ADDIS ABABA UNIVERSITY

COLLEAGUE OF NATURAL SCIENCE

DEPARTMENT OF SPORT SCIENCE

FACTORS AFFECTING THE PERFORMANCE OF LONG DISTANCE TRACK ATHLETES IN CASE OF SECOND DIVISION ATHLETICS CLUBS AT ADDIS ABABA ETHIOPIA

BY: - GIDEY NIGUS

June, 2021

Addis Ababa, Ethiopia

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APPROVED BY THE BOARD OF EXAMINERS

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ABSTRACT

Identifying factors that affect track athletes Performance is crucial. The purpose of the study was to examine factors that affect the performance of long distance track athletes: with specific reference to second division athletics club at Addis Ababa. The research design was descriptive survey and research method was both qualitative and quantitative approaches of organizing and analyzing the data supported by mean, percentage, and tables. In this study athlete, coaches and club officials were participated and the total population was 240 athletes, 17club officials and 20 coaches from 17 clubs. In this research 150 athletes, 20 coaches, and 17 club officials were selected using census and cluster sampling technique. The researcher used both primary and secondary sources of data to accomplish this study. Data gathering tools were questionnaire, interview and observation. The data were analyzed both qualitatively and quantitatively and it were analyzed in SPSS software version 20.0 (mean and standard division). The major findings obtained from these study indicated that, lack of training kits, facilities and equipment, coaches did not applied properly science of sport training principles, and athletes not got enough diets in addition to these long distance track athletes training needs enough rest after training session. It was feasible to deduce from this study that there are numerous issues that affect the performance of long track athletes. According to the findings, the club should address issues such as making the training environment more pleasant, preparing menus, and providing transportation for track workouts.

Key Words: factors, Performance, clubs, Athlete, Training principles

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ACRONYMS / ABBRIVATION

IAAF	**International Association of Athletics Federation**
VO2 MAX	**Maximum Volume of Oxygen Consumption**
ACTH	**Adrenocorticotropic Hormone**
1RM	**One Reputation Max**
HRR	**Heart Rate Recovery**
TRIMP	**Training Impulse**
AAF	**Addis Ababa Athletics Federation**
WA	**World Athletics**

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Athletics is a term that is commonly used interchangeably with any sporting activity, but it usually refers to track-and-field sports that involve running, jumping, or throwing. These sports are most closely linked with the Olympics, although they are also competed in at the youth, high school, college, and professional levels all year long around the world.

The first Olympics in ancient Greece go back at least as far as the eighth or ninth century B.C. While such sports as boxing and equestrian events were included, most of the events were those now classified under athletics or track and field. They included running, jumping, discus and the javelin. Those four, plus wrestling, made up the pentathlon. The running events included "stades," which were essentially sprints from one end of the stadium to the other, a distances of about 190 meters; two-stade races; longer-distance races of between seven and 24 stades; and a two- or four-stade race in which the competitors wore armor.

Long-distance running, or endurance running, is a form of continuous running over distances of at least 3 kilo meters (1.8 miles). Physiologically, it is largely aerobic in nature and requires stamina as well as Running and other athletic events have long been a part of many cultures, but in the 19th century, such activities were becoming more popular, particularly in Europe and the United States. School curricula included athletics and in 1896, the first Modern Olympics were held in Athens, Greece. Events included the 100-meters, 400 meters, 800 meters, 1,500 meters, 110-meter hurdles, pole vault, discus, shot put, javelin, long jump, triple jump and high jump.

After the 1896 Olympics, the popularity of athletics, or rather, a revival of athletic competition, took place around the world. National athletics federations from 17 countries got together to form an international governing body and in 1912, the International Amateur Athletic Federation was born. For many years, the pinnacle of athletics competition was the Summer Olympics. But in the 1970s, more world championships in various events began to take place, helping to maintain interest in track and field every year.

By 2011, nearly 50 outdoor and 25 indoor events fall under the IAAF's authority and rules. Some events, such as the 50-meter sprint, are no longer part of major athletic competitions, but remain

part of school programs. Some events have been modified through the years and races of many varying distances are contested every year. The history of long-distance track running events is tied into the track and field stadia where they are held. Oval circuits allow athletes to cover long distances in a confined area. Early tracks were usually on flattened earth or were simply marked areas of grass. The style of running tracks became refined during the 20th century: the oval running tracks were standardized to 400 meters in distance and cinder tracks were replaced by synthetic all-weather running track of asphalt and rubber from the mid-1960s onwards. It was not until the 1912 Stockholm Olympics that the standard long-distance track events of 5000 meters and 10,000 meters were introduced. The 5000 meters is a premier event that requires tactics and superior aerobic conditioning. Training for such an event may consist of a total of 60–200 kilometers (40–120 miles) a week, although training regimens vary greatly. The 5000 is often a popular entry-level race for beginning runners.

The 5000 meters or 5000-metre run (approximately 3.1 mi or 16,404 ft) is a common long-distance running event in track and field. It is one of the track events in the Olympic Games and the World Championships in Athletics, run over 12.5 laps of a standard track. The same distance in road running is called a 5K run. The 5000 m has been present on the Olympic programmes ince 1912 for men and since 1996 for women. Prior to 1996, women had competed in an Olympic since 1984. The 5000 m has been held at each of the World Championships in Athletics in men's competition and since 1995 in women's.

The event is almost the same length as the dolichos race held at the Ancient Olympic Games, introduced in 720 BCE. While mainly run as an outdoor event, the 5000 m is sometimes run on an indoor track. World Athletics keeps official records for both outdoor and indoor 5000-metre track events • *Tufts University: Ancient Olympic Events: Pentathlon Tufts University: Ancient Olympics Olympic.org: Athens 1896 IAAF: Outdoor and Indoor Events*

5000 meters world record world record progression

Pos	Time	Athlete	Date	Place
1	12:35.36	Joshua Cheptegei" (UGA)	14 August 2020	Monaco
2	12:37.35	Kenenisa Bekele (ETH)	31 May 2004	Hengelo
3	12:39.36	Haile Gebrselassie" (ETH)	13 June 1998	Helsinki
4	12:39.74	Daniel Komen (KEN)	22 August 1997	Brussels
5	12:43.02	Selemon Barega (ETH)	31 August 2018	Brussels
6	12:45.82	Hagos Gebrhiwet (ETH)	31 August 2018	Brussels
7	12:46.53	Eliud Kipchoge (KEN)	2 July 2004	Rome

Pos	Time	Athlete	Date	Place
1	14:06.62	LetesenbetGidey (ETH)	7 October 2020	Valencia
2	14:11.15	TiruneshDibaba (ETH)	6 June 2008	Oslo
3	14:12.59	AlmazAyana (ETH)	2 June 2016	Rome
4	14:12.88	MeseretDefar (ETH)	22 July 2008	Stockholm
5	14:15.41	GenzebeDibaba (ETH)	4 July 2015	Saint-Denis
6	14:18.37	HellenObiri (KEN)	8 June 2017	Rome

Source: "https://en.wikipedia.org/wiki/5000_metres"

The 10,000 meters or the 10,000-metre run is a common long-distance track running event. The event is part of the athletics programme at the Olympic Games and the World Athletics Championships, and is common at championship level events.

The race consists of 25 laps around an Olympic-sized track. It is less commonly held at track and field meetings, due to its duration. The 10,000-metre track race is usually distinguished from its road running counterpart, the 10K run, by its reference to the distance in meters rather than

kilometers. The 10,000 meters is the longest standard track event. The international distance is approximately 6.2137 miles (or approximately 32,808.4 feet). Most of those running such races also compete in road races and cross country events. Official records are kept for outdoor 10,000-metre track events. The world record for men is held by Joshua "Cheptegeiof Uganda in 26:11.00, posted at Valencia, Spain on 7 October 2020. For women, the world track 10,000-metre record is held by Letesenbet Gidey of Ethiopia in 29:01.03 to win Ethiopian Olympic trial at Hengelo. The 10,000 meters demands exceptional levels of aerobic endurance, and elite athletes typically train in excess of 160 km (100 miles) a week. ***"10,000 Meter senior outdoor". www.worldathletics.org***.

1.2 Statement of the problem

Ethiopia was a well-known country in the sport of long-distance track athletics (5000and 10000 meters). However, there were elements that aided distance track athletes' success, including financial, dietary, facility, and equipment considerations, as well as a decrease in acceptance of long distance track events from the Diamond League. These athletes have shown little interest in competing in track and field events. So the study focus on factors affecting track athletes' performance to get positive impact for future athletics sport investigation for long distance track athletes. The IAAF's decision to drop the 5,000 meters from its Diamond League track and field series has been met with strong resistance from Ethiopia and Kenya, where one former world champion accused the sport's governing body of trying to "kill long-distance running. "The Ethiopian Athletics Federation has written to IAAF president Sebastian Coe asking the governing body to reconsider the change, which goes into effect next year and was part of a larger overhaul of the series. Athletics Kenya said it would also argue for the 5,000 to be restored and would ask African nations to come together in opposition to the IAAF's decision at a meeting of the African track body next month. Ethiopia's long distance great Haile Gebrselassie has said the decision to limit the longest event in the circuit to 3,000m will disproportionately affect Kenya and Ethiopia, two powerhouses of middle and long distance running. "Historically, the longer distances were the pillar of track and field. Marathon was the pride of the Olympics, and 5,000m and 10,000m races were what made track and field interesting," the former 10,000m and road runner told Reuters. "All the legends of track and field – from Paavo Nurmi, Haile Gebreselassie and Kenenisa Bekele, Mo Farah and Paula Radcliffe, Kip Keino, Henry Rono and Paul Tergat, Said Aouita and Hicham El Guerrouj - were 5,000m and 10,000m athletes," he said.

"Besides, our athletes would lose significant income from the circuit if the two races are dropped. This would have a trickling effect and demoralize young athletes who admire their successful compatriots in their flashy cars and high-end property, thanks to prize money from winning long-distance races,"

There are a lot of literatures existing in the issues under study. However, some researches made in this concept are (Dine H. S.2012). A study on factors affecting current problem of some selected long distance runner's event at Ethiopian. Nigus D. (2012) came up with the finding of scarcity of facilities; equipment and limitation of training place and Rahmeto, I. (2017) administration factor in the club are the major problem of the performance of the long distance athletes. From those researchers they try to address in general term it's not specific and didn't address other important problems that was currently happed in all disciplines. But, my study try to address more specific challenges that face the athletes performance in long distance track athletes only that helps to clearly identify the current problems of track athletes performance.

1.3 Research Questions.

1. What were the main factors that affect the performance of Long Distance track Athletes?
2. To what extent the coaches followed and applied the science of training principles?
3. Are there enough facilities and equipment in the clubs
4. From where the athletes got their diet/food during training and Competitions period?

1.4 Objective of the Study

1.4.1General objectives

The general objective of the study was to assess the factor that affect the performance long distance track athletes in case of second division athletics club at Addis Ababa.

1.4.2 Specific objectives

1. To identify the main factors that affects the performance of Long Distance track Athletes.
2. To examine the scientific training principles of the coaches
3. To identify whether the clubs had enough facilities and equipment in the clubs.
4. To examine where the athletes obtained their diet/Food during training and Competitions period.

1.5 Significance of the study

The primary interest of the research was factors that affect long distance track athletes' performance in the case of second division athletics club Addis Ababa. The researcher believed that this research work would have the following significance:

- To offer a proper and fruitful ground for athletes;
- Increase the number of elite long-distance track athletes.
- It includes the fresh findings of the research findings into the second division long distance track athletes' system..

1.6 Delimitation of the study

The study focuses on the elements that influence long-distance track athletes' performance at a second-division athletics club in Addis Ababa. Because long distance athletics was popular and practiced among clubs and non-clubs athletes who competed in track events, cross country, road races, half and full marathons under Addis Ababa athletics federation these regions were chosen.It was, however, difficult to discuss the entire field of long-distance athletics. As a result, all outline fields and non-club athletes are excluded from the study. As a result, the study would be limited to only track participants from Addis Ababa's second division athletics club. The research findings would be replicated and changed in additional competitions in order to contribute to the overall development.

1.7 Limitation of the study

The study's limitations included only coaches, long-distance track athletes, and club administrators that were currently involved in the process. I was unable to do the assignment adequately due to a lack of time and a lack of organized records in a second division athletics club. Furthermore, I was limited by the Covid 19 pandemic problem.

1.8 Definition of key terms

Athlete-A participant in a group of sporting activities which includes track and field, road running, cross country running and race walking.

Athletics is a group of competitive sports that include running, jumping, throwing, and walking.

Coaching is a technical talent that entails the coordination of aspects such as time sequence, action movement, and speed in order for a sports person to achieve the best level of efficiency in a particular activity.

Competition-A situation when attainment of a goal by one participant prevents the other participants from attaining it.

Endurance-The capacity to continue a physical performance over a period of time.

Factors: - stimulating test of abilities or a situation that tests some body's abilities in a stimulating way.

Long distance track athletes-distance from3, 000m to 10000 meters.

Performance: -is an actual ability and potential capacity of an athlete's which is an observable behavior of athletes in training and competition (Han in, 2000)

Track Athletes; Athletes who participate only in the tack events.

Training Means- Different variables and measures, which help in the attainment of high sports performance.

1.9 Organization of the study

The research was divided into five sections. Background of the study, statement of the problem, purpose of the study, significance of the study, delimitation and limitation of the study, and definition of terminology were all covered in the first chapter. The second chapter is devoted to a review of the relevant literature. The study methodology (research design, source of data, sample, sample size, sampling procedure, data collection instruments, and data analysis) is covered in the third chapter, and the analysis and interpretation of the data received from the respondents is covered in the fourth chapter. Finally, the fifth chapter summarizes the research, draws conclusions, and makes recommendations based on the study's findings..

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 General Principles of Training

Exercise training can be defined as a systematic process of preparing for a certain physical goal. This goal used to be synonymous with peak physical performance; however, exercise training is also used to achieve targets for health-related fitness. As society evolves and becomes more sedentary Dollman et al. (2005) there is greater emphasis on habitual physical activity with the aim of reducing obesity, adult onset diabetes, hypertension and the risk of heart disease. Indeed, there are specific guidelines which have been have written for prescribing exercise for these conditions (American College of Sports Medicine 1998) Dollman, J., Norton, K. & Norton, L. (2005) Evidence for secular trends in children's physical activity behavior. British Journal of Sports Medicine 39, 892–897

An understanding shared by coaches and athletes alike, all over the world, is the general concept that physical performance improves with training Foster et al. (1996). The specific guidelines on how to achieve peak performance are not so clear, because of the diverse capabilities, goals and types of sport. For example, a sedentary person may have a goal of training to develop sufficient fitness for running 5 km without stopping. This can be compared to the goal of a professional athlete who trains according to a program with the aim of reducing his 5-km time by 3 s. However, irrespective of the goal, there are basic principles of training which can be applied to plan training program.

Training for peak sporting performance includes training for physical development (general and sport-specific factors), and technical and tactical training (Bompa 1999). Athletes also have to train psychological aspects and in team sports athletes have to train for the development of team compatibility to ensure harmony within the team structure. To complete the requirements for achieving peak performance, athletes need to be healthy and free of injuries and have a theoretical knowledge of their training in preparation for their sport so that they can take some responsibility for their progress Bompa (1999).

Long-term planning for the career of an elite athlete covers 10–15 years (Smith 2003). However, the age at which competitors reach their peak varies according to the sport. For example, in

sports such as gymnastics, figure skating, and swimming competitors reach their peak in their late teens or early twenties, in contrast to other sports such as soccer, rugby, and distance running where competitors reach their peak success in their late twenties or early thirties Bompa (1999). In sports such as golf and lawn bowls, in which the technical attributes are the most important factors determining success, the age of elite performers may be 40 or 50 years. Generally, the starting age of athletes in the more technical sports, which require the development of fine motor coordination skills, is younger than athletes competing in sports that are less technical but depend more on physical ability

Exercise training to improve performance can be traced back to early civilizations Kontor (1988). There is evidence for both strength training and strength contests as early as 2040 bc with illustrations of weightlifting and strength movements on the tomb of the Egyptian Prince Baghti Stone et al. (2006). Other forms of training are described in folklore. For example, there is the story of the Milo the Greek wrestler who won six titles at the Olympic Games, getting his first title in 540 bc. In preparation for his competition Milo supported a calf above his head daily. As the calf grew, Milo became stronger and was the credited with being the first person to practice the principle of overload (Kontor 1988). This principle was only studied systematically nearly 2500 years later Hellenbrandt & Houtz (1956). Planning a training program for improving performance was documented by Flavius Philostratus (ad 170–245), a coach of Greek Olympians. He mentioned that a coach should "be a psychiatrist with considerable knowledge in anatomy and heritage" (Bompa 1999).

Temporary athletes compared with the top athletes several decades ago are:

- Improvements in coaching;
- Advances in nutrition;
- Perfection of athletic facilities;
- Refinement of equipment; and
- Contributions from sports medicine (Tipton 1997).

2.1.1. Biologic process of Training

Exercise training can be explained according to the principles of biologic adaptation. In accordance with this explanation, each training session imposes a physiologic stress (Brooks et al. 2005). As with all forms of physiologic stress, there is a homeostatic reaction. This results in

transient physiologic and metabolic changes (Coyle 2000) which return to their pre-exercise resting levels during the recovery period when the exercise session is over. Examples of these transient changes are as follow Brooks et al. (2005):

- Altered blood flow to the active muscles;
- Increased heart rate;
- Increased breathing rate;
- Increased oxygen consumption;
- Increased rate of sweating;
- Increased body temperature;
- Secretion of stress hormones such as adrenocorticotropic hormone (ACTH), cortisol and catecholamine's;
- Increased glycolytic flux; and
- Altered recruitment of muscles

If these acute bouts of exercise are repeated over time they induce chronic adaptations that are also known as training adaptations (Coyle 2000). Most of these changes involve remodeling of protein tissue as a consequence of changes between protein synthesis and degradation (Mader 1988) these changes are semi-permanent and do not disappear after the bout of exercise or training session. However, they do regress if regular exposure to the stress of training ceases, as occurs during periods of detraining Mujika et al. (2004).

Training adaptations result in altered metabolism (Coyle 2000), changes in neuromuscular recruitment patterns during exercise, and remodeling of tissue Hakkinen et al. (2003). The overt symptoms of training adaptations are shown by well-defined muscles, low body fat and skilful movements. The covert symptoms of training are increased mitochondria in skeletal muscles (Irrcher et al. (2003), increased capillarization (Henriksson 1992), cardiac hypertrophy Urhausen & Kindermann (1992), and increased density of bones Chilibeck et al. (1995). The first signs of increased capillarization occur about 4 weeks after starting a training program Jensen et al. (2004), while it takes at least 4 weeks for the mitochondrial mass in the skeletal muscle to increase (Lambert & Noakes 1989). A few days after starting an endurance training program there is an increase in plasma volume Green et al. (1990), while an altered muscle recruitment is the earliest adaptation that occurs after resistance training Carroll et al. (2001); Gabriel et al.

(2006). This is followed by muscle hypertrophy which occurs after about 8 weeks, depending on the training status of the athlete.

Training adaptations can be classified either as those changes that increase performance (through either an increased muscle power, increased ability to resist fatigue, or increased motor coordination) or those changes that reduce the risk of injury. There is generally a positive relationship between training load and the physiologic adaptations resulting in improvements in performance. However, if a critical training load is exceeded there will be diminishing returns. For competitors at the elite level there is a fine line between insufficient training or too much training (Kuipers & Keizer 1988; Lehmann et al. 1993; Meeusen et al. 2006; Morton 1997).

Insufficient training does not induce adequate adaptations and results in suboptimal performance. In contrast, too much training results in maladaptation's or the failure to adapt, causing symptoms of fatigue and poor performance (Budgett 1990; Derman et al. 1997). A more scientific approach to training with a systematic approach to monitoring training increases the chances of the athlete peaking at the correct time coinciding with important competition (Lambert 2006; Lambert & Borresen 2006).

2.1.2 Factors affecting physical performance

- The many factors that have the potential to affect physical performance Exercise training and preparation, including
- tapering
- Health
- Nutrition
- Nutritional ergogenic aids
- Drugs (positive and negative)
- Inherited characteristics
- Opposition
- Tactics
- Equipment
- Home ground advantage
- Environmental conditions (heat, cold, wind, altitude, allergens)

Mental readiness Sleep (and circadian rhythms)(Lambert 2006). Exercise training is the overriding factor in the list and can account for an improvement in performance of over 400% in an untrained person who undergoes a systematic training program Noakes (2001). Fitness components associated with sport

Performance in most sports requires integrated functioning of the different systems in the body. However, it is useful to compartmentalize these systems in order to gain a better understanding of how the athlete has developed and which aspects of their fitness need to be further developed. Accordingly, the systems can be compartmentalized into the following categories.

2.1.3. Strength

Muscle strength is defined as the ability to produce force. While a minimal amount of strength is needed for normal daily activities, the demands of certain sports require well-developed strength. In some sports strength is needed just as a basic component of fitness, while in other sports (e.g., weightlifting) strength is the main outcome variable which determines success or failure in competition. Strength can be increased by systematic resistance training using either specially designed machines or free weights Stone et al. (2000a). The manifestation of an athlete's strength depends on muscle morphology and the motor system (Enoka 1988). Strength can be increased without any change in muscle size, but it is always dependent on changes in the neural system (Carroll et al. 2001). Increases in strength are transferred to sporting performances in varying amounts. For example, a weight-training program increased squat one-repetition maximum (1 RM) by 21% and this increase in strength was accompanied by improvements in vertical jump performance (21%) and sprinting speed (2.3%) (Young 2006).

2.1.4. Muscle endurance

Muscle endurance is dependent on the muscle being able to contract repetitively without developing fatigue. A combination of muscle strength, metabolic characteristics, and local circulation in the muscle influence the endurance characteristics. Several tests have been developed to measure muscle endurance. A feature of these tests is that they all monitor the ability of a specific muscle, or group of muscles, to contract repetitively. Examples of these tests are the number of push-ups and abdominal curls in 1 min (Getchell 1985; Semenick 1994). Muscular endurance can also be measured with repeated static contractions (isometric) (Coetzer et al. 1993)

2.1.5. Flexibility

Flexibility represents the range of motion specific to a joint. Flexibility can be dynamic or static. Dynamic flexibility involves the range of motion during movement of muscles around a joint whereas static flexibility defines the degree to which a joint can be passively moved through its full range of motion. Changes in flexibility occur after stretching exercises. Flexibility training is used in the warm-up before training or competition (Shellock & Prentice 1985) and also with the goal of preventing injuries. Although there is theoretical evidence to support the positive link between stretching and lowered risk of musculoskeletal injuries during exercise, the clinical evidence is not so strong (Gleim & McHugh 1997). Specific joint angle can be measured as a marker of flexibility for various joints with a goniometer, or a Leighton flexometer (Leighton 1966). A sit-and-reach field test has also been developed to measure the range of motion of the lower back and hamstring muscles.

2.1.6. Basic principles of training

There are many different schools of thought, each with their own ideas on how to train athletes in order to increase athletic performance. So how does one know which particular program will work for any given athlete? The Training Principles are a group of components that have been scientifically proven to increase performance. They can guide coaches in ensuring that their athletes get the maximum benefits from their training regime.

2.1.7. Overload Principle

The first concept is known as the Overload Principle, which can be summarized as follows: “Any fitness component that wants to increase must be overloaded.” Overloading must be customized and progressive in order to achieve optimal improvement and avoid injury” (Hodge, Sleivert, McKenzie 1996). In anecdotal form, most athletes may connect to this principle. They are aware that if they don’t push themselves a little bit harder in training, they won’t see any performance improvements in their chosen discipline.

The Adaptation Principle is important here because the body adjusts to this training by eliciting a number of responses to meet the requirement of the increased workload it has to do. These adaptations vary according to the type of training performed. For example, endurance training can increase blood volume, oxygen transport in the blood, and capillary density in the trained

muscles (Reaburn and Jenkins 1996). Resistance training may lead to adaptations including increases in muscle fibre size, lean body mass, ligament and tendon strength, and enzyme activity of creatine phosphokinase and myokinase (McArdle, Katch, and Katch 2001).

This is why progressive overload is necessary. By continually increasing the amount of overload, the body will continue to adapt, allowing further gains to be made. There are a number of ways to ensure that this overload is achieved. The F.I.T.T. principle summarizes these well (Hodge, Sleivert, McKenzie 1996). There are four key factors which can be manipulated to achieve overload. They are:

Frequency: The number of training sessions per week.

Intensity: How hard the work is using a physical measurement such as heart rate, a perceived level of exertion, or a measure such as repetition maximums (e.g. 8 RM).

Time: Measured in a number of forms depending on the type of exercise being performed. Aerobic work is often taken as the total amount of time per session as well as any applicable distances whereas with weight training volume, the number of sets and repetitions performed is often recorded. The amount of time the individual was exercised is also often measured to ensure that the targeted energy system is being used (e.g. 5–10 second exercise intervals load the short-term phosphagen anaerobic systems, 20–60 second intervals load the lactic acid anaerobic system, and intervals greater than two minutes primarily load the aerobic system).

2.1.8. Specificity Principle

The next principle is the Specificity Principle: “The characteristics of a training load must be specific to the movement, muscles, and energy systems of the sport you are training for” (Hodge, Sleivert, McKenzie 1996). The types of specificity (Cochrane 2005) include:

- specificity of energy systems
- specificity of mode of training
- specificity of muscle groups and movement patterns
- posture specificity

This principle confers that one should aim to keep all training as sport-specific as possible, regardless of the type of fitness being trained. The only real exception to this is when injury or the potential for injury restricts the athlete from doing specific training. In this case, exercises should be kept as specific as possible while mitigating the risk of injury. Many athletes will relate to this principle when reflecting on their performances and reviewing the type of training and exercises used prior to the event.

Know what you need and train to obtain it," Eugene Coleman (2002) puts it succinctly. Lift weights to gain strength, run to gain speed, and run, hit, catch, jump, and throw to improve your athletic abilities. You'll end up practicing how to be sluggish if you spend 80 percent of your time jogging.

2.1.9. Rest / Recovery Principle

The Rest/Recovery Principle clearly states that adequate rest is needed to maximize improvements in fitness. Consideration should be given to rest not only between daily workouts but also programmed rest/recovery weeks throughout an annual training plan. Rest does not simply mean sleeping in late and avoiding all physical activity, although at times this is an option! Instead, the focus should be on active recovery sessions involving such activities as massage, stretching, sled dragging, low intensity/low volume training sessions, and hydrotherapy. The majorities of serious athletes have come across the signs and symptoms of overtraining and should be well aware of the need to monitor for these symptoms as well as plan training sessions to avoid them.

No matter how hard you work, you don't make gains during workouts," Coleman (2002) says. During phases of recuperation, gains are made. Recovery is one of the most crucial and underappreciated training principles." Many trainers can attest to this after seeing novice athletes put in hours of training six days a week with little to show for it. These athletes could benefit by learning about the recovery principle and recognizing that more is not always better!

2.1.10. Tapering Principle

The Tapering Principle is in essence a period of time when training is decreased gradually in a constant fashion to allow for peak performance at the actual event. This taper should be approximately two weeks in length just prior to competition, and by gradually decreasing the

volume of training while keeping the intensity at competition level, an increase in performance of up to five percent may be gained (Hodge, Sleivert, McKenzie 1996). This concept is well-known and much used in strength sports. It is reflected in the old weightlifting saying, “There’s no point leaving your best lifts in the gym.

2.1.11. Individualization and Ceiling Principle

The Individualization and Ceiling Principle is important when considering how to maximize an athlete’s skill enhancement and performance level. The key aspects of this principle are that athletes will benefit more when programs are planned to meet their individual needs and when the individual’s capabilities are taken into consideration. Individuals respond differently to training. Some are “high” responders and some are “low” responders. As such, programs may need adjusting to reflect the athlete’s requirements (Hodge, Sleivert, McKenzie 1996). Many athletes will relate to this having watched training partners gain tremendous performance improvements while only making slow progress themselves. This scenario may indicate that changes need to be made to both of the athletes’ programs.

This principle also considers the length of time an athlete has been training and how close they are to their individual genetic potential. Many athletes may recall the time that they put 20 kilograms on their best bench press in only two months or the year that they slashed their best 100 meter time by 1.2 seconds. These rapid gains in performance generally occur during a relatively early stage of an individual’s training. These gains slowly but surely diminish as time pushes forward. This principle considers that an athlete nearing his or her “ceiling” in one type of fitness may benefit by improving in another area of fitness. An example of this is a team-sport athlete whose speed is nearing its peak. However, with room to improve flexibility, this athlete could increase overall performance on the field as well as reduce the risk of injury. Coleman(2002) discusses developing the total athlete stating, “.

In summary, the Training Principles are essential for those coaches and athletes who wish to gain the most from their training and avoid the “hit or miss” approach often used by less “principled” trainers.

2.1.12. Frequency

Training frequency refers to the number of training sessions in a defined period. For example, training frequency may vary between 5 and 14 sessions per week depending on the sport, level of performance of the athlete, and stage of training cycle (Smith 2003).

2.1.13. Duration

This refers to the length or duration of the workout. This is sometimes mistaken with training volume, which measures training over a period of time and incorporates both duration and frequency (Smith 2003). Athletes participating on the international stage must train for about 1000 hours each year (Bompa 1999).

2.1.14. Intensity

Exercise intensity is a measure of "how hard is the exercise?" and is related to the power output. The exercise intensity lies somewhere on a continuum between rest (basal metabolic rate) and maximal effort, which coincides with the maximal oxygen uptake for that activity. Exercise intensity can be monitored by measuring submaximal oxygen consumption (Daniels 1985), heart rate (Lambert et al. 1998), blood lactate (Swart & Jennings 2004), the weight lifted during the exercise (Sweet et al. 2004), or the perception of effort (Foster et al. 2001). Training intensity is the major training stimulus that influences adaptation and performance. Athletes are only advised to incorporate high intensity training into their training programs after they have developed a sufficient base (Laursen & Jenkins 2002). If too much high intensity training is carried out the athlete will be at risk of developing symptoms of fatigue associated with overreaching (Meeusen et al. 2006) and overtraining or will increase the risk of getting injured (Noakes 2001).

2.1.15. Periodization

Periodization is the process of systematic planning of a short- and long-term training program by varying training loads and incorporating adequate rest and recovery.

The athlete and coach can use the plan as a template (Smith 2003). While having a strategy is vital, the day-to-day implementation of the plan should not be strict, but rather adaptable based on the athlete's symptoms (Lambert & Borresen 2006; Noakes 2001).The classic approach of periodized training has been to distinguish between high volume, low intensity training designed to develop aerobic capacity, usually in the early part of the season, and high intensity training

designed to develop qualities linked to performance, as the season progresses (Hellard et al. 2005). This approach to training reduces the risk of overtraining, while the athlete is more likely to peak at a predictable time, usually coinciding with important competition (Hellard et al. 2005; Stone et al. 1999). Another reason for this systematic approach to training is that different physiological systems vary in their retention rate after training (Hellard et al. 2005). Therefore, by varying the training loads as the season progresses, the desired adaptations, which are associated with peak performance, are achieved

An advantage of periodization is that it provides a structure for controlling the stress and recovery for inducing training adaptations (Smith 2003). The success of the plan can also be tested regularly to confirm that specific goals have been met in preparation for the main competition (Lambert 2006).

A study of Olympic swimmers showed that the relationship between training load and performance varied according to the different phases of training. Low intensity training had a positive effect on performance in the long term, suggesting that this type of training is necessary to induce the adaptation of various physiologic mechanisms necessary for the subsequent high intensity training (Hellard et al. 2005). This study also concluded that the swimmers' response to a given training volume may vary between seasons and even between training sessions. They found that at the elite level training variables only accounted for 30% of the variation in performance (Hellard et al. 2005). This supports the concept that training programs need to be highly individualized for elite athletes (Hellard et al. 2005). Monitoring the training load–response relationship is important for elite athletes to ensure that the training program is individualized and accommodates the needs of each athlete (Lambert 2006)

There are several different models for periodizing training (Bompa 1999). These models differ depending on the sport, but they all share a common principle in having phases of general preparation, specific preparation, competition preparation and competition, transition or active rest. The terminology for dividing the cycles is referred to as follows:

- macro cycles: long plan, usually 1 year;
- meso cycles: shorter plan from about 2 weeks to several months; and
- micro cycles: short plan of about 7 days (Stone et al. 1999)

2.1.16. Basic errors in training

The principles of training are guidelines that can be used to customize a training program. A deviation from, or inappropriate application of these guidelines, has consequences that can negatively affect performance. Common basic errors in training that detract from achieving peak performances include the following (Smith 2003):

- Recovery is neglected;
- Demands on the athletes are made too quickly
- After a break in training because of illness or injury, the training load is increased too quickly;
- High volume of maximal and submaximal training;
- Overall volume of intense training is too high when the athlete is training for endurance events;
- Excessive time is devoted to technical or mental aspects, without adequate recovery;
- Excessive number of competitions – this includes frequent disturbances of the daily routine and insufficient training time that accompanies competition;
- Bias of training methodology; and
- The athlete has a lack of trust of the coach because of inaccurate goal setting.

2.1.17. Training intensity

It is only ever necessary and possible to train at a high intensity for 5–10% of the total training time (Daniels 1998). For example, most of the best marathon runners do most of their training at a speed of 30–50 s·km–1 slower than their race pace. While training, the effort should be perceived as "comfortable." A good way of testing this is the "talk test." It should be possible to maintain a conversation with training companions. If it is not possible to talk, then the training intensity is too high and the session should be continued at an easier pace. Training intensity will be addressed in more detail subsequently.

2.1.18. Training structure

An athlete should gradually and systematically increase training distance until the maximum training load that the athlete can tolerate has been reached. Signs that the maximum training load has been reached is a failure to adapt to a new, higher training load, an increase in muscle

fatigue, a feeling of “tired, heavy legs,” an increase in the time taken to complete a given training session (i.e., getting slower, rather than faster), or the appearance of a mild injury or illness (Noakes 2001). The total training load that can be tolerated depends on genetic factors and careful increase in the training distance, and takes years to develop fully. Ignoring signs that the body is failing to adapt to the training load can result in overtraining.

2.1.19. Frequency of training

When someone starts a training program for the first time, training should only be on every second day. In high impact sports such as running, this ensures adequate time for adaptation and repair between training sessions, specifically to the loadbearing bones of the legs. Bone adaptation is particularly slow. In fact, for approximately 3 months after the start of a weight-bearing training program, bone loses strength. Thereafter, the osteoblasts become very active and new bone is laid down (Scully & Besterman 1982). Thus, until this time, the risk of developing a bone stress injury if the training load becomes too high, too rapidly, is greatly increased. The number of training sessions each week should be increased only once the duration of each training session performed every second day has reached an appropriate time. This depends on the sport type and training time available. For example, in the case of a running program in which weight-bearing stress is high, a more cautious increase in training frequency should be followed than in a sport such as cycling. In cycling, limitations are more likely to be related to the rate of muscle adaptation, which occurs more rapidly than bone adaptation (Margulies et al. 1986). The progression from training every second day to more frequent training should proceed systematically. Training every second day should be increased to training for two successive days followed by a recovery day of no training. This should be followed by three successive days, then four successive days, etc., with an appropriate amount of time at each successive “step” before proceeding to the next. On the extreme end of high training load, it is quite common for elite athletes to train every day, with twice daily training sessions 5 or 6 days each week.

Initially one but later two high intensity (speed work) sessions should be introduced into the training regimen once the total weekly training distance has been reached. One of these sessions should be of short duration but of high intensity, corresponding to approximately 60–90 s performed at a fast speed with an equal rest interval before starting the next 60–90 s rest. “Rest”

refers to running at a markedly reduced speed. A second high intensity session each week should be of longer duration, of around 3–5 min but somewhat slower. Again, the rest interval will initially be of equal duration. Both types of high intensity sessions must be introduced gradually into the program, progressively building on the number included in each session until 10–12 repeats of the shorter duration speed work can be completed and around 20 min of the longer speed workout. When this is achieved, the next step is a systematic reduction in the rest period. When the athlete has achieved this level a race can be entered. Low profile races can also serve as a type of speed session.

A series of studies in the UCT/MRC Research Unit for Exercise Science and Sports Medicine at the University of Cape Town and the Sports Science Institute of South Africa have attempted to evaluate the effects of specific speed work sessions on performance. One such study showed that replacing 15% of a group of cyclists' usual training with two speed sessions per week for 3 weeks improved cycling time trial performance by 3.6% (Lindsay et al. 1996). Doubling the total number of training sessions by increasing the high intensity training program from 3 to 6 weeks produced no additional benefit (Westgarth-Taylor et al. 1997). In another study, different groups of subjects performed high intensity training from 30 s duration to longer (8 min) duration from 175% to 80% of Vo2max (Stepto et al. 1999). Interestingly, only speed work at race pace (4 min at 85% of Vo2max) or very high intensity (30 s at 175% of Vo2max) improved cycling performance in a 40 km cycling time trial. These findings demonstrate two important points:

(i) Certain types of speed work may be more effective than others; and

(ii) Large changes in performance can be achieved in a relatively short period of time.

The finding of measurable changes in performance was found also by Smith et al. (1999) who measured the effects of high intensity training using two interval sessions per week for 4 weeks. Subjects trained at the maximal treadmill speed achieved during a Vo2max test, with the duration of each interval being 60–75% of the maximum time that each subject could run at their individual peak speed. Each training session involved the repetition of either five or six of these intervals. In this way subjects maintained heart rates of approximately 90–95% of maximum heart rate during the fast repetitions. However, if exercise duration was extended to more than 70–75% of maximum time capable of running at the velocity of Vo2max, then the heart rate

would rise to 100% of maximum after the second or third repetition, suggesting that the intervals were too long and too stressful. Second, if the heart rate did not decrease below 125 beats·min–1 by the end of the recovery intervals, the next interval would always elicit a maximum heart rate. This supports the principle that more is not necessarily always better. However, the main finding was that this period of high intensity training significantly increased peak treadmill running speed, the time for which this speed could be maintained, and 3000 m time trial performance, the latter by 2.8%. The authors suggested that using the peak speed obtained in the Vo2max test and 60–75% of the time for which the peak speed could be maintained, might be particularly useful in exercise prescription. This suggestion is appealing for a number of reasons. First, the variables are easily measurable for a number of sports and do not require any sophisticated equipment. Second, this method does not require the measurement of blood lactate concentrations and the use of the so-called "anaerobic" or "lactate threshold," the physiologic basis of which is in doubt (Swart & Jennings 2004). Third, the incorporation of heart rate monitoring provides a tool to determine when the fast component has been too long, or the number too many (Achten & Jeukendrup 2003).

2.1.20. Hard day, easy day principle

Bill Bowermann and Bill Dellinger, coaches who have trained a dynasty of great runners from the University of Eugene, Oregon, were the first coaches to teach that training should not always be at the same intensity and duration every day. They observed that progression was best when the athlete was allowed a suitable recovery period after each hard training session. This period of recovery ranged from as little as 24 h for some athletes to 48 h for others. This became known as the "hard day/easy day" training principle and incorporates the physiologic principle that a recovery period is needed for physiologic adaptation to take place after a training load that has caused a significant physiologic stress (Busso et al. 2002).

For experienced competitors training to improve performance, all training should follow a "hard day/easy day" principle. The training session on one day should be "hard" in intensity rating, followed the next day by a session that is "easy." For those athletes training twice daily, only one session would be a "hard" session on a "hard" training day. Some athletes find it difficult to train easily when they should be on the "easy day," and for these athletes the use of a heart rate monitor to prevent training too hard is a useful tool. All athletes must establish for themselves

how frequently they can train hard. Success will, to a large extent, depend on whether or not they achieve this balance.

2.1.21. Peaking and subsequent decline in competitive performance

After reaching a peak in competitive performance, many athletes do not accept the fact that it is impossible to perform well for more than 3–6 weeks before their performances start to decline. Performance may improve steadily for as long as 10 weeks, but beyond this period the athletes will often become easily tired, sleep badly, become prone to injury, illness and symptoms of overtraining (Meeusen et al. 2006). The decline in performance can occur very rapidly. It may take only 3 weeks to go from a best performance to the point at which the athlete is physically incapacitated. These athletes often present to the medical practitioner for help because they are convinced that there is something medically wrong with them. While this may well be the case in some instances, it is important for the sports medicine practitioner to realize that it is quite normal for performances to decline after a period of peaking, tapering, and racing. A period of reduced training should be planned at this phase of training before the next build-up to another peak begins, otherwise overtraining can result. Once in the overstrained state it may take the athlete many weeks to recover and be able to resume normal training (Noakes 2001).

2.1.22. Heart rate monitoring

A popular trend in recent times has been to use heart rate and a heart rate monitor to control training intensity. While scientific in many respects, training entirely on heart rate has many drawbacks, as the so-called heart rate training zone often fails to predict adequately the correct intensity for training (Lambert et al. 1998). Reasons for this include the fact that heart rate while exercising is very dependent on factors other than just the work rate. These include temperature, diurnal variation, and prior sleep. Heart rate also does not adequately account for muscular fatigue which may occur from a prior training session incurred on the previous day. Thus, heart rate may indicate that the training intensity is too low, whereas a low intensity may be appropriate for tired muscles resulting from a previous speed workout for example. Therefore it may be better to use a perception rating of intensity to control training speed. Specifically, does the session feel easy, somewhat hard, hard, or very hard? Where heart rate monitoring may be used to advantage is to monitor trends of either an increase or decrease in heart rate for a given controlled training session.

Often, those who wish to use heart rate during exercise as a monitor of training effort will use an equation based on a predicted maximum heart rate using a simple formula of 220 minus age in years. Therefore, the predicted maximum heart rate of a 40-year-old is (220 – 40) beats·min–1, which equals 180 beats·min–1. However, there is little or no scientific basis for this calculation (Edwards 1997). Therefore, should someone wish to use this method to determine the appropriate exercise intensity, true maximum heart rate should first be established, because all younger, highly trained athletes have maximum heart rates that are lower than expected for their ages. In contrast, highly trained athletes older than 50 years have higher maximal heart rates than predicted by this equation.

Maximum heart rate can be established accurately in one of two ways: an exercise scientist can perform a maximum exercise test or an individual can perform their own test while wearing a heart rate monitor while exercising as hard as possible for 4–10 min. This test should not be undertaken in an unsupervised setting by people whose heart conditions are not known. The popular training dogma is that maximum benefit from training is achieved by training at 60–90% of maximum heart rate. Various exercise training prescriptions can be found that are based on different training heart rate zones. However, for the reasons already described, it is not the best method of monitoring training. For certain people, it may be better than no monitoring whatsoever. This may be particularly true for those individuals who tend to train too hard, too often. For these people, a coach could prescribe a training session (particularly the “easy” day) in which a particular heart rate should not be exceeded. More useful in general terms, however, is that as fitness increases, at any particular exercise intensity or speed, the heart rate will be less. Another benefit from heart rate monitoring is that, performed regularly, the heart rate after exercise will return more quickly towards resting values. Conversely, an increased heart rate at a given speed may indicate the onset of overreaching or overtraining. When this is observed, the individual needs to rest from training, or train less, until recovery has occurred.

2.1.23. Stretching

Training strengthens the active muscles and reduces their flexibility. To maintain flexibility of the muscles, specific stretching exercises can be performed. However, the exact benefit of stretching, particularly to prevent injuries, has not been proven conclusively (Shrier & Gossel 2000). This has not prevented the popular belief that stretching helps in this regard. There is also

no published evidence to suggest that regular stretching improves endurance performance. The one condition that may well be prevented by regular stretching is exercise associated muscle cramping (Schwellnus 1999). When all the evidence is considered, the pragmatic recommendations are that a stretching program should be carried out in moderation and that the stretching exercises should be performed correctly. Importantly, the stretch must always be applied gradually. Ballistic stretching, which involves bouncing up and down, is considered to be an ineffective method as it simply activates the stretch reflex, causing the stretched muscle to contract rapidly. The tension inside the muscle during this type of stretching is much higher than in a static stretch. Although it is often said that this form of stretching increases the risk of injury, there is no convincing published evidence to confirm this.

Static stretching is a specific type of stretching exercise. During static stretching, the stretch position is assumed slowly and held for 30–60 s. The build-up of tension in the muscle is slow, and so the stretch reflex which causes the muscle to contract is not activated. This type of stretching invokes the inverse stretch reflex which causes muscle tension to fall, enabling the muscle to be stretched a little further. More sophisticated techniques include the contract–relax and contract–relax–antagonist contract techniques. The static stretch technique has been shown to be highly effective for increasing the range of motion while being relatively low risk for inducing injury (Hughes 1996)

2.1.24. Overtraining

Painful muscles, muscle fatigue, general fatigue, depression, irritability, disturbed sleep patterns, and an increased POMS score, weight loss, raised resting pulse rate, increased susceptibility to upper respiratory tract infections, gastrointestinal disturbances, and an increased POMS score are all signs of overtraining as well as a drop in running speed (Lehmann et al. 1993; Meeusen et al. 2006).

There is no magical cure for overtraining other than a reduction in training load until the symptoms have passed. Complete rest from training may be necessary. Reducing training or resting is not something that a sports person training seriously wants to do, and it is often difficult to convince someone that these are the only options to recover from the overtraining syndrome. The training at which the onset of symptoms commenced should be noted (Foster 1998). This represents somewhat more than the maximum training load that can be tolerated.

Subsequently, as that particular training load is reached, the volume and speed should be increased only very gradually as the physiologic adaptations are given every chance to occur. However, it should be recognized that everyone has a genetically determined ceiling in training load above which adaptation will not occur.

2.2. Specific Training Methods

Specific training methods can be used to improve each fitness factor:

- Circuit training is a technique that involves performing a number of exercises in a specific order. Used for: Improving speed, agility, coordination, balance, and physical endurance.
- The continuous training method entails working for an extended amount of time without taking a break. Cardiovascular fitness is what it's used for.
- Using another sport or activity to improve fitness is known as cross training. Power training is a term that is used to describe a set of exercises that are used enhance his leaping ability
- Fartlek training is a type of endurance exercise. Changing your speed and the sort of terrain you run on is one method. Fitness, both aerobic and anaerobic
- Interval training is a great way to get in some extra exercise. Alternating between periods of intense exercise and moments of rest is the method. Speed and muscle endurance are two things that this supplement is good for.
- Weight training is a method of providing resistance to muscles by using weights. Used for-Muscle strength, endurance, and power can all be improved with this device.
- Altitude training is aerobic exercise performed at a high altitude above sea level, where oxygen levels are lower. Aerobic fitness is what it's used for.*(Principles of Training | learning.gaa.ie/player)*

2.2.1. Framework for Understanding Coaches of High Performance Athletes

Given the surge in empirical study in coaching science over the last 30 years, it's remarkable that academics have had trouble reporting on good or successful coaching. Côté and Gilbert (2009) recently published a paper that may assist explain this enigma. Drawing on the different

conceptual models of coaching and the empirical coaching science literature, Côté and Gilbert offered an integrative definition of coaching effectiveness and expertise that has yet to be challenged or reproduced. The authors defined coaching effectiveness and expertise as "the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, connection, and character in specific coaching contexts" . This definition is based on years of research and practice, and borrows from teaching, positive psychology, and coaching literature. The following sections will describe each of the three key aspects of Côté and Gilbert's definition in more detail.

2.3. Facilities and Equipment's

Facilities are also important considerations in achieving greater results. If a suitable facility is provided, the athlete may be able to increase his or her performance. To do so, the athletes' earnings are insufficient to cover the costs of proper facilities Suzie Bennet et al, (2007). Although middle distance running is a very inexpensive sport, there are numerous myths about the few elements required of equipment required to participate.

In a study comparing conventional socks to the fitted socks often sold at running specialty stores, Purvis et al, 2004 found that "The subjects preferred the specialty socks; however, they produced no physiological advantage and the runners still described the conventional sock as comfortable. As Ali et al, (2010)found a similar "comfort only" effect with compression socks, made popular by professional athletes like Paula Radcliffe; although Kemmler et al, 2009 did find that they significantly improved running performance. Lower body compression garments may improve some physiological measurements, but have not been shown to improve performance Dascombe et al, (2011). Manufacturers often advertise clothing made of synthetic material as some kind of aid for sweat evaporation, but there is no evidence to suggest that these garments aid thermoregulation or comfort during exercise (Gavin, 2003). Treadmills should only be used as a last resort for training. In their study, LaCaille et al, (2004) found that; "The treadmill setting was rated as least satisfying, while resulting in the highest RPE and slowest performance time. Alternately, the outdoor route resulted in the highest levels of positive engagement, revitalization, tranquility, and course satisfaction, while also yielding the lowest levels of physical exhaustion and RPE. (p. 461). The many events of Athletics require numerous sporting equipment's. It is important for athletes to be able to recognize and understand how equipment

for the specific events works and impacts their performance. Have you athletes named each piece and equipment as you show it and give the use for each. To reinforce this ability within them, have them select the equipment used for their events as well (Suzie Bennet et al, 2007).

2.3.1 Foot wear

Adolescent runners' biomechanics can be drastically altered by training shoes. Mullen et al., 2013, yet marketing methods frequently confuse athletes. Running shoes are frequently advertised as a way to improve comfort or prevent injury, although there is no scientific evidence to support manufacturers' practices of emphasizing pronation control or cushioning (Richards et al, 2009).

According to Enke et al., 2009, nearly three-quarters of teen cross-country runners said arch type was the most significant criterion when selecting running shoes, but just a little more than half understood their own arch type; this lack of self-awareness is true for recreational runners in general (Hohmann et al, 2012).Athletes should wear what feels comfortable for them, not what costs more. Clinghan et al, 2008 found that “low- and medium-cost running shoes in each of the three brands tested provided the same (if not better) cushioning of plantar pressure as high-cost running shoes” (p. 189).

One notable exception to this rule may apply if similar styles are available as models for both children and adults. As Forrest et al, 2012 found that these versions differed sharply in their composition and kinematic effects, even among the same size, and recommended using the adult version when available.

The use of so-called “minimalist” running shoes has attracted attention from some researchers, primarily because runners who prefer such footwear may be more likely to use a forefoot strike pattern–that is, they hit the ground with the ball of the foot first, followed by the heel (Goss et al, 2012). Some researchers have associated this pattern with a reduced risk of overuse injury Daoud et al, 2012, but the use of minimalist footwear has not yet been shown to have a corrective effect on habitual rear foot strikers Ten Broek et al, 2013, and can pose a risk for bone injury (Ridge et al, 2013).

According to a review of the literature by Goble et al, 2013, “current evidence is insufficient to indicate that barefoot runners are faster, perform better, or are any less prone to injury than shod

runners who prefer a heel-striking gait". As suggested by Nigg et al, 2013, "the important aspects of performance and/or injuries are more related to (a) individual preference and (b) individual running style, independent on whether the athlete runs in shoes or barefoot". In some cases, customized shoe or those may improve the comfort levels of athletes with chronic injuries (Hirschmüller et al, 2011).

2.3.2. Facilities for Track Events

Track events include sprint, middle and long-distance, hurdle and steeplechase events. The direction of running is anti-clockwise. The 400m oval track usually forms the basis of a multi-sports area. Its dimensions are, therefore, dependent on the requirements of other sports. When integrating the straight and the steeplechase into the oval track, deviations from Section 2.1.3 will arise in the longitudinal slopes in some areas. Although there are a number of different layouts for the 400m oval track, it is IAAF's objective to create uniform criteria, not only with a view to improving the performance parameters necessary for equal opportunities for all athletes and for the suitability for competition but also to simplify the principles of construction, surveying and certification of facilities. Experience has shown that the most suitable 400m oval tracks are constructed with bend radii of between 35m and 38m, with an optimum of 36.50m. IAAF recommends that all future tracks are constructed to the latter specification and this will be referred to as the "400m Standard Track".

2.3.3 Types of Competition Facilities

Competition Area for Track Events

The Competition area for Track Events includes: - Oval track with at least 4 lanes (400m + 0.04mx1.22m±0.01m) and safety zones measuring not less than1.00 monthe inside and preferably1.00 monthe outside - Straight with at least 6 lanes (100m + 0.02m x 1.22m ± 0.01m for sprints and 110m + 0.02m x 1.22m ± 0.01m for hurdles) Starting area: 3m min. (for 110m Hurdles, category V 2.5m min.). Run-out: 17m min. - Steeplechase track as for oval track with a permanent water jump (3.66m x 3.66m x 0.50m-0.70m) placed inside or outside the second bend

2.3.4 Positioning For Competition

Standard Positions

When installing all Track and Field facilities, careful consideration must be given to the position of the sun at critical times of day and the wind conditions. To avoid the dazzling effect of the sun when it is low, the longitudinal axis of arenas should lie along the north-south axis, although it is possible to deviate to the north-north-east and north-north-west. The strength and direction of local winds should also be taken into consideration. This may result in the main straight being on the eastern side of the arena and, consequently, will require consideration of the effects of a western setting sun on the spectators in the main stand. However, the most important aspect of design is to ensure that the best possible competition conditions are provided for the athletes. *IAAF TRACK AND FIELD FACILITIES MANUAL 2008*

CHAPTER-THREE

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

The main objective of this study was to know factors affecting long distance track athletes: the case of second division athletics clubs at Addis Ababa. The researcher employed surveys, observations, and structured interviews to gather data from primary and secondary sources, and then represented the results using frequency counts and percentages..

3.2 Research Methods

Burns and Grove (2003:201), the researchers who utilized descriptive survey methods to conduct this research, define descriptive research as “designed to present a picture of a situation as it naturally occurs.” Descriptive research is used to learn about the existing state of a phenomenon and to characterize "what exists" in terms of variables or conditions in a situation.

3.3 Methods of Data Collection

To acquire data, the researcher used three different tools (questionnaires, observations and interviews). Athletes, coaches, and club managers completed closed-ended and open-ended questionnaires based on this, and non-participatory observation was undertaken. Using an observation checklist, the researcher observed three times in order to collect data.

3.4 Data type and Source

The instruments of data collection were primary data and secondary sources, and the combination of primary data and secondary sources of information increased the credibility of the research conclusions. Athletes, coaches, and club officials were the key data sources for the study, which were obtained through questionnaires, interviews, and observation. And also secondary sources the researcher used internet websites, articles, journals, and books.

3.5 Method of Data Analysis

The data was analyzed and presented statistically and qualitatively using descriptive statistics approaches such as SPSS (statistical package for the social science) version 20, which used frequency counts and percentages to portray the data.

3.6 Data Collection Process

Before beginning to collect data, the researcher identified research sites and obtained permission from them, as well as determining the participant sample size. Then began to observe for the first step to gain start-up information during training times, for the second step to contact the site, to obtain and observe essential information to determine and distribute questionnaires to respond, and for the third step to contact the site time and date to contact, to obtain and observe essential information to determine and distribute questionnaires to respond.. Finally, after conducting interviews with club office leaders/managers, data gathering was concluded, and processing of the acquired data began to analyze and conclude the research.

3.7 Method of Sampling

The Population of the Study

There were a total of 240 athlete and 20 coach and 17 club officials' respondents who participated in the study which is composed of 17 clubs, in Addis Ababa city administration in the training year 2013 E.C. Some of the clubs are Addis Ababa University athletics club, Addis Ababa Police commutiion, karamara, gulele, aysha, dalul,…..

Table 1. Number of athletes in second division athletics clubs

No	Name of clubs	Foundation	Male	Female	No of long distance athletes(3000-10,000m)
1	Geta zeru	1998	26	10	12
2	Tekle na lijochu	1998	26	4	18
3	Addis hiwet	1998	69	28	15
4	Aysha	1998	40	20	12
5	Wotatoch Andnet	2000	25	6	14
6	Karamara	2001	40	20	14
7	Kosmo engineering	2004	15	8	15
8	Run Africa	2008	15	10	13
9	Aelmi elmndo	2008	15	5	15
10	Habesha	2007	21	5	15
11	Addis Ababa University	2004	18	7	12
12	Addis Ababa police commit ion	2011	25	14	19
13	Arada	2011	13	9	14
14	Ethio karl	2011	19	10	14
15	Dallul	2012	12	13	12
16	Ethio tegen	2012	19	7	13
17	Gullele	2012	25	10	13
Total No	**17**		**423**	**186**	**240**

3.8 Sample Size and Technique

The total numbers of athletes were 240 and 20coaches and 17 club officials of those; the researcher selected 150 athletes, 17 club officials and 20 coaches from 17 clubs. With a method of cluster sampling technique to select athletes by identifying athletes field(discipline) from the total of 240 clustered by 65 of athletes 3000m, 95(5000m) and 80(10000m) of the population the sample of 150 clustered 41,59and 50 respectively and census sampling technique to select coaches and club officials, to select athletes with the minimum sample size required by using Yamane (1967:886) formula $n=N/1+N(e)^2$.Let's take 240 athletes then $n=240/1+240(0.05)^2=0.0025x240=0.6$ it means that $n=240/(1+0.6)=240/1.6=150$ athletes were the target groups totally to the sampling size determination, n= sample size, N= total population, a 95% confidence level, and 5% precision.

3.9 Area of the Study

The researcher purposefully chose this location because of its proximity to the working area, where the researcher believes there is a problem and expects to get better information about the problem, as well as its proximity to the majority of coaches and athletes, who also expect to get better information with an open mind and cooperation to make the research a success, and I am a second-division athlete.

3.10. Pilot Testing

Allowing the researcher to test his research methodology with a small group of test participants before moving forward with the main study. It's "a small-scale test of methods and techniques that will be employed on a bigger scale..." (Porta, 2008).

3.11. Reliability and Validity

Reliability

Cranach's Alpha reliability test is applied to the data study using SPSS software version 20. The Cranach alpha coefficient of a scale is used as an indicator of internal consistency, with a Cranach alpha coefficient of > 0.7 being desirable.

Table 2. Alpha coefficient standards

Cranach's alpha score internal consistency

Cranach's alpha score	Internal consistency
>0.9 <1	Excellent
0.8 ≤a< 0.9	Good
0.7 ≤a< 0.8	Acceptable
0.6 ≤a< 0.7	Questionable

In this regard, Cranach's alpha coefficient scores of over for the first time it becomes 0.6, indicating that the questionnaire was poor. The researcher distributed for the second time by improving items and contents, then received 0.706, indicating that the questionnaire was questionable, but still not reliable. In 1951, Lee Cranach claimed to be able to produce a number between 0 and 1 as a measure of a test's internal consistency. In this scenario, alpha 0.9>= 0.854, indicating that the questionnaire is trustworthy.

Table 3. The researcher's reliability test samples

Cranach's alpha score internal consistency

Cranach's alpha score	Internal consistency
0.8 ≤a< 0.854	Good
0.7 ≤a< 0.706	Acceptable
0.6 ≤a< 0.6	Questionable

Validity

The questionnaires were reviewed by an adviser and experts to ensure that they were free of faults in language, ideas, and content, as well as to confirm the frame items. Consider it this way: the researcher adjusted and determined whether it is valid to a given conclusion for the study's significant purpose after receiving comments and suggestions from the adviser.

CHAPTER FOUR

4. RESULTS AND DISCUSSIONS

Introduction

This study's chapter is divided into two sections. The first section focuses on the respondent's background, while the second section focuses on the presentation, analysis, discussion, and interpretation of data. The data and observation checklist are examined and interpreted individually based on the characteristics of the questions..

4.1 Participant's Information

Based on the data obtained from the track Athletes, analyzed in terms of their age, sex, education background, training year and type of event specialization.

Table 4. Athlete's information

No	Item	Choice	No	%
1	Sex	Male	90	60%
		Female	60	40%
2	Age	Blow 20	96	64%
		21-25	44	29%
		26-30	10	7%
		Above 30	-	-
3	Educational back ground	5-8	18	12%
		9-10	42	28%
		11-12	50	33%
		College or university student	10	7%
		College or university complete	30	20%
4	Types of event specialization	3000m	41	27%
		5000m	59	40%
		10000m	50	33%
5	Training year	1 years	-	
		2 years	10	7%
		3 years	10	7%
		4 years	20	13%
		5 years	40	26%
		6 years and above	70	47%

The above table clearly explains respondent's information particularly those engaged on questioners namely track athletes. Moreover, their information was analyzed as below shows regarding the sex of respondents 90(60 %) of track athletes were male. While the rest 60(40%) of athletes are females.

Item 2 regarding age respondents 96(64%) of long distance track athletes were the age of below 20, 44(29%) of respondents are between the age of 21-25 and 10(7%) are between the age of 26-30 .Thus implies that most of the respondents ages are below 20 years old. so that most of the athletes are young athletes.

In the above table item 3 also shows that 18(12%) of long distance track athletes were elementary students which means 5-8 grades,42(28%) were grade 9-10, 50(33%) were grade 11-12 students ,10(7%) were college or university students and 30(20%) were college or university completed. Thus most of the educational status of respondents is preparatory students.

Item 4 regarding event respondents 41(27%) of athletes are 3000m runners, 59(40%) of respondents are 5000m runners and 50(33%) of respondents are 10000m runners. thus implies that most of the long distance track athletes are 5000m runners.

Item 5 regards training years respondents 10(7%) of athletes were did training for two year, 10(7%) of respondents training age were three years,20(13%) of respondents training years were four years,40(26%) of athletes were they did training for five years and the rest of respondantes70(47%) are their training years are six year and above. Thus shows that most of the athletes training years are above six years.

4.2. Presentation, Analysis and Interpretation of Data

Analysis of athletes' response

Table 5. Question related with Athletes training factors

No	Item	Alternative	Response	
			No	**%**
1	I get sufficient salary from the club	Strongly agree	5	3%
		Agree	20	13%
		Neutral	-	-
		dis agree	74	50%
		Strongly dis agree	51	34%
2	when you join the club your selected based on norms and on your talent	Strongly agree	75	50 %
		Agree	38	25%
		Neutral	8	5%
		di agree	18	12%
		Strongly dis agree	11	8%
3	I get competition opportunity to enhance performance	Strongly agree	30	20%
		Agree	46	31 %
		Neutral	24	16%
		di agree	41	27%
		Strongly dis agree	9	6%
4	I get enough rest after training	Strongly agree	10	7%
		Agree	10	7%
		Neutral	3	2%
		di agree	53	35%
		Strongly dis agree	74	49%

From the above table (item 1), clearly explains that, 5(3%) of respondents were strongly agree, 20(13%) are agree 74(50%) of respondents replied that they did not get enough salary from the club. On the other way 51(34%) of athletes are strongly dis agree. Thus shows that the respondent are not get enough salary from the club.

From the above table (item 2), explains that 75(50%) of respondents were strongly agree 38(25%) of respondents were agree, 8(5%) of respondents were neutral, 18(12%) of the respondents were dis agree and 11(8%) of the respondents are strongly dis agree. Thus implies most athletes join in the club based on their talents and by competition.

Item 3. Shows that 30(20%) of the respondents are strongly agree, 46(31%) of respondents were agree, 24(16%) of respondents were neutral, 41(27 %) of respondents were dis agree and the rest of 9(6%) of respondents were strongly dis agree. Thus implies that most of athletes get competition opportunity to enhance their performance.

According to the above table (item 4), 10(7%) of respondents were strongly agree, 10(7%) of respondents were agree, 3(2%) of respondents were neutral, 53(35%) of respondents were dis agree and 74(49%) of the respondents were strongly dis agree. Thus implies that more of the athlete did not take rest after training.

Questionnaires for track athletes regarding factors

1 .please writes the major factors or problems that affect your performance during track training and competition? The majority of respondents said that transportation access, facility and equipment, lack of recovery after training, food shortages, and a lack of scientific and competent coaches are the most important factors affecting performance.

Table 6. Question related coaches

No	Item	Alternative	Response	
			No	%
1	Relationship with my coach is good	Strongly agree	30	20%
		Agree	75	50%
		Neutral	7	5%
		dis agree	23	15%
		Strongly dis agree	15	10%
2	My coach motive me to work hard to improve my performance	Strongly agree	22	15%
		Agree	44	29%
		Neutral	4	3%
		dis agree	50	33%
		Strongly dis agree	30	20%
3	The method and style of coach is give comfortable for athletes	Strongly agree	28	19%
		Agree	32	21%
		Neutral	4	3%
		dis agree	50	33%
		Strongly dis agree	36	24%
4	Our coach training method is based on the principle of the science of sport	Strongly agree	20	13%
		Agree	28	19%
		Neutral	6	4%
		dis agree	43	29%
		Strongly dis agree	53	35 %
5	Our coach gives training based on experience and ability of athletes	Strongly agree	10	7%
		Agree	12	8%
		Neutral	4	3%
		dis agree	90	60%
		Strongly dis agree	34	22%
6	My coach give me clear instruction before training	Strongly agree	25	17%
		Agree	27	18%
		Neutral	8	5%
		dis agree	49	33%
		Strongly dis agree	41	27%

According to the above table in (item 1), 30(20%) of respondents replied that they are strongly agree with their coaches have good relationship, 75(50%) of respondents replied that they are agree with their coach relationship, 7(5%) of respondents were neutral, 23(15%) of respondents were dis agree. While the rest 15(10%) of respondents are strongly dis agree on coaches relationships. Thus shows that most of the respondents have god relationship with their coaches.

Item 2 in the above table, 22(15%) of respondents were replied that they are strongly agree the coaches motivated athletes to work hard and to improve their performance, 44(29%) of

respondents were agree, 4(3%) of respondents were neutral, 50(33%) of respondents were implied the they are dis agree on their motivation to trained hard and improve their performance and also 30(20%) of respondents also strongly dis agree. Thus implied that most of the respondents were not motivated by their coaches.

As far as (item 3) in the above table, 28(19%) of respondents were implied that they are strongly agree on the method and style of the coaches, 32(21%) of respondents were agree,4(3%) of respondents were neutral,50(33%) of the respondents were dis agree by the method and style of coaches for their track training and 36(24%) of respondents also they strongly dis agree. The above analysis shows that most athletes are dis agree by the method and style of their coaches to did training. This implied that the method and style of coaches was not god to train athletes.

As indicate in the above table (item 4), 20(13%) of respondents were strongly agree on their coaches training method was based on principle science of sport training, 28(19%) of respondents were agree, 6(4%) of the respondents were neutral, 43(29%) of respondents were dis agree by the coaches method of the science of training principle and 53(35%) of the respondents were implied that they are strongly dis agree. This analysis shows that most of the respondents were they strongly dis agree on their coach's principle of science of training method. So that the coach does not apply the science of training principle.

According to the above table in (item 5), 10(7%) of respondents were strongly agree on the coach they give training based on their ability and experience, 12(8%) of respondents were agree, 4(3%) of respondents were neutral 90(60%) of respondents were dis agree and 34(22%) of respondents were strongly dis agree. thus indicates that most athletes were dis agree by the coaches giving training based on the experience and ability of athletes. Thus implied that the coaches do not give training for athletes based on the experience and ability of the athletes.

As indicate in the above table (item 6), 25(17%) of the respondents were strongly agree on coaches s giving clear instruction before training, 27(18%) of respondents were agree, 8(5%) of respondents were neutral, 49(33%) of the respondents were dis agree and 41(27%) of respondents were strongly dis agree. Thus implied that the coaches did not giving clear instruction before training.

Questionnaires for track athletes regarding coaches

- Please explain if anything else? The majority of responses say our instructors did not provide us training based on our abilities, but rather provided us training that was beyond their capability, and they defend our views on the training program. Despite the fact that all disciplines provide training together.

Table 7. Question related Nutrition

No	Item	Alternative	Response	
			No	%
1	The club prepare and give our diet/food/	Strongly agree	12	8%
		Agree	20	13%
		Neutral	-	-
		dis agree	40	27%
		Strongly dis agree	78	52%
2	We ourselves cover the cost of our food /diet/	Strongly agree	60	40%
		Agree	50	33%
		Neutral	3	2%
		dis agree	24	16%
		Strongly dis agree	13	9%
3	Our Clubs gives food during the competition period	Strongly agree	13	9%
		Agree	20	13%
		Neutral	-	-
		dis agree	51	34%
		Strongly dis agree	66	44%
4	I get enough food before and after training	Strongly agree	14	9%
		Agree	20	13%
		Neutral	10	7%
		dis agree	60	40%
		Strongly dis agree	46	31%

As indicate the above table (item 1), 12(8 %) of respondents were strongly agree they implied that the club prepare and give their diet, 20(13%) of respondents were agree, 40(27%) of the respondents were dis agree and the rest of the 78(52%) of respondents were strongly dis agree on the club prepare and give diets. The above analysis shows that the club did not preparing and giving diets.

According to the above table in (item 2), 60(40%) of respondents were strongly agree they implied that they cover the cost of food by themselves, 50(33%) of the respondents were agree, 3(2%) of respondents were neutral, 24(16%) of the respondents were dis agree and the rest of

13(9%) of respondents were strongly dis agree. Thus analysis indicates that most of the respondents were cover the cost of food by their own.

As indicted in the above table (item 3), 13(9%) of respondents were strongly agree the club give diets during competition period, 20(13%) of respondents were agree, 51(34%) of respondents were dis agree. while the rest of 66(44%) of the respondents were strongly dis agree on the club give foods during competition period. Thus implied that most respondents were implied that they are strongly dis agree by the club gives food during competition period. This shows that they did not give food during competition period.

As far as (item 4) in the above table, 14(9%) of respondents were strongly agree on getting enough food before and after training, 20(13%) of respondents were agree, 10(7%) of respondents were neutral, 60(40%) of respondents were dis agree and 46(31%) of respondents were strongly dis agree on the athletes getting enough food before and after training. Thus shows that most of the respondents not get enough diet before and after training. (Burke, 2007) states many distance athletes, even at a recreational level, are consumers of sport foods and supplements. Products such as sports drinks and liquid meal supplements are specially designed to help a runner or walker meet specific needs for energy, fluid and nutrients in situations where everyday foods are not practical to eat, although the expense must be considered

Open ended Questionnaires for track athletes regarding Nutrition

- Please explain how you obtain diet if any else? Majority of respondents implied that they obtained food from family and through help of others. But some respondents explain that they get food from girl or boy friends support.

Table 8. Question related Training Facilities and Equipment's

			Response	
No	**Items**	**Alternative**	**No**	**%**
1	I get sufficient Facilities or equipment access to training	Strongly agree	10	7%
		Agree	32	21%
		Neutral	8	5%
		dis agree	51	34%
		Strongly dis agree	49	33%
2	The club has his own gymnasium center	Strongly agree	-	
		Agree	6	4%
		Neutral	2	1%
		dis agree	112	75%
		Strongly dis agree	30	20%
3	The training that the club gives to me are comfortable for training	Strongly agree	20	13%
		Agree	37	25%
		Neutral	4	3%
		dis agree	60	40%
		Strongly dis agree	29	19%
4	Athletes get training shoes from the club	Strongly agree	35	23%
		Agree	41	27%
		Neutral	5	3%
		dis agree	43	29%
		Strongly dis agree	26	18%
5	The club gives transport services for training	Strongly agree	10	7%
		Agree	12	8%
		Neutral	4	3%
		dis agree	82	54%
		Strongly dis agree	42	28%

According to the above table (item, 1), shows that 10(7%) of respondents were strongly agree they get sufficient facility and equipment's for training ,32(21%) of respondents were agree replied that they get sufficient facilities and equipment for track event training , 8(5%) of respondents were neutral , 51(34%) of respondents were dis agree and the rest of49(33%) of respondents were implied that they strongly dis agree. This analysis shows that most of the respondents dis agrees on the athletes getting sufficient facility and equipment's. This implied that most respondents did not get enough facility and equipment's for training.

Item (2) in the above table respondents, 6(4%) of respondents were agree the club has their own gymnasium, 2(1%) of respondents were neutral, 112(75%) of respondents were dis agree and 30(20%) of respondents were strongly dis agree. the above analysis shows that more half of the respondents were dis agree the club has his own gymnasium center. So that the club did not have his own gymnasium center

Item (3) in the above table, 20(13%) of respondents were strongly agree on the club gives training supplies was comfortable for training, 37(25%) of respondents were agree, 4(3%) of respondents were neutral, 60(40%) of respondents were dis agree and 29(19%) of respondents were strongly dis agree. Thus implied that most of the respondents were dis agree on the club giving supplies training comfortable. The analysis shows that the method of the club giving training is not comfortable for athletes training.

According to the above table (item, 4), 35(23%) of respondents were strongly agree on athletes get training shoes from the club, 41(27%) of respondents were agree, 5(3%) of respondents were neutral, 43(29%) of respondents were dis agree and 26(18%) of respondents were strongly dis agree. Thus implied that most respondents were not getting training shoes from the club.
Running shoes are often sold as a way to either increase comfort or avoid injury, yet there is no valid evidence to justify manufacturers‟ practice of focusing on pronation control or amount of cushioning (Richards et al, 2009).

Item (5) in the above table, 10(7%) of respondents were strongly agree on the club gives transport service for training, 12(8%) of respondents were agree, 4(3%) of respondents were neutral, 82(54%) of the respondents were dis agree and 42(28%) of respondents were strongly dis agree. The above analysis shows that more than half of the respondents were not get transport service from the club for training.

Open ended Questionnaires for track athletes regarding Facilities and Equipment's

Please mention any other problem of facility and equipment's to improve your performance?

The majority of respondents were implied that the club did not fulfill the facility and equipment's for track training like spike shoes and we did not get synthetic track before competition.

Table 9. Background information of coaches

No	Item	Choice	No	%
1		Male	20	100%
	Sex	Female		
2		Blow 20		
	Age	21-25		
		26-30	4	20%
		Above 30	16	80%
3		5-8		
	Educational back ground	9-10		
		11-12		
		College or university student	8	40%
		College or university complete	12	60%
4		1st level		
	Level of coaching	2nd level	10	50%
	certification	3rd level		
		4th level COC	2	10%
		IAAF coaching certificate	8	40%
5		1 years	1	5%
		2 years		%
	year of service	3 years	6	30%
		4 years	4	20%
		5 years	3	15%
		6 years and above	6	30%

The above table clearly explains respondent's information particularly those engaged on questioner's coaches. Moreover, their information was analyzed as below shows regarding the sex of respondents 20(100%) of the respondents were male coaches.

From the above table (item 2), shows that 4(20%) of the respondents were between the age of 26-30 years old and the rest 16(80%) of coaches are above 30 years old. This implied that most of the coaches are not young.

Item 3, from the above table shows, 8(40%) of coaches are College or university student and 12(60%) of coaches are College or university complete. Thus implied that most the coaches were have 1st degree holders.

Moreover, the above table (item 4), shows that half of 10(50%) of coaches were have 2nd level of coaching certification, 4(20%) of coaches were have 4th level COC. While the rest 6(30%) of coaches have IAAF coaching certificate. Thus indicates that half of the coaches were have 2nd level coaching certificate and they are not qualified for word athletics coaching qualification.

Regarding to year of service in the above table,1(5%) of coaches were coaches the club for one year ,7(35%) of coaches also were coaches for three years,4(20%) of coaches were coaches for four years ,3(15%) of coaches are stay in the club for five years and 5(25%) of coaches also were coaches the club for six and above years. The above analysis shows that coaches have different experience in the club.

Table 10. Questions for coaches

No	Item	alternative	Response No	%
1	I have daily and yearly training plan	strongly agree	6	30%
		Agree	14	70%
		Neutral		
		Disagree		
		Strongly disagree		
2	I have evaluate the performance of my athlete	strongly agree	16	80%
		Agree	4	20%
		Neutral		
		Disagree		
		Strongly disagree		
3	Athletes performance have improved after I started to give training	strongly agree	8	40%
		Agree	8	40%
		Neutral	4	20%
		Disagree		
		Strongly disagree		
4	I analysis the previews and current profile of athletes performance	strongly agree	8	40%
		Agree	10	50%
		Neutral	2	10%
		Disagree		
		Strongly disagree		
5	I prepare each days training program in each day	strongly agree	12	60%
		Agree	8	40%
		Neutral	-	
		Disagree	-	
		Strongly disagree	-	
6	I have assistance coach	strongly agree	-	
		Agree	5	25%
		Neutral	1	5%
		Disagree	14	70%
		Strongly disagree	-	
7	I apply the science of sport training principles in my coaching processes	strongly agree	9	45%
		Agree	11	55%
		Neutral		
		Disagree		
		Strongly disagree		
8	In our club, we have enough equipment and facility	strongly agree	-	
		Agree	4	20%
		Neutral	-	
		Disagree	16	80%
		Strongly disagree	-	

As indicted in the above table (item 1), 6(30%) of coaches were strongly agree and 14(70%) of respondents were agree replied that have daily and yearly training plan. The analysis shows that almost all coaches have daily and yearly training plan.

According to (item 2) from the above table, 16(80%) of respondents strongly agree with they evaluate the performance of their athletes and 4(20%) of coaches were also agree. So that almost all coaches were evaluate the performance of their athletes.

From item 3, on the above table 8(40%) of respondents were strongly agree with the athletes performance was improve after they start to give training, 8(40%) of coaches also agree. But 4(20 %) of coaches were neutral. It implied that most of athletes improve their performance after the coaches giving training.

Similarly from (item 4) on the above table, 8(40%) of coaches were strongly agree that they analyses the preview and current profile of athletes performance, half of 10(50%) of coaches were agree and 2(10%) of coaches are neutral. This shows that more than half of coaches were analysis the previews and current profile of athletes performance.

According to (item 5) from the above table, 12(60%) of respondents strongly agree with they were prepared each days training program in each day whereas 8(40%) of coaches also agree. More than half of coaches were prepare daily training session.

According to (item 6) from the above table, 5(25%) of coaches were agree replied that they have assistances coaches, 1(5%) of coaches were neutral and 14(70%) of coaches were have not assistance coaches. Thus implied that during training the coaches controlled and managed all athletes alone.

From item 7, on the above table 9(45%) of coaches were strongly agree that apply the science of sport training principle in their coaching process and also 11(55%) of coaches were agree. The analysis shows that almost all of coaches apply the science of sport training principle in his training process.

Similarly from (item 8) on the above table, 4(20%) of coaches were agree replied that there are enough facility and equipment in their club. But 16(80%) of coaches were replied that there are no enough facility and equipment in their club. Thus analysis shows that the club has not enough facility and equipment.

Open ended Questionnaires which are prepare for coaches

- What are the major problems/factors/ that affects the performances of Long Distance track athletes of your club? Majority of coaches were implied that on this analysis there are factors affect the track athletes performance are less interest and motivation on training, discipline, shortage of diet, less hard working, did not has recovery time after training because of most athletes survive by themselves, shortage of transport access and less acceptance of track events after 5000 and 10000m drops from diamond league.
- When you design annual training plan what things you considering under your planning? The majority of coaches stated that they prioritize their goals, federation competition schedules, athlete performance, athlete concept, and basic fitness components..
- What method that you use to monitor the training program whether it is effective or not to all athletes? Some coaches monitor their athletes by giving training based on their disciplines and based on the Training Impulse (TRIMP), Lactate to RPE Ratio, and HR Recovery (HRR).

Interviews for club officials

The researcher raises some organized questions for sport office experts. The first raises based on sport office expert's specialization? Majority of second division athletics club officials were specialized by sport science. But little club officials their specialization were from other department.

The other interview based on compare the performance of long distance runner's effectiveness from the previous? If not improve what solution you will take? They said that the performance of long track athletes was lower this year than last year because they did not choose talented athletes, they did not have enough preparation time before the competition period, and the club had internal problems due to Covid19. However, they chose to construct their management system and choose athletes prior to the preparation period as a solution.

Finally, they stated that we did everything possible to improve the performance of our club's track athletes..

The researcher also raised other question based on the clubs financial resource. Majority of club officials implied that more than 88% second division club has not enough financial resource. But 12% of second division club has enough financial resource

The other question based on long distance track training needs? Majority of interviewer implied that long distance athletes must fulfill training material like (training kits and spike shoes), take enough recover after training, trained by experience and well qualified coach, taking enough diet after training, take electrolytes, did not miss the program and drink water

The researcher also raised other question based on the club holds athletes and objectives of the club? Some clubs hold an athlete before the New Year get or during summer. But some club also holds an athlete after they see the athlete's performance during competition time especially in Addis Ababa club champion.

The researcher raised the last question asked for sport office. What are the major problems/factors/ that affects the performances of Long Distance track athletes of your club? Long distance athletes' factors, according to the majority of interviewers, are a lack of training material, a lack of recovery after training, a lack of experience and a well-qualified coach, a lack of diet after training, and a lack of transportation access

Interpretation of Observation

- The comfortable training place of athletes and follow up of coaches
- The punctuality of coaches on training place
- athletes Arriving on time to training
- Access of transportation system to athletes from the clubs
- Gym training/exercises access for athletes
- Interest of athletes during the training time with the program
- The coaches and athletes relationship
- Annually monthly and weekly and daily plan preparation
- The motivation system of coaches athletes during training period
- Training equipment or facility access
- Observation based on the comfortable training place of athletes and follow up of coaches. The researcher has been observed 3 training session on 17 Athletics clubs. The comfort ability of training place of athletes for most athletes is not god because athletes did not get different training area to do training. But they did in the same area because the shortage of transportation. This observation observed that one coach could coach three clubs of athletes together. This show that the coach could not manage the athletes error,

did not record every athletes time and they did not improve the athlete's performance simply.

- Observation based on the punctuality of coaches on training place. The majority of coaches were arriving on time. But some coaches were delayed to came the training place.
- Observation based on athletes arriving on time to training. Some athletes were not arrive on time and they are coming on the time of warming up
- Observation based on Access of transportation system from the club. Majority of second division athletics club has not their own transport service. This affect that the athletes to come early on training place affect athletes economically and they expend their time to wait other public services.
- Observation based on Gym training access for athletes. Majority of club did not have their own gymnasium center and even they did not pay for training program. Gymnasium is very crucial for athletes to develop their strength, power and speed of athletes. So that
- Observation based on Interest of athletes on the training program. The majority of the athletes on the training programs most of the athletes facial expression, willingness to do was not god may be programs were not considered the athletes capacity, age and their discipline.
- Observation based on the coaches and athletes relationship. The relationships between coaches and athletes in most clubs were good. But in some clubs the relationship between athletes and coaches were not act as coach and athletes. They did not respecting each other.
- Observation based on coaches daily plan preparation. The majority of coaches were having no daily plan that describes the training program. Load, intensity and volume of the training during practice session. Even, the training was some time less or beyond the athlete's performance.
- Because of this, the majority of athletes do not have interest or response to the training. Some coaches were not act as a good leader. Because they did not follow up easily because high number of athletes were difficult to record each and every athletes time and low skill demonstration.

- Observation based on motivation system of coaches' during training period. About motivation system of coaches during training place were almost all coaches giving recognition, initiation and telling motivation words to those who athletes cover the given program. But did not give better motivation for the late comer athletes
- Observation based on Training equipment or facility access. The majority of the clubs don`t have adequate facilities and equipment. Out of 17 clubs, 16 clubs do not have any running track or line; they were doing simply on uncomfortable area. Almost none of the clubs have equipment, like, gym training equipment, shortage of running shoes and athletes did not get synthetic track.

Interpretation of Observation based on the principle of training for coaches Principle of training is the science of training that follows during training program or the key principle of training for one coach to give training for athletes.

1. Principle of warming up
2. Principle of Overload
3. Principle of Progressive
4. Principle of recovery
5. Principle of Specificity
6. Principle of Individualization
7. Principle of cool down

- Observation based on Principle of warming up, almost all coaches give time for warming before the main program to athletes. However, how coaches used the time to warm up differed from coach to coach. Most coaches give their athletes 15-20 minutes to warm up, either in a group or individually, and they do not follow the athletes arm posture, leg stride, and dynamic exercise of the athlete's gradual increase in the intensity of exercise to allow physiological processes to prepare for greater energy outputs..
- Observation based on Principle of Overload, The majority of coaches did not follow the notion of overloading. In my three days of observation, the program was nearly same, and the increases in load were not based on repetition, frequency, intensity, or time or duration of time. According to (Bompa 1999) states that an athlete has to be exposed to an overload stimulus at regular intervals for the induction of training adaptations. An

overload stimulus can be manipulated by changing the mode of exercise, duration, frequency, intensity, and recovery period between training sessions

- Observation based on Principle of Progression, The majority of trainers did not provide training based on the progression principle since the program did not develop from simple to heavy, from familiar to unfamiliar. The majority of trainers did not gradually raise the load based on the length of time and intensity of the workout.
- Observation based on Principle of Recovery, The majority of the coaches did not follow the recovery principle and were not given adequate recovery time between daily workouts. They were also not considered for the next program and did not include activities such as massage, stretching, sled dragging, low intensity or volume training sessions, or hydrotherapy. Even some coaches recognize the importance of recovery time, stating that if you waited for complete recovery between each session, you would get very little done. It is, thus, acceptable and reasonable to train exhausted and fatigued. As a result, the athletes have encountered the signs and symptoms of overtraining and are unaware of the importance of monitoring these symptoms as well as the training session.
- Observation based on Principle of Specificity, in thus observation majority of coaches did not apply this principle of specificity the observation shows that most coaches program were did not has goals and most coaches training was not specify the athletes body and fitness component they develop.(Hodge, Sleivert, McKenzie 1996) states that the characteristics of a training load must be specific to the movement, muscles, and energy systems of the sport you are training for"
- Observation based on Principle of Individualization, in thus observation majority of coaches did not apply this principle. The program was not considered the athletes difference and the athlete's response to training. During the program most coaches were did not consider the athletes difference of following.
    - Did not consider athletes flexibility
    - Athletes muscle type
    - Athletes response to training
    - Athletes arm and eye coordination
    - Athletes use of vo2 max capacity
    - Ability use of anaerobic exercise

- Observation based on Principle of cool down, most coaches give 5-10 minutes for cooling down after they finished the program. But most of them they told aurally to did cool down and not follow each and individual cool down principle .for instance, they did not apply the process of cool down .i.e. slow run, walk, and passive stretching of muscle until their body returned to the normal position.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary

The main objective of the study is to assess the factor that affect the performance long distance track athletes in case of second division athletics club at Addis Ababa and has the following Specific objectives:

1. To identify the main factors that affects the performance of Long Distance track Athletes.
2. To examine the scientific training principles of the coaches
3. To identify whether the clubs had enough facilities and equipment in the clubs.
4. To examine where the athletes obtained their diet/Food during training and Competitions period

Based on the above objectives mentioned above this study tried to answer the following basic research questions.

1. What are the main factors that affect the performance of Long Distance track Athletes?
2. To what extent the coaches follow and apply the science of training principles?
3. Are there enough facilities and equipment in the clubs?
4. From where the athletes get their diet/food during training and Competitions period

The descriptive survey method was utilized to find the problem. Cluster sampling of 240 track athletes, 20 coaches, and 17 sport office professionals was used to conduct open-ended and closed-ended questions, interviews, and observations. They all took part in the study and gave honest responses. The study's summary was presented as follows, based on the interpretation of the data obtained by these instruments..

- The majority of track athletes were found to be of varying ages, years of experience, and abilities, as well as having varying educational level within the club. so that the athletes' training programs would not be focused on their performance.
- The majority of athletes do not get enough recuperation after training due to transportation issues, lack of facilities and equipment, food shortages, and a lack of scientific and trained coaches.

- Most of the athletes were not motivated by their coaches, not get enough diet before and after training
- The majority of coaches' method and style was not god to trained athletes and did not apply the science of training principle.
- the club did not preparing and giving diets, did not give food during competition period, did not have his own gymnasium center, the giving training supply is not comfortable for athletes training and did not fulfill the facility and equipment's for track training like spike shoes and we did not trained athletes on synthetic track before competition. .
- Most of the athletes were cover the cost of food by their own, did not getting training shoes from the club and most athletes were not get transport service from the club for training.
- Most of the coaches were have 2nd level coaching certificate and they are not qualified for word athletics coaching qualification or IAAF coaching qualification certificate and have less experience in the club.
- Most of the coaches try to control and managed all athletes alone during training they did not have assistance coach. More over in the majority of the clubs there are only one coach that trained and control every activity of athletes.
- Most of track athletes has less interest and motivation on training, they are not disciplined, has shortage of diet, less hard working, did not has enough recovery time after training because of most athletes survive by themselves, shortage of transport access and less acceptance of track events after 5000 and 10000m drops from diamond league
- Majority of second division club has not enough financial resource annually.
- The above pointes were found out being determinant to effectively and efficiently show the factors of the training program and athlete's performance.

5.2. Conclusion

Based on the major finding the researcher forwarded the following conclusion:

The major findings of the research revealed that there was a lack of facilities and equipment such as training kits, finance, and transportation service, coaches did not apply proper science of sport training principles, training was not tailored to the athletes' abilities, and athletes did not receive adequate nutrition. In addition, long-distance track competitors require adequate recovery after each training session. It was feasible to deduce from this study that a variety of factors influence the performance of long-distance track competitors.

In terms of an appropriate training area, the study discovered that the size was insufficient for athletes to receive adequate track training. As a result, unless a solution is discovered to enhance these conditions, they may experience a number of issues with their athletic performance.

5.3. Recommendations

Based on the study's findings, it is plausible to suggest the following as suggestions for improving and highlighting aspects that affect the performance of long distance track athletes in Addis Ababa's second division Athletics clubs.

- The findings reveal that clubs lack training materials and equipment. As a result, the club must make the required preparations. So that the club may provide training equipment and possibly a gym, and athletes can use it. Furthermore, club authorities should specialize in sport science and pay close attention to the food of long-distance track athletes, as well as allocate adequate resources..

- The club should address issues with the training facility to make it more pleasant, as well as train athletes on the synthetic track prior to competition, prepare diets, and provide transportation for training.

- Coaches must use sport science during the training process and provide training to athletes depending on their ability and experience in order to improve their performance. Coaches must upgrade their level coaching certificate and qualified for world athletics coaching qualification.

- The club should hire more coaches to properly develop athletes.

- Athletes should take a break after training to recover from exhaustion and avoid injury.

- Athletes should have discipline, values, and a passion for what they do on the field.

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APPENDIXES A

ADDIS ABABA UNIVERSITY

Colleague of Natural Science Department of Sport Science

Questionnaire to be filled by Athletes

Dear athletes the main objective of this questionnaire is to know factors affecting long distance track athlete's performance: the case of second division athletics clubs in Addis Ababa city administration for partial fulfillment of my MSC in A.A.U

Therefore your willingness, good cooperation and genuine response is curial to the success of this study .Hence, you are kindly requested to give your response confidentiality. Saying these, I would like to extend my cordial gratitude for your cooperation to fill the questionnaire. The information's collected will not be used for any other purpose and it will be confidential. The questionnaire is not by any means to evaluation of the athlete's knowledge so I humbly request you to give a true and precise response.

First of all I would like to thank you for your willingness to fill this questionnaire.

Note

 No need of writing your name.

 put this symbol "√" in the given box and there are some open ended questions so write your answers on the space provided.

Demographic Characteristics of Respondent

No	Variable	Alternative	Rating scale
1	Sex	Male	
		Female	
2	Age	Blow 20	
		21-25	
		26-30	
		Above 30	
3	Education background	5-8	
		9-10	
		11-12	
		College or university student	
		College or university complete	
4	Types of event specialized	3000m	
		5000m	
		10000m	
5	Training years	1 years	
		2 years	
		3 years	
		4 years	
		5 years	
		6 years and above	

 Rating: strongly agree = 5, Agree =4, neutral=3, Disagree=2strongly disagree =1

No	**Items regarding athletes training factors**	Rating scale				
		Strongly agree	Agree	Neutral	dis agree	Strongly dis agree
1	I get sufficient salary from the club					
2	when I join the club your selected based on norms and on your talent					
3	I get competition opportunity to enhance performance					
4	I get enough rest after training					

1 .please writes the major factors or problems that affect your performance during track training and competition? ----------

Items About Coaches

No	Content	Rating				
		Strongly agree	agree	neutral	disagree	Strongly dis agree
1	Relationship with my coach is good					
2	My coach motive me to work hard to improve my performance					
3	The method and style of coach is give comfortable for athletes					
4	Our coach training method is based on the principle of the science of sport					
5	Our coach gives training based on experience and ability of athletes					
6	My coach give me clear instruction before training					

1.please explain if anything else?----------

Items regarding Nutrition

No	**content**	Rating scale				
		Strongly Agree	Agree	Neutral	dis agree	Strongly dis agree
1	The club prepare and give our diet/food/					
2	We ourselves cover the cost of our food /diet/					
3	Our Clubs give nutrition access during the competition period					
4	I get enough food before and after training					

- **Please explain how you get diet beyond this?----------**

Items About Training Facilities and Equipment's

No	**Items**	Rating Scale				
		Strongly agree	Agree	Neutral	Dis agree	Strongly disagree
	I get sufficient Facilities or equipment access to training					
2	The club has his own gymnasium center					
3	The training supplies that the club gives to me comfortable for training					
4	Athletes get training shoes from the club					
5	The club gives transport services for training					

- Please mention any other problem of facility and equipment's to improve your performance?----------

APPENDIX B

ADDIS ABABA UNIVERSITY

Colleague of Natural Science Department of Sport Science

Questionnaire to be filled by coaches

Dear coaches the main objective of this questionnaire is to know factors affecting long distance track athlete's performance: the case of second division athletics clubs in Addis Ababa city administration for partial fulfillment of my MSC in A.A.U

Therefore your willingness, good cooperation and genuine response is curial to the success of this study .Hence, you are kindly requested to give your response confidentiality. Saying these, I would like to extend my cordial gratitude for your cooperation to fill the questionnaire. The information's collected will not be used for any other purpose and it will be confidential. The questionnaire is not by any means to evaluation of the coaches' knowledge so I humbly request you to give a true and precise response.

First of all I would like to thank you for your willingness to fill this questionnaire.

Note

 No need of writing your name.

 Put this symbol "√" in the given box and there are some open ended questions so write your answers on the space provided.

Background information

No	Variable	Alternative	Rating scale
1	Sex	Male	
		Female	
2	Age	Blow 20	
		20-25	
		26-30	
		Above 30	
3	Education background	5-8	
		9-10	
		11-12	
		College or university student	
		College or university complete	
4	Level of coaching certification	1st level	
		2nd level	
		3rd level	
		4th level coc	
		Iaaf certificate	
5	Years of services to this club	1 years	
		2 year	
		3 years	
		4 years	
		5 year	
		6 years and above	

 Ratings trongly agree = 5, Agree = 4,neutral=3, Disagree = 2 strongly disagree=1

No	**Items About Coaching qualification and experience**	Rate				
		5	4	3	2	1
1	I have daily and yearly training plan					
2	I have evaluate the performance of my athlete					
3	Athletes performance have improved after I started to give training					
4	I analysis the previews and current profile of athletes performance					
5	I prepare each days training program in each day					
6	I have assistance coach					
7	I apply the science of sport training principles in my coaching processes					
8	In our club, we have enough equipment and facility					

Open ended Questionnaires which are prepare for coaches

1. What are the major problems/factors/ that affects the performances of Long Distance track athletes of your club?----------

2.When you design annual training plan what things you considering under your planning-------

3. What method that you use to monitor the training program whether it is effective or not to all athletes? ----------

APPENDIX C

ADDIS ABABA UNIVERSITY

Colleague of Natural Science Department of Sport Science

Interviews for club officials

Dear managers the main objective of this questionnaire is to know factors affecting long distance track athlete's performance: the case of second division athletics clubs in Addis Ababa city administration for partial fulfillment of my MSC in A.A.U

Therefore your willingness, good cooperation and genuine response is curial to the success of this study .Hence, you are kindly requested to give your response confidentiality. Saying these, I would like to extend my cordial gratitude for your cooperation to interview. The information's collected will not be used for any other purpose and it will be confidential. The questionnaire is not by any means to evaluation of the managers' knowledge so I humbly request you to give a true and precise response.

First of all I would like to thank you for your willingness to interview

- As you are sport management leaders, have you specialized by sport science?
- Compare the performance of long distance runners effectiveness from the previous? If not improve what solution you will take?
- Does the club have enough financial resource annually to pay athletes?
- Do you know what long distance track training needs?
- When the club holds athletes? And what is the main objectives of the club?
- What are the major problems/factors/ that affects the performances of Long Distance track athletes of your club?

APPENDIX D

ADDIS ABABA UNIVERSITY

Colleague of Natural Science Department of Sport Science

Observation Checklist

The observational check list will takes place three times each club
Observation check list on training activities
Date ----------
Club----------
Period----------
Place of observation ----------
Phase----------

Quantifiers Excellent=5, Very good=4, Good=3, Faire=2, Not faire=1,

No	Content	Rating				
		5	4	3	2	1
•	The comfortable training place of athletes and follow up of coaches					
•	The punctuality of coaches on training place					
•	athletes Arriving on time to training					
•	Access of transportation system to athletes from the clubs					
•	Gym training/exercises access for athletes					
•	Interest of athletes during the training time with the program					
•	The coaches and athletes relationship					
•	Annually monthly and weekly and daily plan preparation					
•	The motivation system of coaches athletes during training period					
10	Training equipment or facility access					

Coaches applied the science principle of sport training

No	Item to be observed	**Rating Scale**				
		5	**4**	**3**	**2**	**1**
1	Principle of warming up					
2	Principle of Overload					
3	Principle of Progressive					
4	Principle of recovery					
5	Principle of Specificity					
6	Principle of Individualisation					
7	Principle of cool down					

APPENDIX E

የአዲስ አበባ ዩንቨርሲቲ የምረቃ ተማሪዎች ትምህርት ቤት የስፓርት ክፍል

ለአትሌቶች የተዘጋጀ መጠይቅ

የዚህ መጠይቅ ዓላማ በአዲስ አበባ ከተማ አስተዳዳር የሚገኙ የሁለተኛ ዲቪዥርዮን የሚገኙ የረጅም ርቀት የመም አትሌቶች አቅማቸው እንዳይጎለብት የሚያደርጉ ችግሮችን ምን እንደሆነ ለማጥናት ነው፡፡ ሰለሆነም ጥናሩ ሙሉ በሙሉ አካዳሚክ ነው እናም በምንም መንገድ የተማሪዎችን ስብዕና ወይም ድርጅትን አይነካም፡፡ የጥናሩን ስኬት ለመወሰን ትክክለኛ እይታዎ፣ ግልጽ አስተያየትዎ እና ወቅታዊ ምላሾችዎ በጣም ጠቃሚ እንደመሆኑ በሚስጢር ይቀመጣል፡፡ ስለሆነም አግባብነት ያላቸውንፈ መረጃዎች በማቅረብ እና ለዚህ ዓላማ የተዘጋጁ የሚከተሉት መጠይቆች በመሙላት ትብብራችሁን በቅንነት እንዲሞሉ በትህትና እጠይቃለሁ፡፡

ስለትብብረዎ በቅድሚያ አመሰግናለሁ!!

መመሪያ ስምዎን መጻፍ አያስፈልግም

እያንዳንዱ ጥያቄ በተሰጠው መመሪያ መሰረት ለመመለስ ሞክር፡፡ ተጨማሪ የጥቆማ አስተያየቶችን ለመስጠት ከፈለጉ በመጠይቁ መጨረሻ ላይ የተሰጠው ቦታ ይጠቀሙ፡፡

ክፍል 1 አጠቃላይ መረጃ

ተ.ቁ	አይነት	ምርጫ	ነጥብ	
1	ፆታ	ወንድ		
		ሴት		
2	ዕድሜ	ከ 20 ዓመት በታች		
		21-25		
		26-30		
		ከ30 ዓመት በላይ		
3	የትምህርት ደረጃ	5-8		
		9-10		
		11-12		
		ኮሌጅ ወይም ዩንቨርሲቲ ተማሪ		
		ኮሌጅ ወይም ዩንቨርሲቲ ተመራቂ/		
4	የርቀት አይነት	3000m		
		5000m		
		10000m		
5	የሥልጠና ዓመት	1ዓመት		
		2 ዓመት		
		3 ዓመት		
		4 ዓመት		
		5 ዓመት		
		6 ዓመት እና ከዛ በላይ		

ደረጃ: በጣም እስማማለሁ = 5, እስማማለሁ =4, ገለልተኛ=3, አልስማማም=2 በጣም አልስማማም=1

ተ.ቁ	አይነት	ደረጃ				
		በጣም እስማማለሁ	እስማማለሁ	ገለልተኛ	አልስማማም	በጣም አልስማማም
1	ከክለቡ በቂ ደመወዝ አገኛለሁ					
2	ወደ ክለቡ እንደቀላቀል የተመረጥኩት ባለኝ ብቃትና አቅም ነው					
3	አቅሜን ለማዳበር በቂ የሆነ የውድድር እድ አገኛለሁ					
4	ከልምምድ መልስ በቂ እረፍት አደርጋለሁ					

ተ.ቁ	አይነት	ደረጃ				
		በጣም እስማማለሁ	እስማማለሁ	ገለልተኛ	አልስማማም	በጣም አልስማማም
1	ከአሰልጣኞች ጋር ጥሩ የሙነ ግንኙነት አለኝ					
2	ልምምዴን ጠንክሬ እንድሰራ አሰልጣኜ ያበረታታኛል					
3	አሰልጣኝ የሚጠቅማቸው የአሰለጣጠን ዘዴ መንገዶች ለአትሌትክስ ምቹ ነው					
4	አሰልጣኘን የምከተለው የአሰለጣጠን ዘዴ ሳይንሳዊ መርህ የተከተለ ነው።					
5	አሰልጣኞችን ልምምድ በሚሰጥበት ጊዜ የአትሌቶችን ልምድ ብቃትን ያገናዘበ ነው።					
6	ከልምምድ በፊት አሰልጣኙ ግልፅ የሆነ መመሪያ ይሰጣል።					

ተ.ቁ	አይነት	ደረጃ				
		በጣም እስማማለሁ	እስማማለሁ	ገለልተኛ	አልስማማም	በጣም እስማማለሁ
1	ክለቡ ምግብ አዘገጅቶ ይሰጠናል					
2	የምምገበውን የምግብ ወጪ በራሴ እሸፍናለሁ					
3	በውድድር ጊዜ ክለቡ ምግብ ያቀርባል					
4	በልምምድና በውድድር ጊዜ በቂ ምግብ አገኛለሁ					

1ከዚህ በተጨማሪ የምግብ አቅርቦት ካለ ዘርዝር?----------

ቁሳቁስ

ተ.ቁ	አይነት	ደረጃ				
		በጣም እስማማለሁ	እስማማለሁ	ገለልተኛ	አልስማማም	በጣም አልስማማም
	በቂ የሆነ የልምምድ መገልገያ ቁሳቁስ አገኛለሁ					
2	ክለቡ የራሱ የሆነ የጂም ማዕከል አለው					
3	ክለቡ የምሰጠው የልምምድ አቅርቦርት ለኔ ምቹ ነው					
4	የልምምድ ጫማ ከክለቡ አገኛለሁ					
5	ከልምምድ ወቅት የትራንስፓርት አገልግሎት ይሰጣል					

- ቁሳቁስ ዙሪያ ለውጤትህ እንቅፋት የሆኑ ነገሮች ካሉ ዘርዝሩ?----------

APPENDIX F

የአዲስ አበባ ዩንቨርሲቲ የምረቃ ተማሪዎች ትምህርት ቤት የስፓርት ክፍል

ለአሰልጣኞች የተዘጋጀ መጠይቅ

ክፍል 2 አጠቃላይ መረጃ

ይህ መጠይቅ ዓላማ በአዲስ አበባ ከተማ አስተዳዳር የሚገኙ የሁለተኛ ዲቪዥኖን የሚገኙ የረጅም ርቀት የመም አትሌቶች አቅማቸው እንዳይጎለብት የሚያደርጉ ችግሮችን ምን እንደሆነ ለማጥናት ነው፡፡ ሰለሆነም ጥናሩ ሙሉ በሙሉ አካዳሚክ ነው እናም በምንም መንገድ የተማሪዎችን ስብዕና ወይም ድርጅትን አይነካም፡፡ የጥናሩን ስኬት ለመወሰን ትክክለኛ እይታዎ ፣ግልጽ አስተያየትዎ እና ወቅታዊ ምላሾችዎ በጣም ጠቃሚ እንደመሆኑ በሚስጢር ይቀመጣል፡፡ ስለሆነም አግባብነት ያላቸውንፈ መረጃዎች በማቅረብ እና ለዚህ ዓላማ የተዘጋጁ የሚከተሉት መጠይቆች በመሙላት ትብብራችሁን በቅንነት እንዲሞሉ በትህትና እጠይቃለሁ፡፡

ስለትብብርዎ በቅድሚያ አመሰግናለሁ!!

መመሪያ ስምዎን መጻፍ አያስፈልግም

እያንዳንዱ ጥያቄ በተሰጠው *መመሪያ* መሰረት ለመመለስ ሞክር፡፡ ተጨማሪ የጥቆማ አስተያየቶችን ለመስጠት ከፈለጉ በመጠይቁ መጨረሻ ላይ የተሰጠው ቦታ ይጠቀሙ፡፡

ለአሰልጣኞች የተዘጋጀ መረጃ

ተ.ቁ	አይነት	ምርጫ	ነጥብ		
1	ፆታ	ወንድ			
		ሴት			
2	ዕድሜ	ከ 20 ዓመት በታች			
		21-25			
		26-30			
		ከ30 ዓመት በላይ			
3	የትምህርት ደረጃ	5-8			
		9-10			
		11-12			
		ኮሌጅ ወይም ዩንቨርሲቲ ተማሪ			
		ኮሌጅ ወይም ዩንቨርሲቲ ተመራቂ/			
4	የአሰልጣኝ የደረጃ ሰርተፍኬት	1ኛ ደረጃ			
		2ኛ ደረጃ			
		3ኛ ደረጃ			
		4ኛ ደረጃ coc			
		laaf certificate			
5	የአገልግሎት ዘመን	1 ዓመት			
		2 ዓመት			
		3 ዓመት			
		4 ዓመት			
		5 ዓመት			
		6 ዓመትእና ከዛ በላይ			

ደረጃ: በጣም እስማማለሁ = 5, እስማማለሁ =4, ገለልተኛ=3, አልስማማም=2 በጣም አልስማማም=1

No	አይነት	ደረጃ				
		5	4	3	2	1
1	የቀን እና የዓመት የልምምድ ዕቅድ አለኝ					
2	የአትሌቶች አቅም እገመግማለሁ					
3	የአትሌቶች አቅማቸው የተሸሻለው እኔ ልምምድ ማሰራት ከጀመርኩ በኋላ ነው።					
4	በፊት እና አሁን ያለቸውን የአትሌቶች ብቃት በቂ መረጃ እሰበስባለሁ					
5	የእያንዳንዱ የልምምድ ፕሮግራም በየቀኑ አወጣለሁ					
6	ረዳት አሰልጣኝ አለኝ					
7	በማሰልጥንበት ሂደት ሳይንሳዊ የሆነ የልምምድ መርህ እተገብራለሁ					
8	በክለባችን በቂ የሆነ የልምምድ ቁሳቁስ አቅርቦት አለ					

1.የክለብ አሰልጣኝ እንደመሆንህ መጠን የትምህርት ደረጃ ወይም የአልጣኝ ደረጃ ምንድን ነው?----------
---

2.ዓመታዊ የልምምድ ዕቅድ ስታወጣ በዕቅድህ ውስጥ መካተት ያለባቸው ነገሮች ምንድን ናቸው----------
---

3**. በልምምድ ፕሮግራም ሁሉም አትሌቶች የምትቆጣጠርበት መንገድ ውጤታም ነው ወይስ አይደለም?** ----------
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APPENDIX G

የአዲስ አበባ ዩንቨርሲቲ የምረቃ ተማሪዎች ትምህርት ቤት የስፓርት ክፍል

ለቢሮ ሐላፊዎች የተዘጋጀ መጠይቅ

የዚህ መጠይቅ ዓላማ በአዲስ አበባ ከተማ አስተዳዳር የሚገኙ የሁለተኛ ዲቪዥኖን የሚገኙ የረጅም ርቀት የመም አትሌቶች አቅማቸው እንዳይጎለብት የሚያደርጉ ችግሮችን ምን እንደሆነ ለማጥናት ነው፡፡ ስለሆነም ጥናሩ ሙሉ በሙሉ አካዳሚክ ነው እናም በምንም መንገድ የተማሪዎችን ስብዕና ወይም ድርጅትን አይነካም፡፡ የጥናሩን ስኬት ለመወሰን ትክክለኛ እይታዎ ፣ግልጽ አስተያየትዎ እና ወቅታዊ ምላሾችዎ በጣም ጠቃሚ እንደመሆኑ በሚስጢር ይቀመጣል፡፡ ስለሆነም አግባብነት ያላቸውንፊ መረጃዎች በማቅረብ እና ለዚህ ዓላማ የተዘጋጁ የሚከተሉት መጠይቆች በመሙላት ትብብራችሁን በቅንነት እንዲሞሉ በትህትና እጠይቃለሁ፡፡

ስለትብብርዎ በቅድሚያ አመሰግናለሁ!!

መመሪያ ስምዎን መጻፍ አያስፈልግም

እያንዳንዱ ጥያቄ በተሰጠው መመሪያ መሰረት ለመመለስ ሞክር፡፡ ተጨማሪ የጥቆማ አስተያየቶችን ለመስጠት ከፈለጉ በመጠይቁ መጨረሻ ላይ የተሰጠው ቦታ ይጠቀሙ፡፡

ክፍል 3 አጠቃላይ መረጃ

1. አንተ የስፓርት ማኔጅመንት ሀላፊ እንደመሆንህ መጠን በስፓርት ሳይንስ ተመርቀህል ወይስ አልተመረክም?
2. በዚህ ሰዓት የረጅም ርቀት ውጤት ከባለፈው ጊዜ አንጻር ዝቅተኛ ነው፡፡ ስለዚህ ለዚህ ችግር መፍትሔ ምን ታስቀምጣለህ?
3. ክለቡ በቂ የሆኑ ዓመታዊ ገቢ አለው?
4. የትራክ ረጅም ርቀት አትሌቶች ምን እንደሚያስፈልጋቸው ታውቀለህ ምን ምን ናቸው?
5. ክለቡ መቼ ነው አትሌቶች የሚቀጠረው እና የክለቡ ዋና ዓላማው ምንድን ነው?
6. በክለባችሁ ለረጁም ርቀት ትራንክ አትሌቶች አቅማቸው እንዳይጨምር የሚያደርጉ ችግሮች ምን ምን ናቸው?