THE EFFECT OF PHYSICAL FITNESS TRAINING ON THE PERFORMANCE OF PREMIER LEAGUE FOOTBALL PLAYERS. (THE: CASE OF HAWASSA KENEMA FOOTBALL CLUB PLAYERS)

BY

GEBRE KIRSTOS BIRARA

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIENT OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN TEACHING SPORT SCIENCE

AUGUST, 2014

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AUGUST, 2014

Addis Ababa, Ethiopia

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Abstract

The aim of this study is to assess the effects of physical fitness training on the performance of premier league football players. A descriptive survey study was conducted on 25 football players .The data were collected by means of questionnaire, observation and filed test. The data obtained through questionnaire and tests were analyzed by using percentages and frequency by using percentages and frequency . The test used in this study consists of standing long jumps, 30 meter sped test push up, sit up, Illinois agility test, 30 meter fatigue test, sit and reach test and 1.5 mile (2414 meter)Vo2max test are conducted.

The funding should that in explosive power test most of the players result were poor and fair in speed and agility test the majority of the players results fair and average within the given norms and aerobic endurance Vo_2 test result showed that when comparing team players with professional and semi professional I all playing position players have lower Vo_2 max.

From the findings the researcher recommends that to develop fitness level of players a coach should used scientific method of fitness training and test.

Key Words – , Effect, Fitness, Football Performance, Test, Training,

CHAPTER ONE

INTRODUCTION

1.1 Back ground of the study

The sport of foot ball of the premier league level comprise of mainly of athletes of uncharacteristic size speed agility, power, strength endurance level of fitness helped many athletes become strong and faster

Athletes spend a lot of time and effort trying to improve their physical performance. Strength and conditioning coaches have helped these athletes to achieve a high level of performance through resistance training. This training is used to help on improve the athletes' strength, power, flexibility and speed. The improvement of all or one of these factors may help in enhancing the athletes performance on his or her respective playing field or court (Alan pearson2007)

In order to cope with the physical requirements and to maintain technical standard through out a match, it is important that the players have a high level of fitness. Playing matches regularly helps to maintain the fitness level of a player, but additional fitness training is required. The training should be specific to soccer with an emphasis on performing exercise with a ball and separate physical training with out ball. Involving the ball during practice ensure that the muscle used in soccer specifically are trained and it all evaluate motivate of the players. (Bangsbo 2007)

Testing athlete may provide the coach with information about the physical attributes of the players. This information may be used as a predicator of the athlete's playing status. This information may also give the coaches information about the physical conditioning of the players. The information can then be processed in a manner to help make accurate evaluation of the players. The physical attributes of football players are measured in a variety of may by a battery of very different test designed to assess an athlete's ability to perform a certain skill or fitness.

Coaches often use these testes to evaluate not only athletic ability but also predictor of the potential for injuries that may arise during the season.

Coaches needs some types of testing protocol to help in the evaluation process of their players. This testing process needs to include all areas of training, this might reflect strength and weakness that the player may possess. Testing needs to be administered in a safe and effective manner to ensure an accurate evaluation (Ebben 1998)

Evaluating performance testing of a player may not only give a coach in – sight regarding the players playing status and position potential but also may be used as a way for fitness and conditioning coaches to re – evaluate their own program.

The success of the team depends on house individuals are blended into on effective playing unit. Coaches and sport scientists acknowledge that the preparation for competitive match – play calls for a systematic approach. Consideration of individual fitness profiles and contribution these make to the team must be an integral part of this systematic approach. Attention to fitness profiles is relevant not just in build – up to wards key matches and tournaments but also prior to and through out the competitive season.

Fitness profiling is achieved by means of battery of test. The test items may either be part of a comprehensive physiological assessment or be dedicated solely to assessing performance of football. Repeated fitness assessment is of further value in that changes in fitness profiles with in individuals and through out the team as a whole can be measured.

To know the improvement of athletes performance is using testing. testing is the only effective and objective way to evaluate a training program. The use of post testing will be date permits accurate evaluation of many qualities. A coach will be able to see progress since the athlete's previous tests or compare data with a previous group of player of the some age, position or experience (Sigi Schmid & Bob alejo2002). Performance tests for foot ball players can be designed to cover the technical, tactical, physiological and fitness components of the game (Jens Bangsbo 2004).

Testing should be done with a purpose, so clear objectives should be defined before selecting a test. There are several good reasons for testing players these include to study the effects of training program, motivate players to train hard, give player objective feedback, to make players more aware of the objective of training, evaluate whether a player is ready to play a competitive match and plane short – long term training programmers,

In order to fulfill these purposes, it is important that the test used is relevant to football and resembles the condition during match play (Bangsbo 2004).

Fitness testing should first occur at the end of the off season just prior to your preseason training. This is so that you can use this information to plan your preseason training and so that you can see how much improvement has been made over the preseason. Your second set of testing should take place jest before the season begins.

Your subsequent fitness tests serve two purpose first you can compare and see how much you have improved your fitness which will give your confidence going in to the season and second it will allow you to assess where you are of and how you might want to adjust your training to work on any areas that you feel strengthening. It is also a good idea to do a round of testing mid season to make sure you are keeping the gains you made preseason and again make any necessary adjustment to your training based on the result (Nathan pallesen 2012).

1.2 Statement of the problem

Football players do not generally have extraordinary capacity in one single physical qualities physical testing is best used as a guide to potential to successful performance in foot ball and can specially used as a monitoring toll to determine individual's status of performance . Therefore the researcher was initiated performance testing in football and in what extent fitness training can be applied in Hawassa kenema culb. The study was to assess the effect of fitness training program by evaluating the players' fitness level with the given norms.

1.3 Research questions

Based on the statement of the problem the research tries to address the following research questions

1. What are causes for low performance in premier league football players?
2. Does the coach use scientific method of testing performance?
3. How the coaches evaluate the performance of the play?
4. Does decrease in performance due to the accumulation of fatigue?

1.4 Objective of the study.

1.4.1. General objective of the study

The generate objective of the study was to assess the effect of physical fitness training on the performance.

1.4.2. Specific objective & the study

- To evaluate the training program of the club

- To examining players level of fitness
- Forward possible suggestion to improve the current situation
- To assess the availability equipment and facilities

1.5. Significance of the study

The finding has the following significances.

- The study would support the club coach in designing the training program.
- To increase the quality training status of the team.
- The coach to use scientific ways of fitness testing.
- The team to adoupt new scientific way of training program

1.6. Delimitation of the study

This study was confined in its scope one of premier league football club to evaluate the players fitness level in addition to this the study will be delimited to investigate the factors and problem related to performance in football.

1.7. Limitation of the study

The researcher doesn't believe that the study will be totally free from any types of limitations. As a result of factor like unavailability of literature review in the area, time, financial costs and teams officials will affect the researchers schedule to conduct the research.

1.8. Definition of terms

Aerobic - The term aerobic means with oxygen, . The physical exercise that depends primarily on aerobic energy generating process.

Aerobic fitness – maximal ability of taking oxygen & utilize. Condition that heart and lungs by increasing the oxygen available to the body and by enabling the heart to use oxygen more efficient.

An aerobic – In the absence of oxygen, no oxidation metabolism. An energy system used when exercising, especially for short period, as it supplies a limited amount of energy quickly.It does not use atmospheric oxygen.

Agility - The ability of rapidly changes the position and direction of the body or body parts.

Athletes-A person which participating in any sport

Continuous training – Exercising at a continuous study pace for a prolonged period of time.

Flexibility – Is the ability to move the body joints through a maximum range of motion without under strain.

Interval training – Shorten bouts higher intensity separated by rest interval.

Performance- The accomplishment of a given task measured against present known standards of accuracy, competences, cost and speed.

Power – The ability of the muscle to exert maximum force against resistance

Tactics- The terms used to described the way in which a team wants to play in match. Tactics match. Tactics can apply either to defensive or attacking formation and method

Technique - is the method, procedure way something is done

1.9 Organization of the research work

The study consist five chapters. Chapter one deals with introduction background of the study statement the problem research question, objective of the study, significant, delimitation, limitation of the study, organization the research work and definition of key terms. Chapter two deals review of related literature. The methods are deals with chapter three. Chapter four deals with data analysis and presentation. Chapter five deals with summary, conclusion and recommendation of the study, Lastly, a list of reference materials, questionnaires and appendix that was used in the study was attached at the end of the paper.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter present related literatures that are relevant to this study. Books, websites and journals (published and unpublished) are included given by different authors.

2.1 The concept of fitness training in football

Football is among the most popular sports in the world. An estimated 100 million registered players exist worldwide divided in men's, women's, youth and veteran competition, with many millions more playing non-organized football (Reilly 1996). Despite its universal nature and its formal history extended back every hundred years. There are still many uncertainties concerning its multidimensional requirements (psychological, physiological, and biomechanical).

Football require a number of physiological qualities to be performed at the high intensity and skill execution with an exceptionally high standard of technical ability, as well as tactical understanding of the game. Physical qualities include aerobic and an aerobic endurance, agility, sprinting ability, jumping and kick power (Reilly 1997). Unlike elite sprinters or distance runners, professional football player do not generally have extraordinary capacities in one single physical quality (Hoff & Helgerud 2004). Physiological testing is best used as guide to potential successful performance in football and can especially be used as a monitoring tool to determine individual's status as a given time (Reilly, Bangsbo, Franks, 2000).

2.2. Requirements of the game

Football is a physically demanding sport in top class male football player covers a distance of about 11 km during match (Bangsbo 2007). A player goes through an average of 1179 changes in activity during 90 minute game (Bangsbo, Norreg and Thorsse 1991). More recent research reported an average of 1459 change in activity during a game . Which equates to change in activity every 4 seconds (Stolent etal. 2005). Furthermore, players in an elite

junior match can undertake closely to 1000 changes in activity through the course of a game (Thatchr & Betterham, 2004). The number of change in modern football is postulated to be a greater than previously reported, it makes approximately 1300 in exercise intensity because it is generally accepted that the game is continuously become faster and more athletically challenging than before (Al-Hazzaa, Alomuzaini, Al-Refaec 2001).

The challenging energy demands of football emerge from requirements to perform a number of high intensity activities such as jumping, tackling, accelerating, decelerating and getting off the ground (Bangsbo & Michalsik 2002). Other game skills such as kicking and dribbling also need to be considered when determining total physical requirement for the football (Reilly 1997). For instance, the oxygen demand for dribbling the ball is greater than the demands imposed by running normally, while the energy demands of running backwards are lower than running with the ball (kemi, Hoff, Engen, Helgerud & Wisloff 2003).

2.3 Players and Positional Requirements

A football side comprises of eleven on field players, ten outfield player and one goal keeper in a team the ten outfield players can be divided into defenders, midfielders and striker or forwards. The number of players in each position will vary slightly on the team's tactical approach. As a result, the general physiological characteristic of different positions when observed will vary from team to team. Some generalization can be draw from collected data on positional differences in football.

2.3.1 Defenders

In general the role of defender is to prevent opposition play, getting too close to the goal area and to prevent goals being conceded. when in possession of the ball, defenders are required to commence the attacking build up. Defenders tend to be the tallest heaviest player in the team (Al-Haaza etal. 2001). Due to the positional difference defenders cover lower distance than midfielder(Stolen 2005). For the purpose of game analysis defender are largely divided into full back (wide defenders) and the central defender due to the differing roles in the two positions play. The playing role and physical requirement of central defender and fullbacks

can differ markedly. The full back cover a greater distance similar to midfielders (stolen2005).

2.3.2 Midfielders

Midfielders are required to create play and move the ball up the field. They are generally expected to help out in both attack and defense and as a result are often to as “link player” (Drust etal. 1998). Midfielders are generally considered the workers, as they are constantly involved in helping the defense, creating attacking opportunities and supporting the strikers in the attacking goal area, in an effort to score. Midfielders will often take up more specific defensive, attacking or wide position. The overwhelming majority of studies on positional difference report midfielders cover the greatest distance in 90 minutes game (Stolen etal. 2005). However players in other positions, usually full back, will sometimes undertake a similar or greater amount of high intensity running than midfielders (Mohr etal. 2003 bangsbo 1994c).Subsequently, midfielders cover a greater distance at low to moderate intensities.

2.4.3 Forward

Forward usually referred to as striker, are primarily responsible for creating and scoring goal. The number of striker or attacking player has changed regularly with differing tactics. In the 1860’s team would be made up of 7 strikers, with 3 defenders (Bangsbo 2004b). Team tactics will determine how many strikers play, with variations from team to team. Strikers are similar in stature midfielders and fullback. Strikers have higher aerobic power than central defenders and goalkeepers but marginally lower aerobic power than full back and midfielders, Strikers will normally cover a lower distance per gram than midfielders and full back but cover slightly greater distance than central defenders (Mohr etal. 2003). Despite the lower total distance covered, strikers will tend to cover a higher percentage of the distance at higher intensities than other position’s (Hoff 2005). Unlike midfielders, strikers are only involved in play when it is their section of the field. Strikers are rarely required to become involve in play at the other end of the field in a defensive capacity.

2.4.4 Goal keepers

Goal keeper is the last line of defense and is the only player allowed to use their hands to touch the ball. This can only be done in the penalty area or "box" goal keepers are similar in size to central defender but have a lower level of aerobic power than all other position (Bangesbo 1994a). This may be explained by the fact that goal keepers cover significantly less ground during a game than outfield players (Reilly & Tomas 1976). However, the goal keeper a much higher involvement with the ball than other player in the team. Most involvement tend to be explosive, short term, and therefore anaerobic in nature (Drust al 1998).

2.4. Physiological Aspects and Game Intensity of Football

Football mainly an aerobic sport that includes frequent bouts of physical activities. During a single foot ball match player perform different types of action ranging from standing still to maximal running from jumping to tackling and from passing to shooting (Bangsbo 1993).

The average work intensity of football, measured as percentage of maximal heart rate has been reported to be close to the anaerobic threshold. (Bangsbo, 1993) reported on average heart rate of 159 bit per minute for Danish league players. In the study by Stroyer etal(2004) the mean heart rate in ten none elite and nine elite player in their early puberty and seven elite player in their late puberty was 162/157, 177/174, and 178/173 in the first and second half respectively.

2.5 Fitness Assessment

The game of football places varying physiological demands on performance. Fitness in a football specific context refers to a range of individual characteristics that is a composition of many attribute and competencies. Such competencies buy definitional needed include physiological psychomotor factors. Such quality are needed in contesting and retaining possession of the ball, maintaining a high work – rate for 90 minute of play, reacting quickly and appropriately as opportunities arise and regulating mental attribute before and during match – play. The balance between thus components of football related fitness depends up on "participant's level of performance, positional role and team style as play. Other inputs to

this mix include age, gender, stage of season environmental influences, History of injury and nutritional status" (Reilly, Bangsbo,& Franks 2000). The possession of this fitness characteristics is isolation does not pre-dispose to successful football performance by them self. but must be synergistic with skill development and the acquisition of tactical knowledge. The success of the team depends on how individuals are balanced into un effective playing unit. When teams roughly equal in skill and tactical knowledgment the one with the higher over all fitness will have the advantage of being more able to cape with a fast pace of play. When two teams equal skill meet, the one with superior fitness would have the edge, being able to play the game at a faster pace throughout (Helgrud etal. 2001). Coaches, trainers and sports scientists acknowledge the preparation for competitive match – play calls for a systematic approach. Consideration of individual fitness profiles and the contribution these makes to the team must be an integral part of this systematic approach (Relly, Bangsbo Franks 2000).

2.5.1 Aerobic Energy Consideration

Aerobic performance is fundamental physical quality for elite foot ball. The role of the aerobic performance in football at all levels have been frequently researched, it is generally accepted the aerobic performance is influenced by three factors maximal aerobic power an aerobic threshold and work economy (Hoff & Helgerud 2004). Estimates of the contribution of an aerobic energy to performance have varied. Based on the length of the game (90 minutes), of least 90% of energy requirements would have to come from aerobic energy sources (Hoff etal. 2002). In later research it was estimated as much as 98% of all energy requirements in football come from aerobic source, with only 2% from an aerobic source (Hoff &, Helgerud 2004). Other reports of game demands cite 8% of total game time is spent performing high intensity activities such as sprinting, jumping and tackling (Bangsbo etal. 1991). While other studies report as higher as 12% contribution from anaerobic sources (Rampinini Impellizzeri,& Marcora. 2007). Such suggest that match performance is nearly solely reliant on aerobic performance however the role of the anaerobic system cannot be forgotten as the most crucial parts of the game generally occur at high intensities requiring energy from an aerobic source (Little & williams, 2005). The importance of high aerobic power in football appears to be necessary condition for football (Stolen etal. 2005). Many

studies have investigated the role of aerobic performance as a determinant of high level of performance in football.

2.5.2 Aerobic fitness

The aerobic system in the main source of energy provision during football match play (Bangsbo,1994c). This factor is indicated both by measurement of physiological responded during game and by the metabolic characteristics of football players muscles. The maximum oxygen up take or Vo2max indicates the upper limit of the body's ability to consume oxygen. The Vo2max represents an integrated physiological function with contributions from lung, heart, blood, and active muscle. The oxygen transport system is influenced by the O_2 – carrying capacity of the blood. Along with the maximal cardiac output, this determines the amount of oxygen delivery to the active muscle cells. The amount of oxygen delivered is important in football because of the large contribution the aerobic system provides towards energy production (Bangsbo, 1994c). The oxygen carrying capacity is determined by the concentration of hemoglobin in the blood, which affects the binding of O_2 in red blood cells, or the blood volume. Thus total body hemoglobin is highly co – related with the maximal oxygen uptake.

The average value of Vo_2 max for top – level soccer players tend to be high, supporting the belief that there is a large contribution from aerobic power to playing the game (Bangsbo, 1994c). The Vo_2max of professional soccer players improved significantly in pre – season period when there is an emphasis on aerobic training. However not all recent reports demonstrate increase Vo_2max with either pre – season training or progression through the season (Ccasajus, 2001).

A high rank order co - relation between mean VO_2max of Hungarian soccer team and their finishing position in the Hungarian first division championship has been demonstrated (Apor, 1988). Means VO_2 max value for the first, second, third, and fourth team were 66.6, 64.3, .63.3 and 58.1 $mlKg^{-1}$ min^{-1} respectively.(Reilly etal.2000) agreed that while VO_2 max alone does not predispose toward success in football, a minimum threshold of approximately 60$mlKg^{-1}$ min^{-1} is apparent where players falling below it may fail to perform with success.

The VO_2 max varies with positional role, when such roles can be clearly differentiated. (Soze&Akkya2000) Suggested that irrespective of playing formation, squad - based training can obscure any specific positional adaptations in cardiovascular structure or aerobic capacity. When English league players where sub divided into position according to 4 – 3 – 3 and 4 – 4 – 2 configuration, the midfielders had significantly high aerobic power value than those in the other position. Central defenders have significantly lower relatively values than the other outfield players while full back and sticker have values that are intermediate (Al-hazza,Alumuzaini&Al-Rafaee, 2001). Goal keeper have a lower values than center backs.

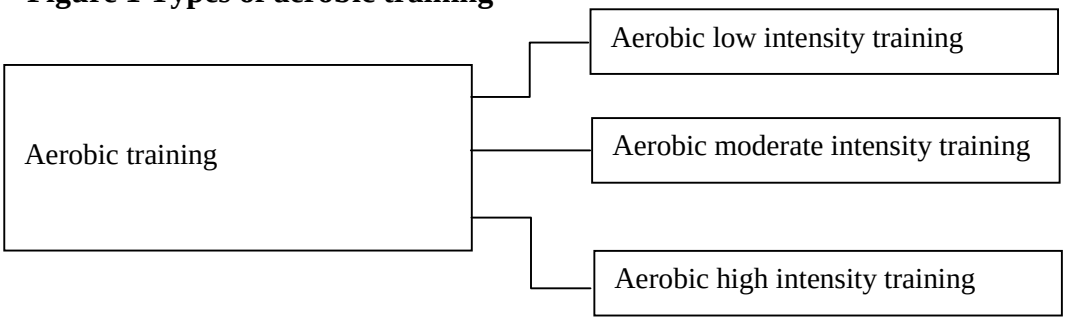
2.5.3 Intermittent training for aerobic performance

Numerous studies have been carried out to investigate the role of intermittent training on physical performance in sport in football specifically. Players at all level of competitive football will vary from period of high energy demand with periods of recovery and low intensity activity throughout the game. This feature of the game has been well documented (Little & williams, 2005). Although simple training playing without any consideration for improved conditioning has shown to maintain aerobic performance match involvements, it does not elicit any improvement in overall conditioning. The interval nature of football, combined with the desire to improve aerobic performance, suggest some form of intermittent training with varying intensities is crucial for preparation for elite performance (Bangsbo1994b, Helgeru,Hoydal,wang,karlsen, Hjorth,Bach & hoff 2007).

2.5.4 Types of aerobic training

Aerobic training can be divided into three overlapping area.

Figure 1 Types of aerobic training



Aerobic training case change in central factors such as the heart and blood volume which result in a higher maximum oxygen up take (Ekblom 1986).

As aerobic training should mainly be performed with the ball, the definition of the three categories of aerobic training take into account that the heart rate of the player will alternate continuously during the training (Bangsbo 2007). The specific aim of aerobic training is the following:-

- Improve the capacity of the cardiovascular system to transport oxygen. Thus, a large percentage of the energy requires for intense exercise can be supplied aerobically allowing a player to work at higher exercise intensity for prolonged period of time.

-To improve the capacity of muscles specifically used in football to utilize oxygen and to oxidize fat during prolonged period of exercise there by the limited store of muscle glycogen is spared and a player can exercise at a higher intensity toward the end of the game.

-To improve the ability to recover after a period of high – intensity exercise. As a result, a player requires less time to recover before being able to perform in a sub – sequent period of high – intensity exercise.

Table 2.1 Principle of aerobic training

	Heart rate				**Oxygen up take % of VO_2 max**	
	% of HRmax		**Beats/min**			
	Mean	Range	Mean	Range	Mean	Range
Low intensity training	65%	50-80%	130	80-160	55	85
Moderate intensity training	80%	65-90%	160	140-180	70	70
High intensity training	90%	80-100%	180	160-200	85	20

2.5.4.1 Aerobic Low Intensity (Aerobic $_{Lo}$) training

The aim of these training is to achieve faster recovery after a match or an intensity training. During a match or intensity training small raptures may occur in the connective tissues and fibers of the muscle. This damage, which is often still present several days after it has been induced, causes the muscle to become stiff and hard. Performance is reduced and the ability to replenish glycogen stores in inhabited. The typical symptom that the player experience is local muscle soreness (Bangsbo 2007). During aerobic $_{Lo}$ training the players perform light physical activities, such as jogging and low intensity games. This types of training can help the muscle recovery more efficiently and can reduce muscle soreness. Aerobic training can also be used to avoid a condition known as "over training" throughout the season when players are training frequently and playing many competitive matches, there may be times when the body is not able to recover completely. In such cases aerobic $_{Lo}$ training should replace more physically demanding forms of training. Due to its function aerobic Lo training is also recovery training.

Aerobic $_{Lo}$ training also has physiological benefit. The need to recover physically is often accompanied by the need to relax mentally(Hollmann,Liesen1981, Bangsbo 2007)

2.5.4.2 Aerobic moderate – intensity (Aerobic $_{Mo}$) training

Aims of the training to increase the capacity to exercise for prolonged period of time and to increase the ability to recover quickly after a period of thigh intensity exercise. A top – class football player cover a distance of approximately 11 kilometer during a football matches and also perform other energy demanding activities (Bangsbo 2007). Therefore it's important for players to have a high endurance capacity. This capacity can be improves through aerobic $_{Mo}$ training and complimented by aerobic $_{Hi}$ training. The desired effect is to improve the ability to maintain a high work – rate and good technical performance throughout the game.

Aerobic $_{Mo}$ training can take the form of either continuous or intermittent exercise. For intermittent exercise the work periods should be longer than 5 minutes. If the training is performed without a ball, it's recommended the exercise with various intensities is used

(Bangsbo 2007). Alternate between exercise intensities corresponding to 70%, 80% and 90% of HR_{max} each minute.

2.5.4.3 Aerobic High –Intensity (Aerobic $_{HI}$ Training)

The aim of this training is to increase the ability to exercise at high intensity for long period of time and to increase the ability to recovery quickly from high intensity exercise.

It has been demonstrated that the total distance covered by high – intensity exercise during a match is related to the standard of football, therefore it's important that players are capable of exercising at high – intensities for prolonged period of time. The basis for this ability is a well developed capacity to perform aerobic exercise, which can be attend by aerobic $_{Hi}$ training.

During aerobic $_{Hi}$ training the lactate producing energy system may also be highly stimulated for short period of time, which means that the training over laps anaerobic speed endurance training. The coach should ensure that exercise intensity during aerobic $_{Hi}$ training does not become so higher that the training become exclusively speed endurance training (Bangsbo 2004). If the intensity is to high, the players will not be able to keep a high enough work rate during subsequent work periods and the desired effect of the aerobic $_{Hi}$ training will be lost.

When using game for aerobic training exercise intensity for a player varies continuously but a decrease in intensity for a short period of time will only cause a minor decrease in heart rate. Therefore it's possible for a player to maintain a heart rate above 80% of maximum heart rate for the majority of the training (Bangsbo 2007).

Table 2.2 Examples of different exercise and rest period in aerobic $_{HI}$

	Exercise	**Rest**	**Heart rate (% HR $_{max}$) end exercise**
A	1 minute	30 sec	90 – 100%
B	2 minutes	1 min	85 – 95%
C	4 minutes	1 min	80 – 90%

2.5.4.4.Fixed time interval

The principle of fixed time interval is that the duration of the exercise and rest period is set. If the exercise periods are longer than one minute, the rest period should be shorter than the exercise period. Otherwise the overall exercise intensity will be too low. The shorter the exercise period, the higher the exercise intensity should be taken according to the principle given for aerobic $_{Hi}$ training. Rest period should include some form of recovery exercise (Bangsbo 2007).

2.6 Anaerobic training

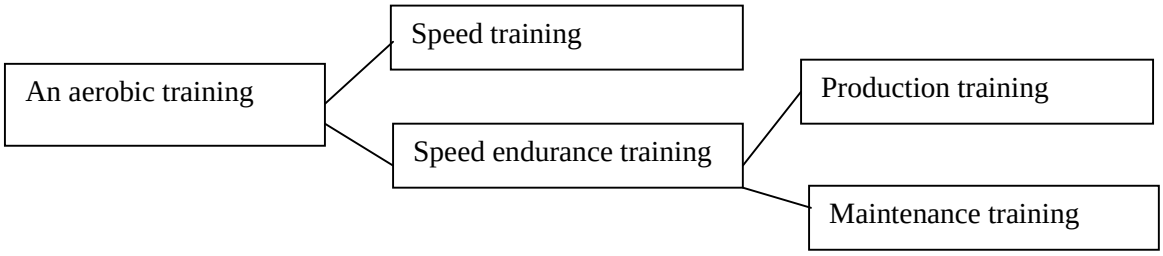
During a match, a player frequently performs activities that require rapid development of force, such as sprinting or quickly changing direction. Furthermore, finding of high blood lactate concentration in top class players during match – play indicate that the lactate production energy system (Glycolsis) is highly stimulated during periods of a game. Therefore, the capacity to perform high – intensity exercise repeatedly should be specifically trained. This can be achieved through an aerobic training. the overall aim of an aerobic training is to increase an athlete's potential to perform high – intensity exercise. The specific aim of Anaerobic training are:-

- To increase the ability to act quickly and rapidly. Thus, a player reduces the time required to react and elevates performance of sprinting.
- To improve the capacity to produce power and energy continuously via the anaerobic energy – production pathways
- There by, a player elevates the ability to perform high intensity exercise for longer periods of time.
- To improve the ability to recover after a period of high – intensity exercise this is particularly important in football. As a result, a player required less time before being able to perform maximally in a subsequent period of exercise, and the player will be to perform high intensity exercise more frequently during a match.

2.6.1 Types of anaerobic training

Anaerobic training can be divided into speed and speed endurance training which can be dived into maintenance and production training (Bangsbo 2007)

Figure 2Types of anaerobic training



The aim of speed training is to improve a player's ability to act quickly in situation where speed is essential. Speed endurance can be separated into two categories, production and maintenance training. The purpose of production training is to improve the ability to perform maximally for relatively short period of time, whereas the aim of maintenance training is to increase the ability to sustain exercise at high intensity.

Table 2.3 The principle of speed training

	Exercise (S)	**Rest (S)**	**Intensity**	**Number of repetitions**
A	2 – 5	>50	Maximal 100%	5 – 20
B	5 – 10	>100	Maximal 100%	2 – 10

During speed training the players should perform maximally for a short period of time less than 10 seconds. The period between the exercise bouts should be long enough for the muscle to recover near resting conditions to enable, a player to perform maximally in a subsequent exercise bouts. Speed training should be performed at an early stage in a training session where the players are not tired. Speed should mainly take the forms a of game – like situations so called functional speed training. Since parts of the desired training effort is to improve players' ability to anticipate and react in different situation in a football. Sprinting a set distance on a given command is an example of formal speed training. While this improves the ability to produce energy by the anaerobic systems, it has little effect on the ability to

react in soccer – specific situation (Bangsbo2004). Formal speed training has traditional been the pre – dominant form of speed training in a football. Thus players often associate speed training with sprinting without a ball, for psychological reasons it might therefore be necessary to include this form of training once in while also the overall effect for football is not optimal(Bangsbo2007).

2.8.2 Principle of speed endurance training

Table 2.4 Maintenance training

	Exercise(s)	Rest(s)	Intensity	Number of repetition
1a	10 – 90	As exercise duration	High- very high (45 – 100%)	2-10
1b	10 – 90	Aerobic low – intensity game for a maximal duration of 3 times exercise duration	High- very high (45 – 100%)	2-10

The exercise intensity during speed endurance training should be almost maximal which means that the training must be performed according to an interval principle. During training games with exercise period of 10 – 20 seconds it may be difficult to achieve a desired training effect, so exercise period of more than 20 seconds are recommended if the training is performed as a game.

Table 2.5 Production training

	Exercise (s)	Rest	Intensity	Number of intensity
1a	10 – 40	> 5 times exercise duration	A very high (70 – 100%)	2 – 10
1 b	10 – 40	Aerobic low intensity game to minimum duration of five times exercise duration.	A very high (70 – 100%)	2 – 10

In the production training the duration of the exercise bouts should be relatively short (10 – 40 seconds) and the rest period in between the exercise bouts should be comparatively longer

from 1 to 4 minutes in order to maintain a very high intensity throughout the production training. in the maintain training the exercise period should be 10 – 90 seconds the duration of the rest period should approximately equal to the exercise period, so that the players progressively become fatigued.(Bangsbo1997,2007).

2.7 Planning the season

Foot ball players need a high level of fitness to cope with the physical demands of a game and to allow for their technical skill to be utilized throughout a match. Therefore, fitness following is an important part of the overall training program. However, the amount of emphasis placed on fitness training depends on several factors, such as the players competency in other area of the game, and the exercise intensity drawing training sessions which are not specifically designed to develop fitness . The type of training one the total loading of player in particular or at a high level, should also be taken in to account . Even player independent of level of football has a zone of optimal training stimuli . This means that the player will have the greatest effect of training in this zone , if he trains less he will not improve enough and if the trains more it will only have a moderate effect (“ over loading”).If(“ over loading”) occurs over weeks it can lead to a state of “ over training” which is characterized by a marked decrease in performance for a prolonged period of time (Roy and Cer Vander 2003, Bongisbo 2007)

When planning fitness training the phase of the playing season should be taken in to account. A year can be divided in to pre- season, a season, and a mid season and a mid season break

2.7.1 Pre- season

The term pre –season cover the period between the lost match of one season and the first match of the next. The pre- season can be divided in a maintenance period and re- building period . The maintenance period is from the last match of the previous season to the resumption of team training. And the re- building period from the resumption of team training until the first match of the next season. The duration of these periods varies from country to county . In some countries the maintenance period is about eight week and the re- building period five to eight week (Bangsbo 2007). Traditionally the maintenance period has been used for mental recovery with very little physical training, and the first

month of the re- building period has focused mainly on fitness training with an emphasis on long distance running and muscle endurance training

2.7.2 The maintenance period

(from the end of one season to approximately eight weeks before the start the next season). By maintaining a certain amount of endurance training after the end of season, the decrease in fitness, which always occurrence after cessation of normal training and competition, will be minimized . This means the player will have a good basic fitness level for the start of the re- building period. In order to help the players to relax mentally, parts of the training in the maintenance period can consist of other ballgame (eg Basket ball). The number of training sessions per week is dependent on many factors, but between one and four times per week with additional individual training may be suitable. During the last month before the re-building period the training frequency should be increased to at least two sessions per week (Bongsbo 2004).

2.7.3 Detail planning

Table 2.6 Weak schedule – Maintenance period

Day / time period	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**minutes**
Monday	Warm-up	3	3	4	3	recovery activities
Tuesday	Warm up	3	3	3	4	recover activities

Explanation of code 3= moderate intensity 4= high intensity

An example of the training frequency and exercise intensity for non professional players during week in the maintenance period in lustrated in the table 6 A higher number indicated a higher intensity. Training with intensity 3 or 4 in the maintenance period should be regarded as training with the main aim of improving or maintaining the level of fitness (Bangsbo 2007).

2.7.4 The re- building period

(Approximately eight weak before the start of the season)

During the re- building period fitness training should mainly consist of game and exercise with ball. The ensures that the relevant muscles are being trained, and allows for technical and tactical aspect to be practiced under physically taxing conditions. As the start of the season approaches the number of training sessions should be gradually increased. In some countries the playing surface is changed (eg sand / gravel to grass) during re- building period which can cause problem for the players as their muscles are stressed in a different ways. In order to decrease the risk of injury the transition between playing surfaces should be gradual (Bongsbo 2007).

During the re- building period training matches are a good and appropriate from of fitness training, but they should not be played before the players are prepared physically for the demands of a full match.

2.7.5 Detailed planning

An example of the training frequency and exercise intensive for typical weak for non-professional team during the re- building period is illustrated in table 7 below. (the total duration of a training session is 90 minutes).

Table 2.7 Week schedule re – build period

Day / time period	**0-15 minutes**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**
Monday	Warm-up activities	3	3	4	3	3 Recovery
Tuesday	Warm up activities	3	5	3	4	3 Recover
Thursday	Warm up activities	3	5	2	4	3 Recover
Saturday	Warm up			training match		

Explanation of codes

2= Low intensity 3= Moderate intensity 4= High intensity 5= Very high intensity

The intensity of the training is represented by a higher number(1-5).A high number indicates a higher intensity. Only period with intensity of 4 to 5 should be considered as fitness training i.e training which is performed with the main purpose of improve the physical capacity of the players . During periods with an intensity of 2 or 3 priority is placed on other areas of the game, such as tactical strategy.

It may be advantageous for player to work in smaller groups during the re- building period. A training model which is easy to organize and which can also have a motivating effect on the players is " station " training.

2.7.6 Season

During the season the level of fitness achieved during the re – building period should be maintained and perhaps even improved. Studies have should that there is a relation between have a high ability to repeatedly perform intense exercise. The capacity can be improved by aerobic H_I training and an aerobic training. Coaches do not always put sufficient emphasis on these types of training during the season.

Table 2.8 Season training

	Season						
	First half				**Second half**		
Aerobic							
Low intensity training	4343	4343	433	343	4343	4343	4343
High intensity training	5555	5555	555	5555	5555	5555	5444
An aerobic							
Speed endurance training	3453	4534	543	453	4534	5345	3453
speed training	555	5555	555	555	5555	5555	5544

Explanation of function 1= Very low priority 2= Low priority 3= Moderate priority

4= High priority 5= Very high priority

Aerobic H_I training should be given a high priority during a season. Speed training, and for top – class players, speed endurance training, should also be performed regularly. Endurance capacity may be maintained by frequently including prolonged training sessions with only short rest period. table 8 indicates how much priority should be given to each forms of training during the season. The higher the number (1 – 5) the more important the types of training. (Bangsbo 2007). (Each value represent one weak)

2.7.7 Mid – season break

In some countries the season is divided into two halves separated by a mid – season break, which can be from 4 to 18 weeks. Like the pre – season, the mid – season break can be divided into a maintenance period and re – building period.

Table 2.9 Mid season break

	Mid season break	
	Maintenance period	**Re – build**
Aerobic Moderate intensity training	444	4443
High intensity training	333	4555
An aerobic Speed endurance training	111	3544
Speed training	223	4555

Explanation of codes

1= Very low priority (need not be trained) 2= Low priority (may be trained)

3= Moderate priority (should be pre formed be trained) 4= High priority (should be trained)

5= Very high priority (must be trained)

It is important that the players are active during maintenance period to ensure a gradual transition between the two periods. Towards the start of the second half of the season high – intensity training should be emphasized table 9 show an example of how much priority

should be given to each forms of training during a seven – week mid season break. (Bangsbo 2007)

2.8 Warm- up and recovery activity

2.8.1 Warm- up

Every match and training session should be preceded by a period of warm up since it allows a player to gradually adapt, both physical and mentally to the subsequent exercise.

During exercise the active muscles produce heat. As the intensity of the exercise increases more heat is generated .Some of the heat is transferred from the muscles into the blood and is dispersed throughout the body. Thus exercising with the large muscle groups not only causes an increase in muscle temperature but also results in a considerable rise in body temperature during intense exercise the muscle temperature may rise to 43c while body temperature can reach 41oC. The muscle temperature reaches a stable level after about 10 minutes, where as the body temperature is still rising after 50 minutes (Bangsbo 2007). A rise in muscle temperature increase the ability of the muscle to produce energy during exercise. This is one reason for the improvement in performance observed after warm up. A cool muscle is relatively rigid and resilient to sudden increases in tension caused by rapid movement. When the elastic components of the muscle are unable to accommodate the external tensions, the muscle will rupture (Bangsbo 2004).

Every training session or match should begin with a warm up in addition to the physical effect; the warm up also has psychological benefits. Before a match it may help some players to control their nervous and concentrate on the match. Both weather and temperature must be considered when planning a warm up.

2.8.2 Pre – match warm up

After cessation of exercise the temperature of the previously activated muscles decreases quickly and is back to a pre – exercise level after approximately 15 minutes. And warm – up before a match should therefore continuous until the start of the match. In top class football the player often return to the changing room after the warm – up and stay therefore more than 15 minutes. During this time many of the benefits gained during the warm up are lost. If the

break is short (e.g five minutes), however the lost in muscle temperature can in part be regained by performing some activities immediately before kick – off.

A considerable decrease in muscle temperature does also occur at half – time. It has been observed that the running distance in the beginning of the second half is markedly shorter than that of the same period in the first half. One possible explanation for this difference is decrease in muscle temperature during the break. Thus, in recent scientific studies it was demonstrated that the sprinting ability of players is reduced at the start of the second compared with the end of first half. This was associated with a decrease in muscle temperature of about 2 degrees Celsius. (Bangsbo 2007)

Therefore, it is advisable that the players perform some kind of activities at half – time and do a shorter warm – up 5 – 7 minutes before the second half especially when the break lasts more than 10 minutes. When group of players followed such a procedure they had the same sprinting capacity of the start of the second half as before the game.

2.8.3 Pre – training warm – up

When planning a warm up program for training the coach should try to be creative. To achieve an effective and motivating warm – up programme, almost all the exercise should be performed with the a ball. It is common to regard warming up as an isolated activity with the only purpose to increase the muscle and body temperature the result is a poor utilization of an often limited time for training. Instead, the warming up can be used to repeat and further develop technical and tactical elements. The result is a poor utilization of an often limited time for training.

To decrease the risk of injury the warm up should be initiated with some exercises that activate large muscle groups, jogging with or without a ball, before playing against opponents. After approximately five minutes of whole body exercise, light stretching exercise can be performed. The warm up should even be continued with exercises for the main muscle groups used during football, which can be achieved by playing a “passive” small site game. After another scribes of stretching exercises the intensity of the warm up activities can be increased.

2.8.4 Recover activities

A training session or match should end with a period of recovery activities consisting of jogging and stretching exercise

2.8.5 Jogging

During a match or an intense training session lactate accumulates in the active muscle. Light recovery will help to remove the lactate more quickly. During low intensity running blood locate decreases of least three times more rapidly than at rest. (Bangsbo 2007,TudroB&Michael C.

2.8.6 Stretching

Stretching is important for football players to be flexible, as a poor range of movement can hinder performance and cause the muscle rapture in situations during a match where the muscle is forced into an extreme position. The length of certain muscle in the legs are considerably shortened following a foot ball match and it can take more than two days before the normal length is restored. Playing match and training frequently without performing regular stretching can result in a permanent shortening of the muscle (Bangsbo 2007). There are three major types of stretching that have been performed to sporting activities. Static, ballistic and pro prioceptiv nuero muscular facilitation (PNF). A static stretch is head in place for 20 to 30 second with 10 seconds rest between stretches. Static stretching is successful because of little stress on the muscles and joints. Ballistic stretches require a bouncing movement. This types of stretching is detrimental when done without a good warm up.The muscle tends to contract because of the stress initiated by the bouncing and the muscle doesn't lengthen (RonMc Eachen 2004). Ballistic stretching triggers the stretch reflex and can increase the like houd of injury in individuals who have not progressed approximately or do not have a correct training back ground for this form of stretching (Mark kovacs 2010). Proprioceptive nuero muscular facilitation has been found to have good result. PNF begins with 6 – 10 seconds isometric stretch while a partner holds the muscle at full range of motion. The stretcher works against the partners resistances. After a short rest the stretcher perform a static stretch of 15 – 30 seconds (Ron MC Eachen 2004)

2.9 Field test

Soccer coaches are continually on the lookout for appropriate tests which allow them to assess fitness of players in field conditions.

2.10 Fitness Testing Guidelines

A battery of fitness tests is simply a group of assessment that closely represents the various physical demands of your sport or event

Foot ball is an intricate bland of endurance strength, power and speed (Philip devies 2012). The test battery should include assessment that measure each of those components. Ideally, each test must also replicate the same energy demands and movement patterns within the game.

Here are most important points to bear in mind to make your fitness testing session as accurate and reliable as possible.

- Always warm up thoroughly before performing a fitness assessment.
- Always complete short explosive test first.
- Always keep the order of the fitness tests the same.
- Try to perform the assessment at the same time or day.
- Use exactly the same equipment.
- An examiner is taking measurement have the same person the measurements each time.
- Familiarize yourself with the testing procedures.
- Avoid eating within two hours of the test battery.
- Avoid training heavenly the day before the physical fitness tests and no training at all on the test day.

2.11 When should fitness testing occur

The most obvious time is at the very beginning of per – season when you are returning from a length break. This is when results should be at their lowest during the season.

It's also sensible to complete a second assessment just to the start of the competitive season. This will give you a good indication as to how effective pre – season training has been and can act as real confidence boots going in to the first competitive game. Coaches can test fitness to identity strength and weakness that may affect performance. If possible conduct bases line fitness test at the start of the season, with checks at the midpoint and end of each competitiveseason(GregGatz2009).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Study area

The study was conducted in Hawassa town SNNP located 270 km from Addis ababa.

3.2 Research design

The content of the data was based on the method of both qualitative and quantitative research methods are implemented more over the information collected from respondents through questionnaire, observation and testing result will be interpreted.

3.2.1 Study population

The study population were players of hawassa kenema club team players, coaches, participated in the study. Coaches have a certificate for coaching foot ball. To understand the coaching back ground adapted varies questionnaires was used in the study.

3.3 Sampling technique

On the process of conducting research work sampling was necessary because it not possible to cover all the population in all testing method. To measure (test) the VO_2max the researcher use the total population according to their positional variation in other testing method participant where selected in purposeful and simple round sample method.

Table 3.1 sampling technique

Category	Population	Sample	Sampling technique
Coach	4	4	Purposeful sampling
Players	25	12	Random sampling
Total	29		

3.3.1 Source of data collecting

Both primary and secondary data source was collected from Hawassa kenema club through observation, field test and for coaches through questionnaire. Secondary source of data information was also collected from document analysis.

3.3.2 Test administration

Fitness assessment test need to be administered properly and a structured manner in order to achieve accurate and consistent r.

3.3.3 Test sequence

The test should be given in three days according to the following:-

First day Vertical jump, Standard long jump & Speed endurance test

In second day Strength endurance test, Speed test & Agility test

In third day Aerobic endurance test & Flexibility test can be conducted. The parameters of the test were recorded in meter, second and number of repetition.

3.3.4 Testing condition

It is recommended that the test condition (running surface, running track, equipment) time, weather condition remain the same. Environmental factors such as temperature and humidity are an controllable. I use three days with similar weather condition because a large variation can significantly affect test result.

3.4 Data gathering instruments

The study followed experimental, qualitative and quantitative research designed to be obtain complete data for the study. The following data collection instruments were used

A. Training program and test result documents analysis.
B. Observation with check list.
C. Fitness evaluation of players' performance.
D. Questionnaires for the coaches

3.5 Data development and collection procedure

3.5.2 Data collection procedure

The survey questionnaire is organized into two sections the first part is aimed to collect background information about coach's respondents and the second part is used to know how they organized the training of fitness and testing fitness level of the players.

3.5.1 Data development and procedure

To collect data from the coach's using the survey method. Questionnaires will be initially designed and develop in English.

3.6 Method of data analysis

Data analyses used to build an organizing system of categories that emerged from the data that the coach's given. the data gained by testing were analyze accordingly to each test have their norms were analyzed using descriptive statistic analysis like percentage and frequencies.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

This chapter deals with presentation and analyzing of the data collected through questionnaire, Test and observation the data are presented in table, analyzed using percentage textual description.

4.1. Background information

Coaches were asked their background information through questionnaire. They responses on their sex, age, years of experience, educational level, coaching license, and have certificate on coaching fitness and performance course.

Table 4.1 Background information of the coaches

No	Items	Alternatives	coaches	
			No of respondents	%
1	Sex	1. Male	4	100
2	Age	1. 24 – 30		
		2. 31 – 37	2	50
		3. 38 – 45	2	50
3	Marital status	1. Unmarried	1	25
		2. Married	3	75
		3. Divorced		
4	How many years of experience do you have in coaching football	1. 1 – 4		
		2. 5 – 8	2	50
		3. 9 – 12		
		4. Above 12 years	2	50
5	Do you have a coaching license	1. Yes	4	100
6	If your answer for question 5 yes what is your current level of coaching license	1. A	2	50
		2. B	1	25
		3. C	1	25
7	What is your educational level of qualification	1. Grade 10 complete		
		2. Grade 12 complete	2	50
		3. Certificate level	1	25
		4. Diploma		
		5. BSC	1	25
		6. MSC		
		7. PHD		
8	If your educational level is above diploma what is your field of study?	1. Teaching physical education and sport	1	25
		2. Coaching football		
9	Have you got any chance of attending on coaching fitness and performance course	1. Yes	4	100
10	If your answer for question 11 “YES” how many times	1. One times in a year		
		2. Two times in a year		25
		3. One times in your coaching carrier	2	50
		4. Two times in your coaching carrier	1	
		5. It is unknown	1	25

Table 4.1 present that 4 of a coaches are male concerning the age of coaches table 4.1 shows that 2 (50%) of the coaches and 2(50%) of the coaches are found between the age of 31 – 37 and 38 – 45 respectively. From this we conclude that all of the coach are founded in the adult age.

As the table show their marital status as the data indicate 3 of the coaches are married 1 of the coach was unmarried.

Regarding their educational level of qualification table 4 – 1 show that 1 of the coaches have degree and 2 them12 grade complete and 1 of coaches have certificate level. Regarding their educational level greater than diploma has a field of study 1 of the coach teaching physical education and sport. However as shown on above table 4 – 1 their chance of attending coaching fitness and performance course 2 of the coaches two times attending in a fitness course in their coaching carrier and 1 of the coaches one times in his coaching carrier attending in coaching performance and fitness1 of the coach not attending on a coaching fitness and performance from this one conclude that the Ethiopia football federation.

4.2 .Components of training

The successful full – service club requires a great deal of work in many areas. The club does not provide the proper training of it's player at all levels. Preparation including knowledge what you want to work on and how to create an optimal environment is fundamental to a successful training session

Table 4.2 Responses on component of training

No	Items	Alternatives	Coaches	
			No of respondents	%
1	Do you have a coaching plan	Yes	4	100
2	What are the component of your training plan	1. Technical preparation		
		2. Physical preparation		
		3. Tactical preparation		
		4. All	4	100
		5. Other		
3	How many training session do you have within a week	1. Three		
		2. Four		
		3. Five	3	75
		4. Six	1	25
4	How many minutes did you spend in one training session	1. 70 minutes		
		2. 90 minutes		
		3. 120 minutes	4	100
5	How much minutes did you spend in one training session for fitness training	1. 15 minutes		
		2. 30 minutes	4	100
		3. 45 minutes		
		4. Other		
6	What are the dominate components of your training plan during a preparatory period	1. Physical preparation	2	50
		2. Technical preparation		
		3. Tactical preparation		
		4. Psychological		
		5. All	2	50
7	How do you implement your fitness plan in training	1. In field		
		2. In gym		
		3. Both	4	100
		4. Other		

As show in the above table 4.2 the respondent responds about component of training in table 4.2 present that 4(100%) of a coaches have a training plan and for the components of

training plan 4 (100%) of respondents responded that the training plan included physical, technical, tactical and psychological preparation. As indicate from above table 4.3 3(75%) of the respondents responded five training session have per week 1(25%) of the respondents responded have six training session per week as it clearly seen from the table above 4(100%) of the respondents responded 120 minutes used in one training session and from this training time 4(100%) respondents respond 30 minutes spend in one training session for fitness training. from the table 4.3 show that 4(100%) of the respondents responded the dominate compounds of your training plan during a preparatory period in physical preparation and 2(50%) of the respondents responded all that means physical, technical, tactical and psychological preparation are the main phase. As we see from table 4.3 4(100%) of the respondents responded the fitness training will be implement both in field and in gym.

4.3. Application of warm – up and cool down

Warm – up exercise is the first phase of the training session this exercise is done of the first session of the training program it allows a player to gradually adapt both physical and mentally to the sub – sequent exercise. The cool down exercise is the third phase of the training session this exercise has been done at the end of training session during a match or intense training session lactate accumulates in the active muscles with recovery exercise will help to remove the lactate more quickly.

Table 4.3 Responses on application of warm – up and cool – down

No	Items	Alternatives	Coaches	
			No of respondents	%
1	Did you players always warm – up before the training	1. Yes	4	100
2	If your answer for question no 1 “Yes” for how many minutes	1. 10 – 15 minutes	2	50
		2. 15 – 20 minutes	2	50
		3. 30 minutes		
		1. No	4	100
4	If your answer for question 3 “Yes” for how much minutes	1. 3 – 5 minutes		
		2. 5 – 7 minutes		
5	Did the players always cool – down after the end of the training session	1. Yes	4	100
6	If your answer for question number 5 “Yes” for how much minutes	1. From 5 – 10 min	4	100
		2. From 10 – 15 min		
		3. Greater than 15 min		

As can be seen on table 4.3 the respondent on doing warm up exercise before a main part of the training session 4(100%) of respondents responded the player always warm – up before training. However players who have been done the warm up exercise for how much minutes 2(50%) of the respondent responded the warm up was done for 10 – 15 minutes and 2(50%) of the respondents responded the warm up training decision will be done for 15 – 20 minutes. As we see from the table above 4(100%) of the respondents responded players did not warm

– up after the first half time match break. From the above table we can be understand the respondent responded on doing cool – down exercise at the end of the training session 4(100%) of the respondent responded players are cool – down exercise at the end of the training session. Regarding the time for cool – down 4(100%) of the respondent responded from 5 – 10 minutes the exercise will be done by their players.

4.4 Fitness components tests

Testing should be done with purpose so clear objective should be defined before selecting tests.

Table 4.4 Responses on fitness compounds tests

No	Items	Alternatives	Coach	
			No of respondent	**%**
1	Did you test your player?	1. Yes	4	100
2	If your answer for question No 1 is "Yes" how many times in a year do you have test?	1. Monthly		
		2. 2 times		
		3. 3 times	2	75
		4. 4 times	2	25

As shown in the above table 4.4 the respondents respond they test they player in training session regarding to the test implement in a year 2(50%) of the respondents respond 3 times per year they test their player and 2(50%) of the respondent responded 4 times per year they test their players.

Table 4.5 Type of test

No	Items	Alternatives	Coaches	
			No of respondents	%
1	Do you test power?	Two times / year	4	100
		Tree times/year		
		Four times/year		
2	Do you test speed ?	Tow times/year	3	75
		Tree times/year		
		Four times/year	1	25
3	Do you test speed endurance ?	Two times/year	4	100
		Tree times/year		
		Four times/year		
4	Do you test agility?	Two times/year		
		Tree times/year		
		Four times/year	4	100
5	Do you test strength endurance?	Two times/year	4	100
		Tree times/year		
		Four times/rear		
6	Do you test flexibility?	Two times/year		
		Tree times/year	4	100
		Four times/year		

As we can see from the table 4.5 4(100%) of the respondents are responded they use power test four times in a year. Regarding speed test 4(100%) of the respondents responded they test speed two times in a year. Based on above table 4 (100%) of the respondents responded they test speed endurance test two times in a year. 4 (100%) of the respondent responded they test agility four times in a year. Regarding strength endurance test 4(100%) of the respondents responded they test strength endurance two times in a year. and 4(100%) of the respondent responded they test flexibility tree times in a year.

Open ended

More over open-ended questionnaire regarding coaching facilities the respondent response has different respond and regarding coaching plane implementation all of the respondent implementing the training plane according to the year plane and regarding aerobic, an aerobic and endurance training there was a big difference in respondents response.

Hawassa Kenema club player observation cheek list for football training and test.

Name of observer _____

Date of observation _____

Tine of observation _____

The training program was observed for two days per week for eight week and five matches.

Table 4.6 observation cheek list

	Checking point	**Un satisfactory**	**Satisfactory**	**V. good**	**Excellent**
1	Training program are will organized			**X**	
2	Coaches are on time for practice			**X**	
3	All training facilities are available			**X**	
4	Coach conduct fitness test	**X**			
5	Medical support		**X**		
6	Before a training session there will be clear explanation about fitness training program	**X**			
7	Players motivation during training		**X**		
8	After a training session there is a clear exchange of ideas between the coach and players	**X**			
9	There in mutual respect between coach and players		**X**		
10	Evaluation of training intensity	**X**			
11	Coaching staff supporting	**X**			

Table 4.6 show that the atmosphere of the training session was unsatisfactory, during the first observation of the research players come from match, the training were on the bases of recovery training all materials were present in a clear and precise miner. before a training session there was no a clear explanation about the fitness training preparation for the session and objective, also the purpose of the training, then the player start their practice according to

the simple instruction. Most of the time coaches are motivating the players but the respond is negative. Regulating training intensity the coacher can not measure the intensity of the players. Medical care also available when injure occur treated quickly and properly coaching staff are supporting was unsatisfactory. After a training session there was un satisfactory exchange of idea between the player and the coaches some time after a training session there will be evaluation based on the coaches criteria prepared for the players but some players show negative filling when the coach start evaluating the training program. The coach attends every practice session are will organized and demanding. The is a mutual respect between coach and players.

4.7 Test result

An important of any fitness training is fitness testing the information you gather from your fitness testing will help to focus your training. you are able to use the information to see the specific area which need the most improvement.

The data below show that the test result one of the club player which is playing in the Ethiopian premier league foot ball club. The data obtained from the test result recorded the vertical jump, standing long jump and sit and reach were recorded in meter and the 30 meter dash speed test, Illinois agility test, speed endurance test and 1.5 mile (2414.016 m) test was recorded in second. Push up and sit up tests recorded in a number of repetition on 1 minutes

4.8 participants

25 players were available to take part in the study two of them were goalkeeper .Except aerobic endurance 1.5 mile test for each test 12 players are tested the result of the test were compared with the direct variable(norms).

4.9 Explosive power test

4.9.1 Standing Long Jump

Along with the standing vertical jump the long jump is an accepted assessment for ultra - short term power (Phil Devies 2012)

Table 4.7 standing long jump

	Standing long Jump results	
	Male	**Female**
Poor	2.00M	1.7M
Fair	2.30M	1.9M
Average	2.5M	2.2M
Good	2.7M	2.5M
Excellent	3.0M	2.8M

4.9.2 Testing procedure

1. Make out a line and stand with your feet slightly apart
2. Take off and landing with both feet. Swing you arm and bend your knees to jump forward as far as possible.
3. Measure the distance in meters. Rest fully and repeat for a total of 3 jump (time). Take the best distance from the three trials as your final score.
4. Compeer your results with the table below.

Table 4.8 standing long jump test result

No		**Participant**	**%**
1	Poor	7	58.3
2	Fair	3	25.0
3	Average	2	16.7
4	Good		
5	Excellent		

According to the table test result indicate 7(58.3%) of the players were show poor, 3(25%) indicated fair and the remaining 2(16 .7%) indicates average availability of players wear.

4.9.3 Test result of vertical jump

4.9.3.1 Standing Vertical Jump

This is a good test for football because it measure the Jumping power relevant for heading ability. It's also useful for goal keeper (Phil Devies 2012).

Table 4.9 Standing vertical Jump

	Male	**Female**
Poor	< 46 cm	< 36 cm
Fair	50 cm	40 cm
Average	55 cm	45 cm
Good	60 cm	50 cm
Excellent	> 65 cm	> 55 cm

Jump height can also be converted in to power using the following formula

Power = Body mass pound or (kg) x (4.9x height Jumped in meter)^2

4.9.3.2 Testing procedure

1. Chalk your hand and stand next to a well side on. Keeping your feet flat on the ground reach up as high as possible and make a mark.
2. Relax for a moment. Bend your keep to right angles and Jump as high as possible making a second mark on the wall
3. Measure the distance between the two marks rest fully and repeat 3 times. Take the best score over the three trials and compeer your result with the table below.

Table 4.10 standing vertical jump test result

No		**No**	**%**
1	Poor	3	25
2	Fair	5	41.7
3	Average	4	33.3
4	Good	0	
5	Excellent	0	

Based on the above table test result 3(25%) of the players were show poor 5(41.7%) indicate fair and the remaining 4(33%) indicates average results.

4.10 Result of speed test (30 meter)

This test is used to measure acceleration and speed of the mark. A long distance isn't relevant to football where players rarely run flat out for more than 20 – 30 meters. (Philip devies 2012)

Table 4.11 30meter speed test

	Male	**Female**
Poor	> 5- is sec	> 5.56 sec
Fair	5.00-5.15 sec	5.40-5.65
Average	4.40-4.74 sec	4.90-5.14 sec
Good	4.00-4.24 sec	4.50-4.64 sec
Excellent	3.90-3.99 sec	4.40-4.49 sec

Testing procedure

1. Set up two cones 30 meters apart starting at one cone.
2. On a signal of "Marks- Set- Go" sprint to the other cone as quickly as possible.
3. Restfully and. repeat three times. Take your best time as a the result. Compare your result with the table below.

Table 4.12 Speed test result

No		**No of athlete**	**%**
1	Poor		
2	Fair		
3	Average	9	75
4	Good	3	25
5	Excellent		

As it clearly seen from the above table 4.12 test result 9(75%) of the players were show average and 3(25%) of the remaining players are good in speed test.

4.11 Agility test (Illinois Agility test)

This test measures the ability to change direction quickly and body control. Football is rarely played in a straight line so a suitable agility test in an important assessment (Phil Devies2012).

Table 4.13 Illinois agility test

	Male	**Female**
Poor	> 18.8 sec	> 23.4 sec
Fair	17.7-18 sec	22.5-23.4 se
Average	16.8-17.6 sec	18.7-22.4 sec
Good	15.9-16.7 sec	17.5-18.6 sec
Excellent	<15.9 sec	< 17.5 sec

Testing procedure

1. Set up the cones according to the diagram. 8 cones are arranged in a 10 meter square
2. The begin the test position yourself at the designated starting cone lying face down, your head even with the cone your hands and feet are raised off the ground in stationery position. Start the test by getting of the ground quickly and accelerating to the top-corner cone. After making a quick turn around the cone, again accelerate to the middle set of cone and perform a wave – type run up back. At this point reaccelerate to the farthest corner cone, make another turn, and sprint through the finish line two trials should be allowed, starting the test from both sides to compare right and left turning efficiency

Figure 5 Illinois agility test field

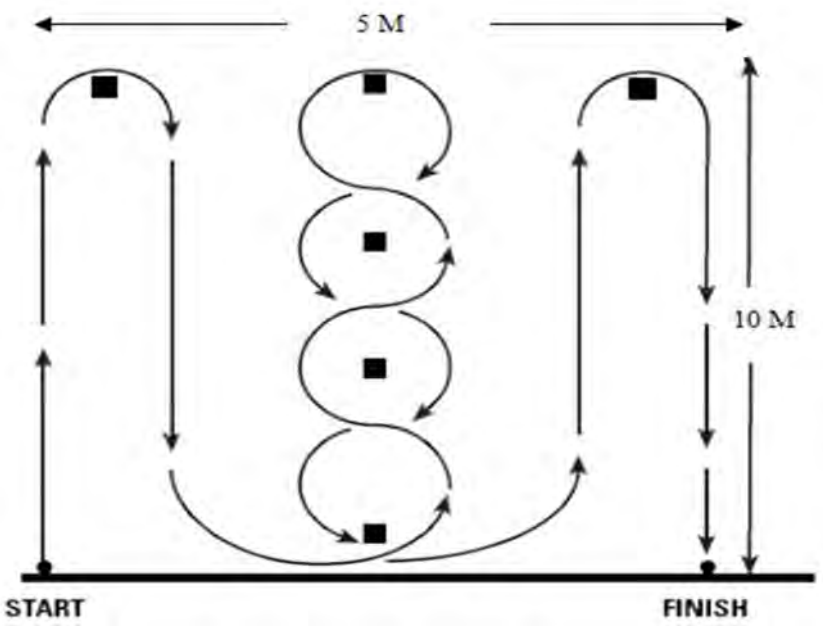


Table 4.14 Illinois agility test result

No		No of athlete	%
1	Poor		
2	Fair	6	50
3	Average	5	41.7
4	Good	1	8.3
5	Excellent		

As the data indicate from above the table 4.15 test result 6(50%) of the players were show fair result, 5(41.7%) indicate average result and 1(8.3%) indicates good test result

4.12 Speed endurance test (30 meter sprint fatigue test)

Football player are often require to produce back - to - back sprits during a game. This test measure sprint fatigue or speed endurance. It's made more football – specific by adding in a deviation. (Philip devies 2012, Bangsbo 2004)

Table 4.15 Sprint fatigue for player

	Best time	**Average (mean time)**	**Fatigue**
Average	6.80	7-10	0.64
Range	6.53-7.01	6.83-7.31	0.15-0.92

Another useful ways of interpreting the result in to take the average of the first three trials and divided it by the average of the lest three trials. if your results were

Table 4.16 Compare your score with the table below %

Poor	< 79%
Fair	80-84%
Good	85-89%
Excellent	+ 90%

4.12.1 Speed endurance test result

From the 10 sprint time we can combine three test results

A. Best time

The best time is the fastest of the ten sprint time.

B. Mean time

The mean time is calculated as the average of the 10 sprint time

C. Fatigue time

The fatigue time is the difference between the slowest and the fastest time. A high fatigue time suggests a poor ability to recover from a sprint. Hence the time indicates how a player's performance is affected by preceding bouts of high – intensity exercise during match – play (Bangsbo 2004)

4.12.2 Test procedure

1. For this test you will need 12 cones, a stop watch and sit up the cones according to the diagram below
2. Sprit from A-to-B through the cone as quick possible diverting 5 meter sideways.
3. Slow down over 10 meter and jog slowly back to A Taking 30 second to do so.
4. Repeat the sprint again immediately after the given time
5. Complete total of 10 sprints
6. Subtract your fastest time from slowest time. This is your sprint fatigue index and uses the table below to compare the result.

Figure 6 Sprint fatigue test field

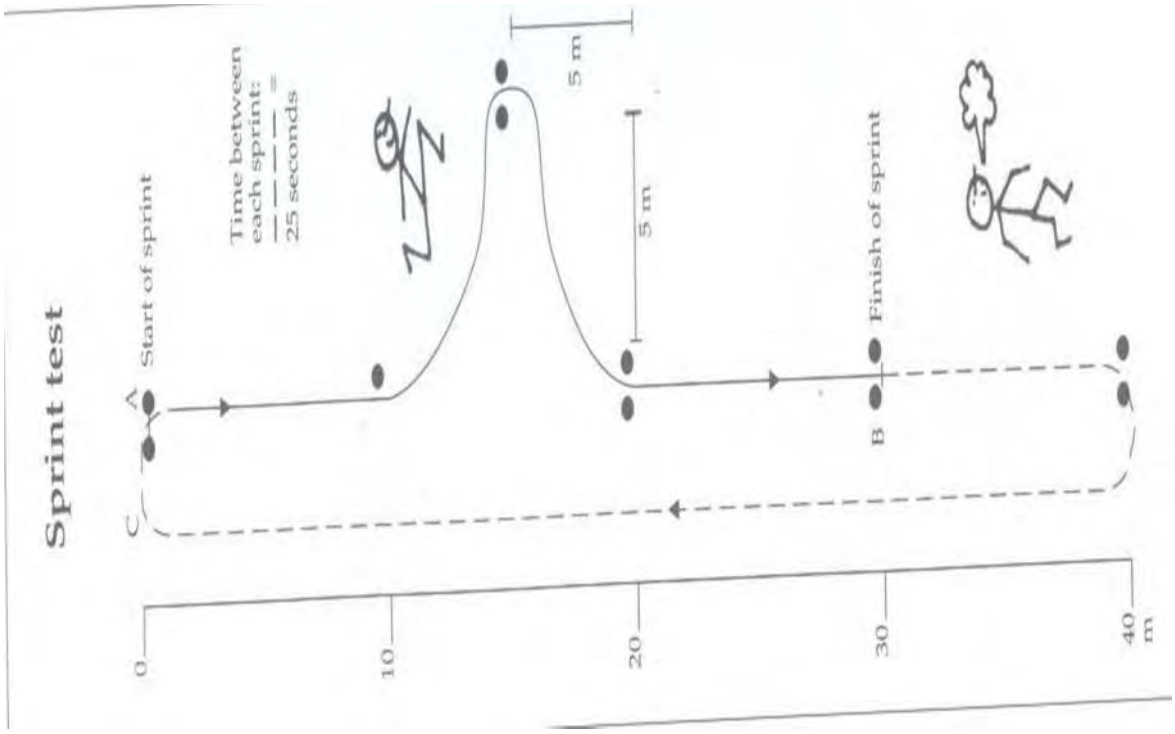


Table 4.17 30meters sprint fatigue test result

No	Time	No athlete	%
1	Best time	8	66.6
2	Poor time	4	33.3

From the table 4.17 based on 16 players test result 8(66.6) of the players has a best time and 4(33.3) players has poor time

Table 4.18 Regarding fatigue time

No	Fatigue time	No athlete	%
1	Normal fatigue time	7	58.3
2	Higher fatigue time	5	41.7

Regarding as fatigue time from the above table indicates that 7(58.3%) of the player has less fatigue time and 5(41.7%) of the player has higher fatigue time this indicate that higher figure time suggests a poor ability to recover from sprint.

4.12.3 The another way of interpreting the speed endurance result into % is given below

Table 4.19 Interpreting the result into %

No		No player	%
1	Poor	3	25
2	Fair	2	16.7
3	Average		
4	Good	3	25
5	Excellent	4	33.3

Table 4.19 based on 12 players result clarifies that among the test result 3(25%) of the players has poor results 2(16.7%) of the player has fair results and 3(25%) indicated a good result the remaining 4(33.3%) of the players has a excellent results in speed endurance fatigue test

4.13 Strength endurance test

4.13.1 Push up test

Table 4.20 Push up test

	Male	Female
Poor	10	10
Fair	20	20
Average	30	30
Good	40	40
Excellent	50+	50+

The push up test is a standard field assessment for measuring strength endurance. The aim is to complete as many push – up as possible in one minute. You must remain in prone position. Men should perform a standard push – up while for women push-up with bent keen support (that is weight on knee rather than toes) are nor suitable. Use the table below to measure your score. (Phili devies 2012)

Table 4.21 Push up test result

No		**No player**	**%**
1	Poor		
2	Fair	2	16.5
3	Average	2	16.5
4	Good	6	50
5	Excellent	2	16.5

From the above table 4.22 can understand 2(16.6%) of the player has a fair result, 2(16.6%) indicate average result and 6(50%) of the player has good result the other 2(16.6%) has excellent result regarding push up.

4.13.2 Sit up Test

This test tests the abdominal and hip flex as strength endurance

Table 4.22 Sit up test

	Male	**Female**
Poor	20	20
Fair	30	30
Average	40	40
Good	50	50
Excellent	60+	60+

4.13.3 Procedure

Complete as many full sit - ups on one minute as possible. A full sit-up should be performed and not a crunch. Keen should be bent with feet flat on the ground a hands should rest against temples rather than behind the neck use the table above to major your score

Table 4.23 Sit up test result

No		**Athlete**	**%**
1	Poor		
2	Fair	5	41.7
3	Average	4	33.3
4	Good	3	25
5	Excellent		

As it clearly seen from above table 4.23 5(41.7%) of the player has fair result 4(33.3%) indicates average result and 3(25%) of the players has a good resu

4.14 Flexibility tests

Measuring flexibility is quick and easy, you may want to perform flexibility tests more often than other tests. Perhaps every six to eight weeks. (Phil Devies 2012).

These assessments are best carried out at the end of a testing session when your muscles are most warm. Also, stretching before strength and power assessments may negatively affect the results.

4.14.1 The modified sit and reach test

This test is the most commonly used flexibility test. It measures the range of movement in the lower back and hamstring. (Phili devies 2012)

Table 4.24 Modified set and reach test

Poor	< 5 cm
Fair	25 cm
Average	30 cm
Good	35 cm
Excellent	45 cm

4.14.2 Procedure

1. The test needs a box about 30 cm high and a 1 – meter rule. Sit on the floor with your back and head against a well. Legs should be out straight a head and keens flat against the floor.

2. Lean forma slowly as far as possible keeping the fingertips level with each other and the leg flat. Your head and shoulder can come always from the wall now. Do not jerk or bounce to reach further.
3. Slowly reach along the length of the ruler 3 times, On the third attempt reach as far as possible and hold for 2 seconds. repeat twice and compare your best score with the table below

Table 4.25 Modified set and reach test result

No		**Athlete**	**%**
1	Poor	7	58.3
2	Fair	5	41.7
3	Average		
4	Good		
5	Excellent		

According to the table 4.25 the test result indicate that 7(58.3%) of the players poor flexibility ability and 5(41.7%) of the players has fair result.

4.15 Aerobic endurance test

Aerobic capacity is most accurately measured in laboratory setting using sophisticated analyzers. Of course, for most player and teams this is completely impractical. There are number of field test that measure aerobic endurance power (Phil Devies 2012). They are simple to perform require little or no equipment and reasonable accurate. They also allow coaches to test large group of players simultaneously

Table 4.26 VO_2 max other elite male athletes

Sport	VO_2 max
Cross country skier	83
Middle distance runner	80
Swimmer	77
Speed skaters	76
Cyclist	75
Rower	62
Soccer player	62
Weight lifter	54
Sedentary male	42
Sedentary female	38

4.15.1 VO_2 max assessments

$VO_{2\ max}$ is the maximum amount of oxygen (in milliliter) a player can take in and utilize every minutes. It is calculated in ml/kg/min using specific laboratory test or field testes. (Fahey 2007) In football today $VO_{2\ max}$ has become a reference criterion. Given that norms very between 58 and 68 ml/ kg/ min for top flight players. A $VO_{2\ max}$ reading of 60 to 62 mi/kg/min is considered to be good (FIFA 2006).

4.15.2, 1.5 Mile run test (2414.016 m

This run is very closely related to Vo_2 max (maximal oxygen up take). A measure of an athletes' aerobic capacity. Although football involves intermittent high intensity exercise

having a high level of aerobic endurance. Then perform it compare the result below the table (4,28).

Table 4.27 V_{O2} max (ml/kg/min) for various football positions

Position	Professional	Semi Professional
Full Back	62	55
Center back	56	55
Midfielder	62	58
Striker	60	54
Goal keeper	51	N/A

Table 4.28 1-5 mile (2414.016 meters) run test result

No	Players position	No of Athlete	Vo2max (m1/kg/min)
1	Full back	5	51 – 51.8
2	Center back	5	50 – 50.6
3	Midfielder	10	51 – 51.4
4	Striker	3	47 – 47.4
5	Goal keeper	2	46

According to the test result obtained from table 4.28 based on 25 players test result indicate that full back players VO_2 max 5(51.8 ml/kg/min) this show that 10.2ml/kg/min and 3.2 ml/kg/min has less VO_2 max than professional and semi – professional player respectively. The center back players has 5(50.6 ml/kg/min) VO_2max this indicate that the center back players has 4.4 ml/kg/min and 3.4 ml/kg/min less VO_2max than professional and semi – professional players respectively.

Regarding midfielders has 10(51.4 ml/kg/min) VO_2max it indicate that 10.6 ml/kg/min and 6.6 ml/kg/min less VO_2max than professional and semi – professional respectively. From the above table strikers has 3(47.4 ml/kg/min) VO_2 max. This show that 13 ml/kg/min and 7 ml/kg/min striker has less VO_2 max than professional and semi – professional players respectively. A goal keeper has 2(46 ml/kg/min) VO_2 max this show goal keeper 5 ml/kg/min less VO_2 max than professional players.

CHAPTER FIVE

SUMMARY, CONCULUSION AND RECOMENDATION

These chapters deal with over view of the purpose of fitness training and fitness testing. Major finding conclusion and recommendations forwarded.

5.1. Summary

Finesse tests are important for all coaches. when a coach holds at training session he should always take a critical look at whether the desired effect has actually been achieved.

The fitness (conditioning) program must always take account of the actual fitness of the player. This must be the starting point. The only way to obtained picture of the physical condition of the player is to test them.

The purpose of this study was to assess the fitness level of the player and fitness training application of Hawassa ketema football club.

The study focused on the physical fitness test battery and fitness training program, this test evaluate the ability of designed test battery to measure performance level between different athletic standards. The finding produce more evidence in the importance of fitness testing and fitness training program. The evaluation process of the fitness and conditioning program also noted to be of the utmost importance to the club coaches. The evaluation made in this test have give reliable information for the coaches about the athlete performance.

In this study all possible were made to get the most problem answer to the bass of test and, collecting relevant information through, testing, questionnaires for coach and observation are used. To this end of the study has been the following objective

- Evaluate whether players in different positional role have the different V^{O}_{2} max.
- To assess the availability facilities and equipment
- To evaluate the training program
- To assess the fitness level of the players
- To assess the previous document

- To address possible suggestion to improve the current situation.

From the data analyze the major finding obtained are summarized of follow.

- The study should that all coaches are similar sax, majority of the coach educational level found between 12 grade and degree, the age of the coach are found between 31-45 years
- Regarding appropriate material for the team coaches got appropriate material from the clubs, the field are convents to conduct training program
- Regarding coaching plan all of the coach have coaching plane, the training plan, include the four compount, physical, technical, tactical and psychological preparation.
- Regarding training session time the training is conducted for two hour. Form these time coach can expend 30 minutes for fitness training on one training session. The season training should be conducted both in gym and field.
- Regarding worm up training player was always doing worm up and cool down before and after training the worm up training should take 10 to 20 minutes and the cool down program spend 5-10 minutes. During a match after the first half match brake the players do not worm up.
- Regarding the types of test the club coaches was respond all types of test such as power test, speed, speed endurance, Agility, strength endurance, and flexibility test be conducted 3 to 4 times per-year.
- Regarding the test result of the players on explosive power such as stranding long jump the result indicate that most of the players were poor. The rest of the result was fair and average. This show that not one player get a good and excellent result comparing with the given standard
- Regarding vertices jump based on the test result most of the players result indicate fair and the result of a few player was poor and the other player result show average. This show that players ability for jumping is poor
- Regarding speed test result majority of the player have average result and a few other players result show good result

- Illinois agility test result show that the majority of the players result indicates fair and the other players result show average and a few players result indicate good.
- The speed endurance test result 30 meters sprint fatigue time show that the majority of players result was normal fatigue time and a few players result indicate higher fatigue time and percentile result also show the same result. from this we can see players has excellent result regarding repeated short sprints this show that the majority of a players have an ability to recover from repeated short sprint capacity.
- Regarding strength endurance test such as push up the majority of the players have good result and few players has excellent result and the other has fair and average result
- Regarding sit up test the result indicate most of the players have fair result and the other have average result and rest of a few players have good result.
- Regarding flexibility test sit and reach the majority of the players have poor flexibility result and the other few players have fair result.
- Regarding aerobic endurance V^{O}_{2} may test according to the test result when comparing team players full back and midfielder has better test result then center back player, center back players also have better result than the sticker and sticker have good result than goal keeper but in other induction when comparing the club players with the professional and semiprofessional in all area players have lower V^{O}_{2} may regarding to their position

5.2. Conclusion

Based on the finding the following conclusion can be drown

- A football training program aim to maximize the physiological development of players over the pre-season training phase and maintain an optimal level of fitness over the course of a season, fluctuations in training volume and intensity throughout the completion phase were result in alterations in fitness level and performance out comes the study has indicate that:-

- Warm up training during a match break was not done properly, when a player training speed the player working by incomplete recovery.
- From the principle of fitness training the program of training and preparation of the club are quite in appropriate and incomplete. It cannot contribute for the development sof football performance. It seems that the program has in appropriate to succeed for the perspective of the modern way of fitness training. The study show that the method of fitness training for Hawassa club have not yet been following the scientific method of fitness training.
- Fitness test are a useful means of obtaining information for drawing up a conditioning program, evaluating a fitness program, check match fitness motivating player are poor. The result of the present study suggest that the selected fitness test and performance rating foot ball players of different playing area comparing with the other were as lower
- One of the problems to camper the player's fitness test result, with previous year we cannot get it, because of the poor decimation system of the club. Seasonal testing of years in commonly conduct on return from an-off season of on training, at the competition of the pre-season training phased.

5.3 Recommendation

Based on result obtained the following recommendation are made

- Foot ball players need high levels of fitness to cope with physical demands of the game and to allow for their technical skill and tactical movement to utilize throughout the match. Therefore, fitness training has an important part of the overall training program, the program should be given according to the scientific method of fitness

- Test should be taken in a session two or three times after starting a new season and one or two week before starting the league competition. When we test at starting of the season to know the fitness level of the players, this show that the basic fitness of players when they return from vacation. When we test before the league competition this is movement when the preparation work can be evaluated

and when it can be seen whether the players have built up to proper match fitness..

- Preparing test is important for the payer fitness improvement so coach properly work on this area was necessary when preparing attest one possible way is to test the first and the second team separately another way of testing is to mix the two group and max them competitive
- Coaches designed the training program should be functional to the football
- When the coacher designed the fitness program with enjoyment of the player mind.
- When a coach conduct the fitness test the result should be documented
- During the training program coaches close attention be paid work to rest ration.
- To evaluate the intensity of the training the coaches should monitoring the heart rate of the player.
- Players should not perform intensive exercise during the day prior to testing or on the day of testing.

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REFERENCE

Alan Pearson (2007)- **SAQ a foot ball (Speed, Agility and quickness training)** A and C Black publisher ltd.

Al –Hazzaa, H,M, Alamuzaini ks, Al-Retace (2001). **Aerobic and anaerobic power characteristics of Saudi elite soccer players**. Journal of sport medicine and physical fitness, 41, 56-61

Apor. P . (1988). **Successful formulae for fitness training, in science and football.** London pp 95-107

Bangsbo, J, Norregoard L. & j horoscope, F (1991). **Activity profile of competition soccer**. Canadian journal of sport science. 16, 110 – 116

Bangsbo, J.and lind quist. F (1992). **Comparison of various exercise tests with endurance performance during soccer in professional players**. International journal of sport medicine 13,12 -32

Bangsbo J. (1993) **The physiology of soccer**. Augest krogn institute university of copenhage pp 79-82

Bagsbo,J. (1994 a) **Energy demand in competitive soccer**, Journal of sport sciences, 12-5-12

Bangsbo J(1994b) **The physiology of soccer. with special reference to intense intermittent** exercise, Act physiological scandinavica 1 -55

Bangsbo. J (1994c). **Fitness training in foot ball A scientific approach**,HO& storm, Bagsvaerd.

Bangsbo. J. (1997), **physiology of muscle fatigue during intense exercise in clinical pharmacology of sport and exercise Elsevier**, Amsterdam pp123-31

Bangsbo J and Mjchalsik .L (2002). **Assessment of the physiological capacity of elite player** . in science and foot ball iv ret ledge Londun 53-62

Bangsbo (2004) **fitness training in football. A scientific approach** redswain publish

Bangsbo.J, (2007). **Aerobic and anaerobic training insoccer** stormtyk, Begsvaerd. Denmark.

Casajus,J.A (2001) **seasonal variation in fitness variable sin professional soccer** players. Journal of sports medicine and physical fitness 41, 461 – 7

Drust, B, Reilly, T. and Rienzi. E (1998). **Analysis of work rote in soccer, sport Exercise and injury,** 4 (15-5)

Ebben,w.p (1998). **AReview of football fitness testing & evaluation.** strength and conditioning journal,42-47.

Ekblom B (1986). **Applied physiology of soccer sport medicine** 31, 50-60

Fahey, T., Insel, P., Roth, W., (2007) Fit & Well: Core Concepts in Physical Fitness and Wellness (Seventh Edition), McGraw-Hill,

FIFA(2006**) Football coaching manual**

Greg Getz (2009). **Complete conducting of. Soccer**. Human kinetics

Helgerud J. Engen, L.C wislott U, and Hoff, J (2001.)Aerobic training improvement soccer performance. medicine and science in sport and exercise, 33 1925-31

Helegerud. J. Hoydal K, lange E, (2007), **Aerobic high intensity intervals improve Vo2 may more them moderate training** .Medicine of science in sport & exercise. 31-46

Hoff wisloff u & helgerud J (2002) Soccer specific Aerobic endurance training. British journal of sport medicine 36.218 – 221.

Hoff J & Helgerud J (2004). Endurance and strength training for soccer players, physiological considerations sport medicine 34, 165-180

Hoff, J. (2005) **Training and testing physical capacities for elite soccer playas**. Journal Of sport science 23,573-582

Hollmann w, Liesen H, Meder,A etl (1981).**Aerobic and an aerobic field testing of soccer players**. journal of sport science

Kemi O, Hoff J, elgen L, Helgerude j & wislofta u (2003). **Soccer specific testing of maximal oxygen up take**. journal of sports medicine & physical fitness

Little. T and Williams AG. (2005). specific of Acceleration maximum speed, and Agility in professional soccer players, journal of strength conditioning research 19.76-78

Mark kavacs, (2010). **Dynamic stretching**. Ulysses press.

Mohr.M .krustup and Bangsbo (2003) match performance of high – standard soccer players with special reference to develop of fatigue journalist of sport science 21,519 – 528

Nathal pallesen(2012) **comprehensive soccer conditioning**. The essential Guide To Serious Soccer Fitness .

Phil Davies (2012). **Total soccer fitness**: The complete guide to soccer conditioning.

Reilly, T. and Thomas.V. (1976). AS motion analysis of work rote in different positional roles in professional foot ball match- play. Journal of human body studies. 2.

Reilly, T, (1996) motion analysis and physiological demands in science and soccer 65-79

Reilly, T (1997) Energetic of high intensity exercise (soccer) with particular reference to fatigue. Journal of sport science, 15,257-6

Reilly T, Bangsbo J, and franks, A (2000) anthropometric and physiological predispositions for elite soccer, journal of sport sciences, 69 – 83

Romanini. E, impellizzeri F.M, and marcore 5-A (2007) **Factor influencing physiological responses to small side soccer games.** Journal of sport science 25(6)-5-47

Ron McEachen (2004) **Coaching Soccer bible**. National soccer coaches association of America "Human kinetics.

Roy Rces and car Vander Mcer (2003). **Coaching soccer successfully**. Human kinetics 2nd ed.

Sigil schema and Bob Alejo. (2002). **Complete condition for soccer**. Human Kinetics

Stolen T, chemerik, castegna.c of wisloffu (2005), physiology of soccer: anecdotal, sports medicine . 36(6)

Stroyer J, Hansen L & Hansen K (2004). Physiological profile and activity pattern of young soccer players during match play. Medicine & science in sport & exercise 36, 168 – 174

Thatcher R of Betterhan A.M (2004): Development and validation of a sport- specific exercise protocol for elite youth soccer player. Journal of sport medicine of physical fitness. 44 15-46

Tudor, O. Bompa and Michael C. carrera (2005) **Perlodization training for sport.** Human Kinetics 2nd ed

Appendix – 1

Addis Ababa University

School of graduate student

Department of sport science

Questionnaire provided for coaches

This questionnaire designed to gather data on current challenges and future prospects of football fitness test in case of hawassa ketema football club. Since the success of the study depend up on the responses that you provide. I will kindly ask you genuine and accurate response to each of items given in the questionnaire.

Thank you in advance for your co – operation

Instruction:- Please respond to the following question by putting the "√" make or by writing the appropriate information on the space provided.

Section 1:- background information

The following questions are about the background for clubs coaches

1. Sex Male ☐ Female ☐
2. Age 24 – 30 ☐ 31 – 37 ☐ 38 – 45 ☐ Above 46 ☐
3. Marital status Unmarried ☐ Married ☐ Divorced ☐
4. How many years of experience do you have in coaching football?

   Less than one year ☐ 1-4 years ☐ 5-8 years ☐ 9-12 years ☐

   above 12 years ☐
5. Do you have a coaching license? Yes ☐ NO ☐

6. If your answer for question 5 “yes” what is your current level of coaching license?

   A license ☐ B license ☐ C license ☐ no license ☐

7. What is your educational level or qualification?

   Grade 10 complete ☐ grade 12 complete ☐ certificate level ☐

   Diploma ☐ BSC ☐ MSC ☐ PHD ☐

8. If your educational level is above diploma what is your field of study?

   Teaching physical education and sport ☐ Coaching football ☐

   other subject ☐

9. Have you got any chance of attending on coaching fitness and performance course?

   Yes ☐ No ☐

10. If your answer for question 11 “Yes” how many time One times in year ☐

    Two times in a year ☐ One time in your coaching carrier ☐

1. ☐ ☐ ☐ ☐

Section two:- Components of training

The following questions are about the components of training for hawassa kenema coaches.

1. Do you have a coaching plan?

   Yes ☐ No ☐

2. If your answer for question 1 is “Yes” how would you implement your plan

   _____

   _____

3. What are the components of your training plan

   Technical preparation ☐ Physical proportion ☐

   Tactical preparation ☐ psychological preparation ☐ Other ☐

4. If your answer for question 3 is “Other” list them

   _____

   _____

5. How many training session do you have with a week

   3 ☐ 4 ☐ 5 ☐ 6 ☐

6. How many minutes did you spend in one training session

   70 minute ☐ 90 minute ☐ 120 minute ☐ other ☐

7. If your answer for question 6 is “Other” list them

   _____

8. How much minutes did you spend in one training session for fitness training

   15 minutes ☐ 30 minutes ☐ 45 minutes ☐ other ☐

9. If your answer for question 8 “Other” list them

   _____

10. What are the dominant component of your training plan during a preparatory period?

    Physical preparation ☐ Tactical preparation ☐

    Technical preparation ☐ psychological preparation ☐

11. How do u implement your fitness plan in training

    In field ☐ in gym ☐ Both ☐ Other ☐

12. How does you implement aerobic training?

    _____

13. How does you implement anaerobic training?

    _____

    _____

14. How do you implement endurance training?

    _____

    _____

Section three :- Application of warm – up and cool down

The following questions are about the application of warm – up and cool – down program?

1. Did your players always warm – up before the training?

   Yes ☐ No ☐

2. If your answer for question number 1 is "Yes" for how many minutes?

   10 – 15 minutes ☐ 15 – 20 minutes ☐ 30 minutes ☐

3. Did your players warm – up after the first half time match break? Yes ☐ No ☐

4. If your answer for question number 3 is "Yes" for how much minutes?

   3 – 5 minutes ☐ 5 – 7 minutes ☐

5. Did the players always cool – down after the end of the training session?

   Yes ☐ No ☐

6. If your answer for questiton number 5 "Yes" for how much minutes?

   From 5 to 10 minutes ☐ From 10 – 15 ☐ Greater than 15 minutes ☐

Section four:- Fitness components tests

1. Did you test your players?

   Yes ☐ No ☐

2. If your answer for question 1 is "Yes" how many times in a year do you have test?

   Monthly ☐ 2 times ☐ 3 times ☐ 4 times ☐

Section 4.1:- Types of tests

Put " √ " for the appropriate information from the given below option if your test the following tests

	Types of tests	**Two times/year**	**Three times/year**	**Four time /year**
1	Power test			
2	Speed test			
3	Speed endurance test			
4	Agility test			
5	Strength endurance tests			
6	Flexibility tests			

Declaration

This thesis is my original work and has not been presented for a degree in any other University and all the sources used for the thesis bare dually acknowledged.

NAME GEBREKIRSTOS BIRARA

SIGNATURE_____

DATE _____

This thesis was submitted for examination with my approval as a University advisor

NAME MABRATU BELAY

SIGNATURE _____

DATE _____