	6	4.9		
		Neutral	2	1.6		
		Agree	11	9.0		
		Strongly Agree	6	4.9		
		Total	122	100.0		
2	Plyometric training is a crucial component of a well-rounded training program for short-distance athletes.	Strongly Disagree	59	48.4	4.42	.678
		Disagree	59	48.4		
		Neutral	1	.8		
		Agree	1	.8		
		Strongly Agree	2	1.6		
		Total	122	100.0		
3	Agility training Should be a primary focus in the training program of short-distance athletes.	Strongly Disagree	1	.8	4.54	.605
		Neutral	1	.8		
		Agree	50	41.0		
		Strongly Agree	70	57.4		
		Total	122	100.0		
4	Mental skills training, such as visualization, goal-setting, and self-regulation, should be a key focus in the development of short-distance athletes.	Strongly Disagree	75	61.5	2.03	1.488
		Disagree	10	8.2		
		Neutral	10	8.2		
		Agree	12	9.8		
		Strongly Agree	15	12.3		
		Total	122	100.0		
5	Technical proficiency is a critical factor for the long-term success of short-distance athletes	Strongly Disagree	13	10.7	4.21	1.325
		Disagree	6	4.9		
		Agree	26	21.3		
		Strongly Agree	77	63.1		
		Total	122	100.0		
6	Comprehensive monitoring and individualized training approaches are essential for the long-term development of short-distance athletes.	Strongly Disagree	1	.8	4.52	.646
		Disagree	1	.8		
		Neutral	1	.8		
		Agree	50	41.0		
		Strongly Agree	69	56.6		
		Total	122	100.0		
7	Resistance training should be a core component of the long-term development program for short-distance athletes.	Strongly Disagree	13	10.7	4.31	1.227
		Agree	32	26.2		
		Strongly Agree	77	63.1		
		Total	122	100.0		
8	A holistic approach, considering the athlete's physical, mental, and lifestyle factors, is essential for the long-term development of short-distance athletes.	Neutral	6	4.9	4.50	.593
		Agree	49	40.2		
		Strongly Agree	67	54.9		
		Total	122	100.0		

Training methods are being used for long-term development of short-distance athletes' questionnaires

Item1: I maintain a positive mindset during training and competition: Most respondents 84 (68.9%) agree or strongly agree that maintaining a positive mindset is important. This suggests that respondents recognize the importance of mental preparation and resilience in competitive sports.

Item2: Strength training is beneficial for improving the performance of short-distance athletes:

Only 97(79.5%) of respondents agree or strongly agree that strength training is beneficial. This may be due to the fact that strength training is often associated with power development, which may not be as critical for short-distance events.

Item3: I control the stress that I have in sports activities: A significant majority (94.3%) of respondents agree or strongly agree that they control their stress levels in sports activities.

This suggests that respondents prioritize stress management as part of their training routine.

Item4: Over speed training helps athletes develop a more efficient sprinting technique and stride mechanics: Most respondents 78(63.9%) agree or strongly agree that over speed training is beneficial for technique development. This highlights the importance of technical skill development in short-distance events.

Item5: The table indicates that a large majority (68.9%) of respondents strongly disagree with the statement that "carefully planned periodization strategies are crucial for the long-term development and peak performance of short-distance athletes." This suggests a rather negative perception towards the importance of periodization strategies for short-distance athlete development.

Item6: Over speed training is to enable athletes to run faster than their usual skills:

Most respondents 66(54.1%) agree or strongly agree that over speed training is used to improve performance. This suggests that respondents recognize the importance of pushing themselves beyond their comfort zone to achieve better results.

Item7: I understand the importance of setting specific goals for each training period to guide my training progression: Most respondents (58.2%) agree or strongly agree that setting specific goals is

important for guiding their training progression. This highlights the importance of goal-setting as a tool for motivation and direction in athletic development.

Item8: I prioritize adequate rest and recovery as part of my training routine: Most respondents 97(79.5%) agree or strongly agree that prioritizing rest and recovery is important. This emphasizes the importance of allowing athletes to recover and recharge between training sessions to avoid burnout and prevent injuries.

Table 5 Training methods are being used for long-term development of short-distance athletes' questionnaires

Part3	Items	Alternatives	Frequency	Percent	Mean	St. Div.
1	I maintain a positive mindset during training and competition.	Disagree	6	4.9	4.59	.736
		Agree	32	26.2		
		Strongly Agree	84	68.9		
		Total	122	100.0		
2	Strength training is beneficial for improving the performance of short-distance athletes.	Strongly Disagree	97	79.5	4.75	.539
		Agree	19	15.6		
		Strongly Agree	6	4.9		
		Total	122	100.0		
3	I control the stress that I have in sports activities.	Disagree	5	4.1	4.39	.709
		Neutral	1	.8		
		Agree	58	47.5		
		Strongly Agree	58	47.5		
		Total	122	100.0		
4	Over speed training helps athletes develop a more efficient sprinting technique and stride mechanics.	Disagree	6	4.9	4.54	.740
		Agree	38	31.1		
		Strongly Agree	78	63.9		
		Total	122	100.0		
5	Carefully planned periodization strategies are crucial for the long-term development and peak performance of short-distance athletes.	Strongly Disagree	84	68.9	4.49	.973
		Neutral	26	21.3		
		Agree	6	4.9		
		Strongly Agree	6	4.9		
		Total	122	100.0		
6	Over speed training is to enable athletes to run faster than their usual skills.	Neutral	4	3.3	4.51	.564
		Agree	52	42.6		
		Strongly Agree	66	54.1		
		Total	122	100.0		
7	I understand the importance of setting specific goals for each training period to guide my training progression.	Disagree	1	.8	4.13	1.120
		Neutral	2	1.6		
		Agree	53	43.4		
		Strongly Agree	66	54.1		
		Total	122	100.0		
8	I prioritize adequate rest and recovery as part of my training routine.	Neutral	25	20.5	4.51	.564
		Strongly Agree	97	79.5		
		Total	122	100.0		

Challenges of training methods and athlete development of long-term short distance questionnaires.

Item1. Training facilities and infrastructure; the majority of the respondents 80(65.6%) strongly disagreed that the training facilities and infrastructure are adequate. This suggests that the current training facilities and infrastructure are inadequate for the long-term development of athletes.

Item2. Coaches' ability to address unique needs; a large majority of the respondents (91.8%) agreed or strongly agreed that coaches better address the unique needs and requirements of short-distance athletes. This indicates that the coaches are perceived to be more effective in supporting the training and development of short-distance athletes compared to long-distance athletes.

Item3. Injury prevention measures; half of the respondents 61(50%) agreed that there are adequate injury prevention measures, while 55(45.1%) were neutral on this aspect. This suggests that there is room for improvement in the injury prevention measures for long-term athlete development.

Item4. Psychological support; a significant percentage of respondents 59(48.4%) strongly disagreed that psychological support for athletes is adequate. This implies that more attention and resources are needed to provide sufficient psychological support for the long-term development of athletes.

Item5. Funding for training and competition; a majority of the respondents 70(57.4%) disagreed that the funding for training and competition is satisfactory. This indicates a perceived lack of adequate funding for the long-term development of athletes.

Item6. Rest and recovery opportunities; half of the respondents 62(50.8%) strongly disagreed that the training program provides ample opportunity for rest and recovery. This suggests that the current training program may not be optimized for the long-term well-being and performance of athletes.

Item7. Support from governing bodies; a significant percentage of respondents 62(50.8%) strongly disagreed that the overall support provided by the governing bodies is satisfactory. This implies that the athletes perceive a lack of adequate support and guidance from the governing bodies in their long-term development.

Item8. Technical satisfaction of the training program; nearly half of the respondents 60(49.2%) strongly disagreed that the training program for short-distance athletes is technically satisfactory. This

suggests that there are concerns about the technical aspects and effectiveness of the training program for long-term athlete development.

Table 6 Challenges of training methods and athlete development of long-term short distance questionnaires.

Part4	Items	Alternatives	Frequency	Percent	Mean	St. Div.
1	Training facilities and infrastructure are adequate.	Strongly Disagree	80	65.6	1.52	.947
		Disagree	32	26.2		
		Neutral	3	2.5		
		Agree	2	1.6		
		Strongly Agree	5	4.1		
		Total	122	100.0		
2	Coaches better address the unique needs and requirements of short distance athletes.	Strongly Disagree	6	4.9	4.27	.962
		Disagree	2	1.6		
		Neutral	2	1.6		
		Agree	55	45.1		
		Strongly Agree	57	46.7		
		Total	122	100.0		
3	There are adequate injury prevention measures.	Strongly Disagree	4	3.3	4.42	.690
		Disagree	2	1.6		
		Neutral	55	45.1		
		Agree	61	50.0		
		Strongly Agree	122	100.0		
		Total				
4	Psychological support for athletes is adequate.	Strongly Disagree	59	48.4	1.98	1.379
		Disagree	44	36.1		
		Strongly Agree	19	15.6		
		Total	122	100.0		
5	Funding for training and competition is satisfactory.	Strongly Disagree	52	42.6	1.57	.497
		Disagree	70	57.4		
		Total	122	100.0		
6	Our training program provides ample opportunity for rest and recovery	Strongly Disagree	62	50.8	1.52	564
		Disagree	56	45.9		
		Neutral	4	3.3		
		Total	122	100.0		
7	The overall support provided by the governing bodies is satisfactory.	Strongly Disagree	62	50.8	1.54	.619
		Disagree	56	45.9		
		Neutral	2	1.6		
		Agree	2	1.6		
		Total	122	100.0		
8	The training program for short distance athletes is technically satisfactory.	Strongly Disagree	60	49.2	1.57	.691
		Disagree	58	47.5		
		Neutral	2	1.6		
		Strongly Agree	2	1.6		
		Total	122	100.0		

4.3. Interpretation of the Interview with the Athletic Projects coaches

Based on the information provided, prior to conducting interviews with Gimbi city administration and Guliso Woreda coaches, the data revealed that the coaching staff is entirely male and a 50/50 share between diploma levels. In general, the interview will proceed as follows.

Interview 1: Short-distance training program: The coaches highlighted the key elements of their short-distance training program, which included a strong focus on speed development, improving acceleration, top-end velocity, and refining running mechanics. This suggests a well-rounded approach to building the foundational physical capacities required for sprint performance.

Interview 2: Training week structure: However, when asked about the structure of a typical training week for their sprinters, the coaches' response of a 2-day per week schedule with just a few hours of training time raises concerns. This training volume may be insufficient to adequately develop the necessary physical qualities and prepare the athletes for competition. A structured training method following 4-5 weekly sessions should be the expectation of a coach. This is consistent with the findings of a recent study on optimal training frequency in short distance events (Casado et al., 2021).

Interview 3: (Successful Training Cycle): The coaches' response about using a regular program that they consider successful was not convincing. Optimal training programs often involve periodized, evidence-based approaches tailored to the specific needs and adaptations of the athletes, rather than a one-size-fits-all continuous program (Durán-Custodio et al., 2023).

Interview 4: (Recovery in Training): The coaches' emphasis on post-training nutrition as the primary aspect of recovery is a limited perspective. Effective recovery also requires adequate rest, active recovery modalities, and a holistic approach to managing training load and fatigue (Kellmann et al., 2018).

Interview 5: (Technical Drills): The coaches' focus on overall speed development rather than specific technical drills to improve running mechanics suggests a potential gap in their understanding of the importance of technique refinement for sprint performance. However, the main technical exercises used to improve running should focus on such things as knee lifts and proper foot placement, building leg exchanges and running mechanics rather than overall speed(Thompson, 2015).

Interview 6: strength and power training: The coaches' view of strength training solely as a means to develop speed is a narrow approach. Comprehensive strength and power training, incorporating exercises like plyometric, Olympic lifts, and targeted resistance training, is crucial for sprinters to develop the necessary physical capacities (Thurgood, 2015).

4.4 Analysis of Observation on Athletics projects

As mentioned in the methodology section, observation was conducted for the facility, which is for athletes in two selected projects. The observation checklist involved facility requirements for athletes, suitability of the project environment, instructional materials', and duty of coaches to encourage athletes.

1. Planning

Clear training program plan: There is no clear and well-designed training program plan. This affects the development of athletes due to the lack of a clear training program plan (Balyi et al., 2013).

Unbalanced training approaches: The observation that some key physical attributes such as speed, endurance, and strength are not targeted consistently or fairly in training programs indicates an unbalanced approach. This can limit physical development and overall performance of athletes(Lahti & Mero, 2016).

Effective planning and implementation processes: regarding planning, implementation and monitoring of training, as well as effective and equitable processes for feedback and correction this indicates a level of organization and an athlete-centered approach.

2. Facilities and Equipment

Regarding adequate facilities and equipment: The lack of properly equipped facilities and equipment such as running tracks, starter blocks, and gyms indicates a significant lack of resources. This can negatively impact athletes' ability to train and develop effectively (Melnick, 2023).

3. Sport Wear Services

Regarding lack of support and motivation for athletes, coach and assistant coach: there is no support in that athletes are not given proper sportswear and there is no motivational benefit for coaches considering inadequate support for athletes and among athletes and coaching staff it indicates that relationships may be disconnected. This can affect the overall health and performance of athletes (Memarian et al., 2019).

Regarding athlete-coach relationships: Looking at the fairness of relationships between athletes and coaches is a good indicator and can help alleviate some of the challenges associated with lack of resources and support.

Table 7 Observation Checklist

Checklist measures: Very excellent= 5, Excellent= 4, Good=3, Fair=2, Unfair=1

No	Observation focus area	**5**	**4**	**3**	**2**	**1**	**Remark**
1.1	**Regarding Planning**						
	Regarding the Training Program Plan,						
	Speed development, patience training, force training						
	The Training and Performance Meeting Plan						
1.2	**Regarding Facilities and Equipment.**	5	4	3	2	1	
	Running track						
	Starting blocks						
	Racetrack lines						
	Well-equipped gymnasium						
	Sports medicine services for athletes						
1.3	**Regarding Sports Wear**	5	4	3	2	1	
	Sports Clothes for athletes.						
	Regarding the benefits of coach.						
	Regarding the benefits of assistant coach.						
	Athlete motivation						
	Coach athlete relationship						

4.5. DISCUSSION

4.5.1. Demographic Characteristics of the Respondents

The sample of respondents is relatively balanced in terms of gender, with a slightly higher proportion of males compared to females. The majority of the respondents are young adults, with the 19-20 age group being the most represented. The educational background of the respondents is diverse, with a fairly even distribution across the different levels. The duration of involvement with the athletics project varies, with most respondents having been part of the project for 2-3 years. Notably, the vast majority of respondents have not had prior experience in other sport projects, and the majority does not have a family athlete background. This demographic profile suggests a relatively homogeneous sample of young, novice athletes who are focused on their development within the current athletics project.

4.5.2. General Discussion on Respondents Response

Based on training methods used for the long-term development of short-distance athletes:

The findings suggest that short-distance athletes place a strong emphasis on mental preparation, stress management, and technique development. While the benefits of strength training are widely recognized, there is some uncertainty around the importance of periodization strategies. Nonetheless, respondents highlight the value of pushing beyond their comfort zone through over-speed training and setting specific goals to guide their progression. Importantly, the prioritization of adequate rest and recovery underscores the holistic approach these athletes take to their long-term development. Collectively, these strategies demonstrate the multifaceted nature of training for successful short-distance performance, blending physical, mental, and technical components to foster sustained improvement over time. This category mainly consists of positive descriptions with a high level of consensus, indicating positive views of training and development methods for athletes for Strength training and carefully planned periodization whereas there is a gap. Mean values in this category range from 4.13 to 4.75, which shows high agreement with positive expression. SD values in this section ranged from 0.539 to 1.120, indicating low variability in responding.

Based on long-term development strategies for short-distance athletes:

The findings underscore the importance of comprehensive long-term planning for short-distance athletes' development. While the significance of plyometric training is disputed, agility and mental skills training emerge as central priorities. Technical proficiency is critical, and individualized, monitored programs are essential. Resistance training is a core component, and a holistic approach considering physical, mental, and lifestyle factors is key. Collectively, these strategies highlight the multifaceted nature of long-term athlete development, emphasizing the need for a strategic, evidence-based approach to nurture the success of short-distance athletes over the long run. This section also contains most of the good explanation on the importance of various training components for short distance athletes. In addition, there are deficiencies in long-term planning and plyometric training. The mean values in this section ranged from 4.21 to 4.54, indicating a high level of agreement with the positive statements. SD values in this section ranged from 0.593 to 1.325, indicating low variability in responding.

Based on challenges related to training methods and athlete development for long-term short-distance athletes:

The findings highlight several critical challenges in the long-term development of short-distance athletes. Respondents in quantity report inadequate training facilities and infrastructure, indicating a need for investment in improving the physical environment for athlete preparation. While coaches are perceived as effective in addressing the unique needs of short-distance athletes, concerns linger/ stay around injury prevention, psychological support, and funding for training and competition. Additionally, the respondents express dissatisfaction with the rest and recovery opportunities, the support from governing bodies, and the technical aspects of the training program. Collectively, these findings suggest that a more holistic, well-resourced, and athlete-centered approach is required to overcome the systemic barriers and foster the long-term success of short-distance athletes. This category contains a mixture of positive and negative feedback, with some areas such as training facilities and coach support receiving positive feedback, while others such as psychological and financial support receive negative feedback 's been described. The mean values in this segment ranged from 1.52 to 4.42, with some areas such as training facilities and injury prevention receiving higher scores and others such as psychological and financial support receiving lower scores .SD values in this

section ranged from 0.497 to 1.379, with some areas such as financial and general support showing low variability, while others such as psychological support showed high variability.

Overall, the 3rd specific objective and class 2nd specific objectives appear to be the most positive classes, with high mean values and low standard deviations. The 4th presents a more mixed image, with some areas receiving a lot of positive feedback and others receiving negative feedback.

4.5.3. Discussion on Interview and Observation

The answers are based on qualitative methods based on attitudes and beliefs of coaches and factors identified by observation that are linked to training methods of athletes and facilities.

The findings from the interviews and observations at the athletic projects provide valuable insights into the current state of the sprint training programs, uncovering several critical areas that require immediate attention and improvement. One of the primary concerns is the insufficient training volume and frequency reported by the coaches, with a 2-day per week schedule and limited training time likely inadequate for developing the necessary physical qualities and preparing the athletes for competition. This is inconsistent with the recommendations from the broader literature, which suggests that a structured training program following 4-5 weekly sessions is more appropriate for optimal sprint development (Oliveira, 2020).

The coaches' reliance on a "regular program" that they consider successful, rather than a periodized, evidence-based approach tailored to the specific needs and adaptations of the athletes, is also concerning. Optimal training programs for sprinters typically involve a carefully planned periodization strategy that accounts for the athletes' individual characteristics and progression over time (Mujika et al., 2018).

The coaches' narrow focus on post-training nutrition as the primary aspect of recovery is a limited perspective, as effective recovery requires a more holistic approach, including adequate rest, active recovery modalities, and a comprehensive management of training load and fatigue (Kellmann et al., 2018).

Furthermore, the observation of inadequate facilities and equipment, such as the lack of a proper running track, starting blocks, and well-equipped gymnasium, suggests a significant resource constraint that can profoundly impact the athletes' training and development. Without access to the necessary

infrastructure and equipment, the coaches and athletes are severely limited in their ability to implement effective training programs and optimize performance(Edler & Eberman, 2019).

Finally, the observation disconnect between the coaches, athletes, and sports administrators, as evidenced by the lack of support, motivation, and cohesive relationships, is a concern that can adversely affect the overall well-being and performance of the athletes. A strong, athlete-centered culture with effective communication and support systems is crucial for the long-term success and sustainability of the training programs (Küttel, 2022).

Addressing these shortcomings and fostering a more cohesive, athlete-centered environment with evidence-based, holistic approaches to training and support structures will be essential for unlocking the full potential of the sprinters and driving sustainable performance improvements.

4.6. RESULT

Based on the above discussion, I have announced my results/findings as follows on methods of training and long term development of short distance athlete's in West Wollega Zone:

Long-term Development Strategies of Short-Distance Athletes:

- ✓ Importance of plyometric training**;**
- ✓ Emphasis on agility and mental skills training**;**
- ✓ Significance of technical proficiency and individualized, monitored programs**;**
- ✓ Role of resistance training and holistic approach considering physical, mental, and lifestyle factors (Engebretsen, L.2015).

Training Methods Being Used for Long-Term Development of Short-Distance Athletes:

- ➢ Emphasis on mental preparation, stress management, and technique development**;**
- ➢ Benefits of strength training and the role of periodization strategies**;**
- ➢ Value of over-speed training and setting specific goals to guide progression**;**
- ➢ Prioritization of adequate rest and recovery (Campillo, R. 2019).

Challenges of Training Methods and Athlete Development for Long-Term Short-Distance Athletes:

- ❖ Inadequate training facilities and infrastructure.
- ❖

- Concerns around injury prevention, psychological support, and funding for training and competition;
- Dissatisfaction with rest and recovery opportunities, support from governing bodies, and technical aspects of the training program;
- Need for a more holistic, well-resourced, and athlete-centered approach to overcome systemic barriers(Suraci, B., Arnason, A., & Shrier, I.2020).

CHAPTER FIVE

5. Summary, Conclusion and Recommendation

5.1 Summary

The objective of this study was to examine the long-term training and development methods of short-distance athletes in West Wollega Zone of Oromia region. (Namely, the Gimbi city administration athlete's project and the Guliso Woreda athletes' specifically. Three basic research questions were formulated, validated by the researcher and consultant, and a review of related literature was conducted using a range of sources and references. The researcher used a mixed research approach for this study; includes the members of the project: athletes, coaches, assistant coach, office technicians, and managers of both offices. These respondents included a total of 124 members (66 male and 58 female athletes ; also long distance, middle distance and short distance runners in both projects (male = 45, female = 47, total = 92, coaches of both projects). male = 2, no female, assistants of both athletes projects male = 2, no female, two sports specialists office male = 15, female = 11, total 26 and pair of Sports Administration offices male = 2 and no female total number of many. In a population of research participants 124 (one hundred twenty-four).

However, discussion based on training methods used for the long-term development of short-distance athletes; this category mainly consists of positive descriptions with a high level of consensus, indicating positive views of training and development methods for athletes for Strength training and carefully planned periodization whereas there is a gap. Mean values in this category range from 4.13 to 4.75, which shows high agreement with positive expression. SD values in this section ranged from 0.539 to 1.120, indicating low variability in responding.

Based on long-term development strategies for short-distance athletes; this section also contains most of the good explanation on the importance of various training components for short distance athletes. In addition, there are deficiencies in long-term planning and plyometric training. The mean values in this section ranged from 4.21 to 4.54, indicating a high level of agreement with the positive statements. SD values in this section ranged from 0.593 to 1.325, indicating low variability in responding.

Based on challenges related to training methods and athlete development for long-term short-distance athletes; this category contains a mixture of positive and negative feedback, with some areas such as training facilities and coach support receiving positive feedback, while others such as psychological and financial support receive negative feedback 's been described. The mean values in this segment ranged from 1.52 to 4.42, with some areas such as training facilities and injury prevention receiving higher scores and others such as psychological and financial support receiving lower scores .SD values in this section ranged from 0.497 to 1.379, with some areas such as financial and general support showing low variability, while others such as psychological support showed high variability.

The Interview and Observation findings are:

The coaches' reliance on a "regular program" rather than a periodized, evidence-based approach tailored to the athletes' needs is problematic. Optimal training programs for sprinters typically involve a carefully planned periodization strategy that accounts for the athletes' individual characteristics and progression over time.

The coaches' narrow focus on post-training nutrition as the primary aspect of recovery is a limited perspective. Effective recovery requires a more holistic approach, including adequate rest, active recovery modalities, and a comprehensive management of training load and fatigue.

The observation of inadequate facilities and equipment, such as the lack of a proper running track, starting blocks, and well-equipped gymnasium, suggests a significant resource constraint that can profoundly impact the athletes' training and development. Without access to the necessary infrastructure and equipment, the coaches and athletes are severely limited in their ability to implement effective training programs and optimize performance.

5.2 Conclusion

Based on the results of the study the researcher obtained and analyzed, the following basic points were forwarded as a conclusion.

This study investigate the long-term development of short distance athletes in Gimbi city administration and Guliso Woreda, lack of implementation of long-term development strategies, inadequate training methods, poor training approaches, lack of resources and broken relationships. The findings underscore the need for a comprehensive, evidence-based, and athlete-centered approach that includes personal development plans, formal training, comprehensive recovery strategies, and stakeholder relationships, which support the long-term of athletes. When we look at these one by one:

Long-term Development Strategies of Short-Distance Athletes:

- Importance of plyometric training**;**
- Emphasis on agility and mental skills training**;**
- Significance of technical proficiency and individualized, monitored programs**;**
- Role of resistance training and holistic approach considering physical, mental, and lifestyle factors (Engebretsen, L. 2015).

Training Methods Being Used for Long-Term Development of Short-Distance Athletes:

- Emphasis on mental preparation, stress management, and technique development**;**
- Benefits of strength training and the role of periodization strategies**;**
- Value of over-speed training and setting specific goals to guide progression**;**
- Prioritization of adequate rest and recovery (Campillo, R. 2019).

Challenges of Training Methods and Athlete Development for Long-Term Short-Distance Athletes:

- ✓ Inadequate training facilities and infrastructure.
- ✓ Concerns around injury prevention, psychological support, and funding for training and competition;
- ✓ Dissatisfaction with rest and recovery opportunities, support from governing bodies, and technical aspects of the training program;
- ✓

- ✓ Need for a more holistic, well-resourced, and athlete-centered approach to overcome systemic barriers (Suraci, B., Arnason, A., & Shrier, I.2020).

5.3 Recommendation

Based on the results of the study, the researcher suggested the following recommendations in light of the summary and conclusion made:-

- ❖ Coach's assistance coaches incorporate plyometric training, aerobic drills, and mental stamina development to enhance athletic performance.
- ❖ Coaches and assistance coaches emphasize technical proficiency through individualized, monitored programs that consider each athlete's needs.
- ❖ Coaches and assistance coaches implement a holistic approach to training, addressing physical, mental, and lifestyle factors.
- ❖ Coaches and assistance coaches utilize strength training and periodization strategies to optimize performance and minimize injury risk.
- ❖ Coaches and assistance coaches together with the management bodies implement over-speed training and set specific, measurable goals to guide long-term progression.
- ✓ Coaches and assistance coaches together with the management bodies ensure athletes have access to adequate rest and recovery opportunities, including proper nutrition, hydration, and sleep.
- ✓ Coaches and assistance coaches together with the management bodies give provide comprehensive psychological support and stress management resources to address the mental demands of the sport.
- ✓ The management of the youth and sports office should work with the governing body to provide better training facilities and development infrastructure to create the right training environment.
- ➢ Governing bodies jointly create incentives to increase funding and resources for training, competition, and athlete development programs.
- ➢ Collaborate with governing bodies to improve the technical aspects of training programs and address athletes' concerns.
- ➢ Coaches and assistance coaches together with the management bodies adopt a more holistic, athlete-centered approach that addresses systemic barriers and provides comprehensive support.

- Coaches and assistance coaches together with the management bodies and athletes encourage a culture of open communication, feedback, and continuous improvement to enhance the overall training environment.
- Coaches and assistance coaches together with develop comprehensive injury prevention programs that address common short-distance athlete injuries.
- The project organization has qualified medical professionals, such as sports medicine specialists, physiotherapists, and sports psychologists, to support injury prevention and rehabilitation.

By implementing these recommendations, short-distance athletes can benefit from a more holistic, well-resourced, and athlete-centered approach to their long-term development, ultimately enhancing their overall performance and well-being.

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APPENDIX -A

JIMMA UNIVERSITY

SPORT ACADEMY DEPARTMENT OF SPORTS SCIENCE

APPENDIX A- QUESTIONNAIRE

All respondents are required to fill out questionnaires (short distance running).

Dear athletes who have responded, this questionnaire's primary goal is to evaluate the training strategies and long-term short-distance athletes' development in the West Wollega Zone athlete's project, which is partially related to my MSC performance at Jimma University (JU). Your sincere answer, courteous collaboration, and curiosity are therefore very important to the outcome of this study. As such, I respectfully request that you keep your responses private. I appreciate your help in filling out the surveys with these. I kindly ask that you supply accurate and confidential information, since it will not be utilized for any other reason or used to evaluate the athlete's knowledge.

General Directions:

• Please, do not write your name on the questionnaire

Please mark a tick (√) inside the circle indicated and for the open ended questions, please write your responses in the space provided.

Part 1: Background Information.

1. Sex: Male ☐, Female ☐
2. What is your age group: 1 6- 18 ☐ , 19-20 ☐, 21-30☐
3. Educational level (Tick one) 5- 8 ☐, 9-10 ☐, 11-12 ☐, 12above ☐
4. How long have you been with the athletics project? (Tick one) 1st Year ☐, 2nd Year ☐, 3rd Year ☐, 4 th Year ☐
5. Have you been in other sport project training before you join athletics? Yes ☐ No ☐

6. Is anyone from your family an athlete before? Yes ☐, No ☐, I don't remember anyone ☐

Part 2: Main Body

Part 2	Items	Alternatives				
2	**Questions related to Long-term development strategies of short-distance athletes.**	1.Strongly	2 Disagree	3 Neutral	4 Agree	5 Strongly
1	Long-term planning is essential for the successful development of short-distance athletes over the course of their careers.					
2	Plyometric training is a crucial component of a well-rounded training program for short-distance athletes.					
3	Agility training should be a primary focus in the training program of short-distance athletes.					
4	Mental skills training, such as visualization, goal-setting, and self-regulation, should be a key focus in the development of short-distance athletes.					
5	Technical proficiency is a critical factor for the long-term success of short-distance athletes.					
6	Comprehensive monitoring and individualized training approaches are essential for the long-term development of short-distance athletes.					
7	Resistance training should be a core component of the long-term development program for short-distance athletes.					
8	A holistic approach, considering the athlete's physical, mental, and lifestyle factors, is essential for the long-term development of short-distance athletes.					

Part 3	**Questions related to Training methods used for short distance athlete's development**.					
1	I maintain a positive mindset during training and competition.					
2	Strength training is beneficial for improving the performance of short-distance athletes.					
3	I control the stress that I have in sports activities.					
4	Over speed training helps athletes develop a more efficient sprinting technique and stride mechanics.					
5	I believe that dividing my training into distinct periods with different focuses is an effective way to improve my performance.					
6	Over speed training is to enable athletes to run faster than their usual skills.					
7	I understand the importance of setting specific goals for each training period to guide my training progression.					
8	I prioritize adequate rest and recovery as part of my training routine.					
Part 4	**Questions related to Challenges of training methods and athlete development of long-term short distance.**					
1	Training facilities and infrastructure are adequate.					
2	Coaches better address the unique needs and requirements of short distance athletes.					
3	There are adequate injury prevention measures.					
4	Psychological support for athletes is adequate.					
5	Funding for training and competition is satisfactory.					

6	Our training program provides ample opportunity for rest and recovery.					
7	The overall support provided by the governing bodies is satisfactory.					
8	The training program for short distance athletes is technically satisfactory.					

APPENDIX- B

INTERVIEW QUESTIONS FOR COACHES PROJECTS

Part1:-Basic Data

Sex: Male ☐, Female ☐

What is your level of educational qualification? 10th ☐ 12th ☐ , Diploma ☐, Degree ☐

1. What are the key components of your short distance training program?

2. How do you structure a typical training week for your sprinters?

3. Can you share an example of a successful training cycle you've used?

4. What role does recovery play in your training model?

5. What are some of the key technical drills you use to refine sprinting technique?

6. Can you explain your approach to strength and power training?

APPENDIX -C

OBSERVATION

A perspective checklist on training methods and barriers associated with short distance runners, current training methods in use for short distance athlete projects and Training and development of long term short distance athletes for West Wollega Zone athlete's projects.

Observer: Tariku Tesgera Date: 16/7/2016

Address: West Wollega Zone

Duration of Observation: 1:30 Started: 3:00 Finished at: 4:30

Checklist measures: Very Excellent=5, Excellent=4, Good=3, Fair=2, Unfair=1

No	Observation focus area	5	4	3	2	1	Remark
	Regarding Planning						
1	Regarding the Training Program Plan,						
2	Speed development, patience training, force training						
3	The Training and Performance Meeting Plan						
	Regarding Facilities and Equipment.						
1	Running track						
2	Starting blocks						
3	Racetrack lines						
4	Well-equipped gymnasium						
5	Sports medicine services for athletes						
	Regarding Sports Wear						

1	Sports Clothes for athletes.						
2	Regarding the benefits of coach.						
3	Regarding the benefits of assistant coach.						
4	Athlete motivation						
5	Coach athlete relationship						

DABALATA -A

YUNIVARSIITII JIMMAA

SPORT AKKAADAAMII KUTAA SAAYINSII SPOORTII

DABALATA AF- GAAFFII

Gaaffii Uummata qorannichaan guutamuu qabudha (fiigicha fageenya gabaabaaf).

Kabajamtoota deebii kennitoota, kaayyoon gaaffilee kanaa inni guddaan mala leenjii fi guddina atileetii fageenya gabaabaa yeroo dheeraa pirojektii atileetiksii Zoonii Wallaggaa Lixaa keessatti gartokkoon raawwii MSC koo Yunivarsiitii Jimmaa (JU) keessatti madaaluudha. Kanaafuu, fedhiin keessan, tumsi gaarummaa fi deebii dhugaa keessan milkaa'ina qorannoo kanaa keessatti waan hawwataadha. Kanaaf deebii keessan iccitiin akka eeggattan kabajaan isin gaafadha. Kanneen waliin gaaffilee guutuu irratti tumsa gootaniif galatoomaa! Odeeffannoon walitti qabame kun kaayyoo biraatiif kan hin oollee, iccitii kan qabuu fi karaa kamiinuu beekumsa atileetichaa madaaluuf kan yaadame waan ta'eef deebii dhugaa fi sirrii ta'e akka kennitan cimsee isin gaafadha.

Tumsa keessaniif dursinee galatoomaa!

Kallattii waliigalaa:

• Maaloo, maqaa keessan gaaffilee irratti hin barreessinaa!

Maaloo geengoo agarsiifame keessaa mallattoo (√) guutaa!

• Gaaffiiwwan banaa ta'aniif deebii keessan bakka kenname keessatti barreessaa!

Kutaa 1ffaa: Odeeffannoo Duubbee.

1. Saala: Dhiira ☐ Dhalaa ☐

2. Umriin kee meeqa: 1 6- 18 ☐ 19-20 ☐ 1-30 ☐

3. Sadarkaa barnootaa 5- 8 ☐ , 9-10 ☐ , 11-12 ☐ , 12 oli ☐

4. Pirojektii atileetiksii kana waliin yeroo hangamii turtan? (Tokko irratti mallattoo kaa'aa!)

waggaa1 ☐ , waggaa 2 ☐ , waggaa 3 ☐ , waggaa 4 ☐

5. Atileetiksiitti osoo hin makamin dura leenjii pirojektii ispoortii biroo keessa turteettaa?

Eeyyee ☐ , Lakki ☐

6. Maatii keessan keessaa namni kanaan dura atileetii ture jiraa?

Eeyyee ☐ Lakki ☐ Nama tokkollee hin yaadadhu ☐

Kutaa 2ffaa: Qaama Guddaa

Kutaa 2	Wantoota	Filannowwan				
2	Gaaffilee Misooma Yeroo Dheeraa atileetota fageenya gabaabaa waliin walqabatan	1.Cimsee Walii hin galu	2 Walii hin galu	3 Qaama biliisaa	4 Waliin gala	5.Cimseen walii gala
1	Atileetota fageenya gabaabaa adeemsa hojii isaanii keessatti milkaa'inaan akka guddataniif karoorri yeroo dheeraa barbaachisaa dha.					
2	Leenjiin pilaayimeetirii sagantaa leenjii atileetota fageenya gabaabaa irratti hundaa'aniif qaama murteessaadha.					
3	Sagantaa leenjii atileetota fageenya gabaabaa keessatti leenjiin sochii qaamaa xiyyeeffannoo jalqabaa ta'uu qaba.					
4	Leenjiin dandeettii sammuu kan akka mul'achuu, galma kaa'uu fi of-danda'uu guddina atileetota fageenya gabaabaa keessatti xiyyeeffannoo ijoo ta'uu qaba.					
5	Milkaa'ina yeroo dheeraa atileetota fageenya gabaabaaf dandeettiin teeknikaa waan murteessaadha.					

6	Hordoffii bal'aa fi mala leenjii dhuunfaa guddina yeroo dheeraa atileetota fageenya gabaabaatif barbaachisaa dha.					
7	Leenjiin mormii sagantaa misooma yeroo dheeraa atileetota fageenya gabaabaaf qophaa'u keessatti qaama ijoo ta'uu qaba.					
8	Malli waliigalaa, dhimmoota qaamaa, sammuu fi akkaataa jireenyaa atileetichaa ilaalcha keessa galchuun, guddina yeroo dheeraa atileetota fageenya gabaabaaf barbaachisaa dha.					
Kutaa 3	Gaaffiiwwan Mala Leenjii guddina atileetii fageenya gabaabaaf itti fayyadaman waliin walqabatan.					
1	Yeroo leenjii fi dorgommii yaada gaariin qaba.					
2	Shaakalli humnaa ga'umsa atileetota fageenya gabaabaa fooyyessuuf faayidaa qaba.					
3	Sochii Ispoortii keessatti dhiphina natti dhufu haalaanin to'adha.					
4	Leenjiin saffisa olka'aa atileetotni tooftaa fiigichaa fi makaaniksii tarkaanfii gahumsa qabu akka horatan gargaara.					
5	Leenjii koo yeroo adda addaa xiyyeeffannoo adda addaatiin qooduun raawwii koo fooyyessuuf karaa bu'a qabeessa ta'uu nan amana.					
6	Leenjiin saffisa olka'aa atileetotni dandeettii isaanii isa barame caalaa saffisaan akka fiigan dandeessisuudha.					

7	Yeroo leenjii tokkoon tokkoon isaatiif galma addaa kaa'uun guddina leenjii koo qajeelchuuf barbaachisummaa isaa nan hubadha.					
8	Boqonnaa gahaa fi fayyuu akka qaama leenjii kootti dursa nan kenna.					
Kutaa 4	Gaaffiiwwan Rakkoolee fi daangaawwan leenjii fi guddina atileetota fageenya gabaabaa yeroo dheeraa irratti mul'atan waliin walqabatan.					
1	Bakkeewwan leenjii fi bu'uuraalee misoomaa ga'aa dha.					
2	Leenjistootni fedhii addaa fi barbaachisummaa atileetota fageenya gabaabaa haala gaariin ilaalu.					
3	Tarkaanfiiwwan ittisa miidhaa qaamaa gahaa ta'an jiru.					
4	Deggarsi xiinsammuu atileetotaaf kennamu haala ga'aa irra jira.					
5	Maallaqni leenjii fi dorgommiidhaaf oolu quubsaa dha.					
6	Sagantaan leenjii keenya carraa boqonnaa fi fayyina gahaa ni kenna.					
7	Deeggarsi waliigalaa qaamoleen bulchitootaa kennan quubsaa dha.					
8	Sagantaan leenjii atileetota fageenya gabaabaa .gama teeknikaan quubsaadha.					

DABALATA - B

GAAFFII QOMAA LEENJISOOTA PROOJEKTOOTAATIIF.

Kutaa1ffaa:-Daataa Bu'uuraa

Saala: Dhiira ☐ Dhalaa ☐

Sadarkaan gahumsa barnootaa keessan maali? 10ffaa ☐ , 12ffaa ☐ , Dippiloomaa ☐ , Digirii ☐

1. Qaamonni ijoo sagantaa leenjii fageenya gabaabaa keessanii maali?
2. Torban shaakala idilee fiigdota keessaniif akkamitti caaseffattu?
3. Fakkeenya marsaa leenjii milkaa'aa fayyadamte nuuf qooduu dandeessaa?
4. Moodeela leenjii keessan keessatti fayyuun gahee akkamii qaba?
5. Shaakala teeknikaa ijoo teeknika fiigichaa fooyyessuuf itti fayyadamtan keessaa muraasni maali?
6. Akkaataa leenjii humnaa fi humnaa itti fayyadamtu ibsuu dandeessaa?

DABALATA -C

DAAWWANNAA

Tarreen sakatta'iinsa Ilaalchaa (perspective checklist) mala leenjii fi danqaawwan fiigdota fageenya gabaabaa waliin walqabatan, maloota leenjii yeroo ammaa pirojektoota atileetota fageenya gabaabaaf itti fayyadamaa jiranii fi Leenjii fi misooma atileetota fageenya gabaabaa yeroo dheeraa pirojektoota atileetota Zoonii Wallaggaa Lixaa ilaalchisee.

Daawwataa: Taarikuu Tasgaraa Guyyaa: 16/7/2016

Teessoo: Godina Wallagga Lixaa

Yeroo turtii Daawwannaa: 1:30 Yeroo jalqabe: 3:00Yeroo itti xumurame: 4:30

Safartoota tarree sakatta'iinsaa: Baay'ee baay'ee gaarii=5, Baay'ee gaarii=4, Gaarii=3, Haqa qaba=2, Haqa hin qabu =1

Lakk.	Naannoo Xiyyeeffannoo Ilaalchaa	5	4	3	2	1	Yaada
	Karoora Ilaalchisee						
1	Karoora sagantaa leenjii ilaalchisee,						
2	Misooma saffisaa, leenjii obsaa, leenjii humnaa						
3	Karoora walga'ii leenjii fi raawwii						
	Faayidaa fi Meeshaalee Ilaalchisee.	5	4	3	2	1	
1	Daandii fiigichaa						
2	Bilookii jalqabbii fiigichaa						
3	Sararoota dirree fiigichaa						
4	Jiimnaaziyeemii meeshaalee gaarii qabu						
5	Tajaajila qoricha ispoortii atileetotaa.						

	Uffata Ispoortii Ilaalchisee	5	4	3	2	1	
1	Uffata Ispoortii atileetotaaf.						
2	Leenjistootaaf faayidaa ilaalchisee.						
3	Gargaaraa leenjisaatiif faayidaa ilaalchisee.						
4	Atileetotaaf kakaastotailaalchisee						
5	Hariiroo Atileetii fi leenjisaa						