# EFFECT OF TECHINICAL EXERCISES ON IMPROVING BASIC SKILLS OF BASKETBALL TRAINEES, THE CASE OF YISMALA PREPARATORY STUDENTS, WEST GOJJAM ZONE, AMAHARA REGIONAL STATE.
# ETHIOPIA

**MEd THESIS**

**ASHENAFI DEGU MEKONNEN**

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**Effects of Technical Exercises on Improving Basic Skills of Basketball Trainees, The case of Yismala Preparatory Students, West Gojjam Zone, Amahara Regional State.**

**A Thesis Submitted to the Department of Sport Science Postgraduate Program Directorate**

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**Ashenafi Degu Mekonnen**

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**Haramaya University, Haramaya**

## HARAMAYA UNIVERSITY

## POSTGRADUATE PROGRAM DIRECTORATE

As research advisors we hereby certify that we have read and evaluated this thesis entitled "**Effects of Technical Exercises on Improving Basic Skills of Beginner Basketball Players of Yismala Preparatory Students** , in West Gojjam Zone, Amahara Regional State." prepared by Ashenafi Degu Mekonnen . We recommend that it can be submitted as fulfilling the thesis requirements.

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|---|---|---|
| AbinetAyalew (PhD) | _____ | _____ |
| **Major Advisor** | **signature** | **date** |
| WegeneWaltenegus (PhD) | _____ | _____ |
| **Co- Advisor** | **signature** | **date** |

As a member of the Board of Examiners of MEd. Thesis Open Defenses Examination, we certify that we have read and evaluated the thesis work prepared by Ashenafi Degu Mekonnen and examined the candidate. We recommend that the thesis be accepted as fulfilling the thesis requirements for the Degree of Master of Education in Teaching Physical Education.

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| _____ | _____ | _____ |
| **Chair Person** | **Signature** | **Date** |
| _____ | _____ | _____ |
| **Internal Examiner** | **Signature** | **Date** |
| _____ | _____ | _____ |
| **External Examiner** | **Signature** | **Date** |

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# DEDICATION

I have dedicated this thesis manuscript in the memory of my beloved father Degu Mekonnen and my mother Tsedale Hailu they passed away when I was a child. May God keep his and her Soul in Heaven.

## STATEMENT OF THE AUTHOR

First, I declare that this thesis is my genuine work and that all sources of materials used for this thesis have been duly acknowledged. This thesis has been submitted in partial fulfillment of the requirements for M.Ed. Degree at Haramaya University and is deposited at the university library to be made available to browsers under rule of library. I solemnly declare that this thesis is not submitted to other institutions anywhere for the award of any academy degree diploma or certificate. Brief quotations from this thesis are allowed without special permission provided that accurate acknowledgements of sources are made. Requests for permission for extended quotation form or duplicate of this manuscript in whole or in part may be granted by the head of the department/school or the Director of Postgraduate Directorate when he/ she reaches judgment that the proposed use of the material is in the interest of scholarship. However, in all other instances permission must be obtained from the Author.

Name of Author: Ashenafi Degu Mekonnen

Signature: _____

Date of submission _____.

Department: Sport Science

# BIOGRAPHICAL SKETCH

The author Ashenafi Degu was born in September 20, 1988 GC in Durbetie town, Debub Achefer Woreda of West Gojjam Zone.He started his Elementary and Secondary School education at Ayalew Mekonnen Primary school and Dangila Secondary and Preparatory school Respectively. Then, he joined Adama University Department of Health and Physical Education in 2008 GC. And graduated with B.Ed Degree in Health and Physical Education with Minor Biology.

The author began practiced his career by teaching Health and physical Education in Mekonnen Shindi Preparatory school since 2011 GC. Being served for four years, he changed his work place to Gish Abay /Sekela/ Secondary and Preparatory School in west gojjam zone Amahara Region. Then he joined Haramaya University for M.Ed. Summer program in Sport science Academy (Teaching in physical Education) in 2015 GC.

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# ACRONYMS AND ABBREVIATIONS

**AT** Accuracy Throw

**FGST** Field Goal Speed Test

**FIBA** Federation International de Basketball Amateur

**IOC** International Olympic Committee

**IRERC** Institutional Research Ethics Review Committee

**MD** Mean deviation

**N** Number of trainees

**NBA** National Basketball Association

**NFHS** National Federations of High school State

**NIBT** National Interscholastic Basketball Tournament

**POT** Post Test

**PT** Pre Test

**SD** Standard Deviation

**SPSS** Statistical package of social science

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## ABSTRACT

*The main objective of this study was to investigate the effect of technical exercise on improving basic skills of basketball trainees and technical exercises on skill enhancement of basketballtrainees of yismala preparatory school students, in West Gojjam Zone, Amhara Region. For this study tewenty eight, male basketball traineeswere selectedpurposefully from Yismala preparatory school students as a subject and their age was 17-20 years old. All selected players were participated in a scheduled training program three days per week for 12 weeks. For this study pre post research design was used. The parameters selected for the study were speed dribble, speed pass, dribble control and accuracy free throw test. Pre and post training test were conducted for all twenty-eight subjects on selected basic skill and basketball performance skill variables and the score were recorded. Computerized statistical package software (SPSS) paired sample t-test was used to analyze the data. The level of significance was set at $p \leq 0.05\%$. Selected technical exercise and basketball skill performance results showed that the study units were significantly improved from pre to during and pre to post training test. The mean difference of speed dribble was improved by 5.893 second. The mean difference of speed pass was increased by 2.536 sec, the same way the mean difference indicated that, improvement was observed in dribbling control by 3.786-second pre to posttest each. There was also improvement in accuracy free throw test. Mean differences of Accuracy free throw increased by 3.68 point. This study also proved that the use of ball handling drills, speed passing, dribbling control, and accuracy free throw exercises were helpful in enhancing the performance skill of basketball trainees.*

***Key words:*** Accuracy throw, ball handling, passing, shooting, Field goal speed test, dribbling.

# INTRODUCTION

This chapter presented Background of the study, Statement of the problem, Scope of thestudy, significant of the study and Objectives of the study.

## 1.1. Background of the study

According to authorities, it is agreed that mastery of fundamentals is essential for success in basketball. The basic skills are passing, catching, dribbling, shooting, rebounding, and handling the body in relation to the ball and other players. Technical exercises of basketball have a beneficial effect on the improvement of skill of dribbling, passing and shooting for students developed by knowledge, tactics and abilities in the game of basketball, where students are trained in developing basketball fundamentals, undergo fitness and endurance exercises and learn various basketball skills.Inyismala preparatory school students practiced selected technical exercises. They were low dribbling, highdribbling, chest pass, overhead pass, baseball pass, bounce pass, jump shoot, set shoot, and lay up shoot,pivoting,accuracy and faking techniques.

The benefits and detriments of participating in technical exercise of basketball for students have been a topic of debate within the research and policy literature; however, numerous benefits have been identified. For instance, Seefeldt, Ewing, and Walk (1992) have identified the following possible benefits associated with good training : Learning physical, psycho motor skills, Young athletes learn both fundamental motor skills (e.g., running, jumping and hopping) and sport-specific skills (e.g., how to putt a basketball ball or shoot a jump shot in basketball) that allow them to stay active. Appreciation of fitness.Two of the motives for participation identified by student are “to get exercise” and “stay in shape” (Ewing &Seefeldt; 1989); participating in sports offers this benefit. Sense of belonging. Another strong motive of participation is social interaction, Sports can provide peer interaction through both teammates and healthy competition (Weiss &Stuntz, 2004), Acquiring sport skills for leisure, Learning the fundamental motor skills through sport(e.g.Proprioception, coordination) can aid in skill development, but can also be transferred to other sports and leisure activities, promoting increased participation and involvement.

M. Gladys Scott, in 1963, is quoted as having said, "Basketball is a sport consisting almost entirely of ball handling and body balance in running and jumping." (28:265) This statement was made with reference to principles of kinesiology For players new to basketball, the game may seem a little confusing at first. Begin with the basics, such as shooting, dribbling and passing. To get familiar with the game, a few drills designed for the beginning basketball player can help. Specific drills also can teach youoffensive and defensive principles. Practicing these drills regularly can enhance your performance and help you perfect your technique on the court. (http://www.USA youth basketball development guide book).

Learning how to dribble the ball was usually one of the first skills of basketball trainees must learn. To do this, there were a few drills you can try. Stationary drills, such as dribbling the ball in a circle around each leg, dribbling in place at varying heights or dribbling the ball in figure 8 patterns through your legs wereexcellent ways to get more familiar with ball handling. Other drills, such as dribble tag or tight chairs, are more dynamic and require trainees to move around the court while dribbling. In dribble tag, allplayers but the one who was “it” have a ball, and the object was to avoid being tagged by “it” while maintaining a constant dribble. Tight chairs were done with six chairs or cones set up in two rows of three chairs. Trainees must dribble around each chair, performing a specific ball handling skill, such as a figure 8, after completing one row and then moving onto the next one.(MacKay 2011).

Getting the ball to your teammates was crucial during basketball training, so trainees needed to learn how to make good passes. Basic passes were included a chest pass, bounce pass and overhead pass. To practice passing, have players pair up and work on each of these skills. Chest passes were done with two hands, with the passer and receiver working to keep the ball at chest level. Bounce passes were thrown from the same position, but the passer should aim for the floor about three-quarters of the way between him and his partner. Overhead passes werealso done with two hands raised above your head, but players should be careful to keep the ball directly overhead, as bringing it behind the head can result in a stolen ball during a game.(http//www.USA youth basketball development guide book).

Shooting the ball for the student was the only way to score points in a basketball game, so trainees should practice a couple different shot techniques. The air-ball drill

was done by having trainees line up with balls, then getting into an offensive position, dropping their elbow, jumping and shooting from their highest point. players should learn the importance of following through on their shot, and this drill can be done as a group without using the goal, or individually with the goal. Another shooting exercise to try was the box drill, which is done with two lines of trainees and one ball. The trainees on the right side takes a jump shot to the backboard, while the left side trainees run up to receive the rebound and make their own shot. The ball goes back to the next player on the right side to continue the drill.

In yismala preparatory school,learning how to play both offensive and defensive was necessary, as the game shifts rapidly between the two for trainee. An offensive drill to try was a layup competition, where the trainees were divided and line up under each basket. The first trainee on each side dribbles at full speed to the opposite basket, performing a layup, while the next trainee on that side wasready to grab the rebound and repeat the drill. To practice defense, a scramble drill would help teach trainees how to keep an opposing player from receiving a pass. To done it, have twotrainees stand equidistant from a ball. When the whistle blows, the defensive player must useproper defensive stance to box out the other player to keep him from getting to the ball. (http//www.USA youth basketball development guide book).

Moreover, the high intensity movements of basketball trainees were closely related to develop dribbling, passing, receiving and shooting (Hedrick,1993;Castagnaetal., 2007; Meckell et al., 2009). Technical exercise of ball handling, passing and shooting drills were abilities that made an important Contribution to efficient movement with and without the ball, thus play an important role in basketball technique and tactics (Erculj et al., 2010).The level of these skills in the school, that was, the potential was most often measured using various skill tests with and without the ball (Collietal.,1987).In basketball practice,skill tests were the most suitable and applicable because they were implemented in conditions similar to those of training or competition (Erculjetal.,2010). Therefore, to attain optimum skill in activities where ball-handling drills were the main factor, above-mentioned basic skills should be woven together.

Basic skills of technical exercise for students were measured as the product or outcome of standardized technical exercises and tasks requiring ball handling, passing and shooting. At the elite level, research had identified the intermittent high-skill intensity as predominant and techniques.(Dare et al, 1988).

Therefore,the present study was undertaken with a view to make of upgrading in regard to investigate the effect technical exercise on the improvement of basic skills of basketball trainees. Thus, the research investigated the effect of selected type of exercises on the skill of dribbling, passing, and shooting on improvement of beginner basketball trainees among yesmala preparatory school students at west gojjam.

## 1.2. Statement of the problem

The brief study of basketball skill and its relationship to the general education was needed more appreciate understanding, a thorough study of its technical exercise parts together with identifying the problem that hindered it further development and favorites' progress. In the preparatory school, especially in yesmala preparatory improving basic skills of basketball were sound and favored by many problems. They were:

- Students were not improve and practice dribbling, passing and shooting.
- Student's had been Low level of skill, tacticrule and knowledge about the game of basketball.
- Students were not understood the types and benefits of technical exercises on the improvement of dribbling, passing and shooting of basketball.
- The lack of interest, motivation and awareness to participate in the game and in different technical exercises were common problems of the statement.

Therefore, the following study tried to solve the problem and questions would take into Consideration to be answered.

1. What were the effects of ballhandling drills on the improvement of basic skill of basketball?
2. What were the effects of passing exercise on the improvement of basic skills of basketball?

3. What were the effectsof shooting technical training on the improvement of basic skillof basketball?
4. What were the types, benefits, and rules of technical exercises?

## 1.3. Scope of the study

This study was delimited to selected preparatory school inyesmala west gojjam zone. It was difficult and unmanageable to conduct research on the problems of Basketball teaching skill and student interests in many preparatory schools because of lack of skill and awareness, resource, time and other constraints Therefore, the researcher restricted himself to the only yesmala preparatory of school. This school was selected due to the interests of the researcher to examine the real situation in effects of technical exercise on improving dribbling, passing, and shooting skills.

Hence, the results of the study would have identifying ball handling, passing and shooting skills and drills of basketballapplicability to the study area and other areas with similar preparatory school as well as serve as a spring board to others who would initiate similar studies on the topic.

## 1.4. Significance of the study

This study was attempted to identify the effects of selected various exercises to improve the basic skill of basketball trainees. The information generated through:

- In this study trainees and students was benefited in learning how to dribble, pass, and shot the ball with appropriate technical exercise in the area of the skill and qualities of trainer and coach.
- To improved basic skills among the concerned bodies and the standard of facility and equipment required. Furthermore, the analysisand identification of effects of selected technical exercises on improving basic skills of basketball were vital.
- The study was important in the process of promoting the student use and enhancing youth production as well as development of skill of dribbling passing, and shooting technique and abilities of basketball in the country.

- This study helped to provide proper and fertile ground information in training drill exercises for students, sport professionals, societies and for others on the current status of basketball skills in yismala preparatory.
- This study was helped to provide popularity of the game, understand the method of training program, produce skillful and knowledgeable student and increase awareness and interests in the school and society.

Moreover, the study was provided base line information for further research work and sport development planner's activities and benefit various organized sport at different places to share experiences.

## 1.5. Objectives of the study

### 1.5.1. General objectives

The general objective of the study was to investigate the effect of selected technical exercise on the improvement of basic skills of basketball trainer at yesmala preparatory some selected student in west gojjam of the Amahara region.

### 1.5.2. Specific Objectives

Specifically, the following objectives were set to be accomplished with this study.

- ❖ To evaluate the effect of technical exercise on dribbling of basketball trainees.
- ❖ To measure the effecttechnical exercise on passing of basketball trainees.
- ❖ To test the effect of technical exercise on shooting of basketball trainees.
- ❖ To identify the benefits and types of technical exercises that help to improve basketball skill of trainees.

# 2. REVIEW OF RELATED LITERATURE

## 2.1. Technical exercises of basketball

According to the Edwin B Flippo,"Training technical exercises is the act of increasing knowledge and skills of an employee for doing a particular job." (Source: Personnel Management, McGraw Hill; 6 thEdition, 1984)

### 2.1.1. Concepts of technical exercise

In a review of current trends and literature in student sport, (Malina and Cumming, 2003) outlined exercises have possible benefits of participation: Growth and maturation effects, Regular physical activity leading to increased fitness, Self-concept or self-worth effects, Social competence, and Moral development.

Technical exercises of basketball are usually vigorous physical activity, complex physical skills which are applied throughout the set time, serious training and preparation in which outcomes are determined by physical skill of dribbling, passing and shooting. (Sherrill, C. 2004) also defined technical exercise as any activity, experience or business enterprise for which the primary focus is fitness, skill, athletics and leisure related. According to (Bucher,2003) explain that physical exercise is an exercise that, it has the aim of improvement human performance and enhancement of human development through the medium of the physical activities and skills selected to realize this outcome. It is not only concerned with the physical skill that accrue from participation in activities but the development of tactics, knowledge and attitudes conductive to lifelong learning and lifespan participation.Uses technical physical activity as a means to help individuals acquire skills, fitness, knowledge, and attitudes that contribute to their optimal development and well-being" (Bucher 2003).

Techniques in basketball players are important elements that should be considered during talent improvement that is, technical abilities should be part of skill improvement system. In line with this,(Hadavi et al., 2009) while developing talent identification model in USA have included technical abilities as elements of talent development system. As (Edwards 2009) indicates some of the technical abilities in basketball players are footwork, arm action, foot strike, trunk position and

economy of effort in basketball players; transfer of weight, extension of body from ankle-legs-hips-back-chest-arms and rotation of hip.

Training programs for basketball players were often targeted atimproving game tactics. The main objectives of this study were:

(a) To establish a relationship between exercise intensity and performance in basketball technical and tactical proficiency drills;
(b) To determine the existing relationship between the opposition exerted by a direct opponent and the exercise intensity needed for the attacker to overcome this opposition.

According to the Michel Armstrong, "Training exercise is systematic development of the knowledge, skills, and attitudes required by an individual to perform adequately a given task or job." (Source: A Handbook of Human Resource Management Practice, Kogan Page, 8 thEd., 2001).

## 2.2 The demands of basketball

The average time of a movement in youth basketball is about two seconds. A one dribble sprint and a pull-up, a two-second cut and a jump-shot, jumping for a rebound and tipping it in. During a forty-minute game, athletes may perform well over a thousand distinct movements. Improved explosiveness will help both rolling and standing starts whenrunning. Also, the ability to push quickly in another direction will make it easier to decelerate from a full-sprint sprint in order to perform a sport-specific skill. Explosive athletes will be able to push off one foot to jump into the passing lane and steal the ball, accelerate to a full-speed dribble and push hard off the floor in order to jump high and make the lay-up.(Abdelkrim etal.,2007)

## 2.3. Common techniques, practice, and types of Basketball skills

Criteria of basketball skill in 1940 in the opinionof Nelson Lehsten (21) consisted of speed, shooting, passing,reaction time, sensory-motor coordination,footwork,motor ability, motor agility, and ball handling. Although the rules do not specify any positions whatsoever, they have evolved as part of basketball. During the early

years of basketball's evolution, two guards, two forwards, and one center were used. In more recent times specific positions evolved, but the current trend, advocated by many top coaches including Mike Krzyzewski is towards position less basketball, where big guys are free to shoot from outside and dribble if their skill allows it. Popular descriptions of positions include:

- Point guard (often called the "1") : usually the fastest player on the team, organizes the team's offense by controlling the ball and making sure that it gets to the right player at the right time. Shooting guard (the "2") : creates a high volume of shots on offense, mainly long-ranged; and guards the opponent's best perimeter player on defense.
- Small forward (the "3") : often primarily responsible for scoring points via cuts to the basket and dribble penetration; on defense seeks rebounds and steals, but sometimes plays more actively.
- Power forward (the "4"): plays offensively often with their back to the basket; on defense, plays under the basket (in a zone defense) or against the opposing power forward (in man-to-man defense). Center (the "5"): uses height and size to score (on offense), to protect the basket closely (on defense), or to rebound.

The above descriptions are flexible. For most teams today, the shooting guard and small forward have very similar responsibilities and are often called the wings, as do the power forward and center, who are often called post players. While most teams describe two players as guards, two as forwards, and one as a center, on some occasions teams choose to call them by different designations.(Al Ameen J Med, 2009).

### 2.3.1. Strategical techniques

There are two main defensive strategies: zone defense and man-to-man defense. In a zone defense, each player is assigned to guard a specific area of the court. Zone defenses often allow the defense to double team the ball, a manoeuver known as a trap. In a man-to-man defense, each defensive player guards a specific opponent. Offensive plays are more varied, normally involving planned passes and movement by players without the ball. A quick movement by an offensive

player without the ball to gain an advantageous position is knownas a cut. A legal attempt by an offensive player to stop an opponent from guarding a teammate, by standing in the defender's way such that the teammate cuts next to him, is a screen or pick.

The two plays are combined in the pick and roll, in which a player sets a pick and then "rolls" away from the pick towards the basket. Screens and cuts are very important inoffensive plays; these allow the quick passes and teamwork, which can lead to a successful basket. Teams usually have several offensive plays planned to ensure their movement is not predictable. On court, the point guard is usually responsible for indicating which play will occur.

### 2.3.2. Effect of technical exercises on shooting

Shooting is the act of attempting to score points by throwing the ball through the basket, methods varying with players and situations. Typically, a player faces the basket with bothfeet facing the basket. A player will rest the ball on the fingertips of the dominant hand (the shooting arm) slightly above the head, with the other hand supporting the side of the ball. The ball is usually shot by jumping (though not always) and extending the shooting arm. The shooting arm, fully extended with the wrist fully bent, is held stationary for a moment following the release of the ball, known as a follow-through. Players often try to put a steady backspin on the ball to absorb its impact with the rim.

The ideal trajectory of the shot is somewhat controversial, but generally a proper arc is recommended. Players may shoot directly into the basket or may use the backboard to redirect the ball into the basket.(Abdulkerim et al,2007).

In order to shoot well, basketball players must square up to the basket in a variety of positions. Whether the player employs a jump stop or pivots, they must stop moving and assume a balanced position before initiating the shooting motion. Stepping into the shot with a 1-2 step affords a longer time, which aids the development of balance (Bourgase, 2012). If players wish to use the quicker release of a two-foot jump stop, they must have the ability to establish balance in a short

period under great pressure. Shooting entails starting and finishing in a balanced position, staying under control throughout the process (MacKay, 2011).

The two most common shots that use the above-described setup are the set shot and the jump shot. The set shot is taken from a standing position, with neither foot leaving the floor, typically used for free throws, and in other circumstances while the jump shot is taken in mid-air, the ball released near the top of the jump. This provides much greater power and range,andit allows the player to elevate over the defender. Failure to release the ball before the feet return to the floor is considered a traveling violation.

Another common shoot is called the lay-up. This shot requires the player to be in motion toward the basket, and to "lay" the ball "up" and into the basket, typically off the backboard (the backboard-free, underhand version is called a finger roll). The most crowd-pleasing and typically highest-percentage accuracy shot is the slam-dunk, in which the player jumps very high and throws the ball downward, through the basket while touching it.

Another shot that is becoming common is the “circus shot". The circus shot is a low-percentage shot that is flipped, heaved, scooped, or flung toward the hoop while the shooter is offbalance,airborne, falling down, and/or facing away from the basket. A back-shot is a shot taken when the player is facing away from the basket, and may be shot with the dominant hand, or both; but there is a very low chance that the shot will be successful.

A shot that misses both the rim and the backboard completely is referring to as an air ball. A particularly bad shot, or one that only hits the backboard, is jocularly called a brick. The hang time is the length of time a player stays in the air after jumping, either to make a slam-dunk, lay-up, or jump shot. Shooting can be improved with an explosive vertical jump and defense necessitates the ability to accelerate, decelerate and change direction. Youth who are deficient in these explosive skills will be utilized less in game situations (SeparovicandNuhanovic, 2008). These sport-specific skills also weigh heavily onplaying time in professional basketball.

### 2.3.3 Effect of technical exercises on Rebounding

The objective of rebounding is to successfully gain possession of the basketball after a missed field goal or free throw, as it rebounds from the hoop or backboard. This plays amajor role in the game, as most possessions end when a team misses a shot. There are two categories of rebounds: offensive rebounds, in which the ballis recovered by the offensive side and does not change possession, and defensive rebounds, in which the defending team gains possession of the loose ball. The majority of rebounds are defensive, as the team ondefense tends to be in better position to recover missed shots.

Rebounding is a method of gaining possession ofthe ball, and many coaches have said that he who controlsthe backboards usually controls the game. Wooden(1966) stated,"More opportunities for possession will come from missedshots than by any other way; therefore offensive anddefensive rebounding must receive a great amount ofattention." (33:212).

### 2.3.4. Effect of technical exercises on Passing

A pass is a method of moving the ball between players. Most passes are accompanied by a step forward to increase power and are followed through with the hands to ensure accuracy.

A staple pass is the chest pass. The ball is passing directly from the passer's chest to the receiver's chest. A proper chest pass involves an outward snap of the thumbs to add velocity and leaves thedefense little time to react. Another type of pass is the bounce pass. Here, the passer bounces the ball crisply about two-thirds of the way from his own chest to the receiver. The ball strikes the court and bounces up toward the receiver. The bounce pass takes longer to complete than the chest pass, but it is also harder for the opposing team to intercept (kicking the ball deliberately is a violation).

Thus, players often use the bounce pass in crowded moments, or to pass around a defender. The overhead pass is used to pass the ball over a defender. The ball is released while over the passer's head.

The outlet pass occurs after a team gets a defensive rebound. The next pass after the rebound is the outlet pass. The crucial aspect of any good pass is it being difficult to intercept. Good passers can pass the ball with great accuracy and they know exactly where each of their other teammates prefers to receive the ball. A special way of doing this is passing the ball without looking at the receiving teammate. This is called a no-look pass.

Another advanced style of passing is the behind-the-back pass, which, as the description implies, involves throwing the ball behind the passers back to a teammate. Although some players can perform such a pass effectively, manycoaches discourage no-look or behind-the-back passes, believing them to be difficult to control and more likely to result in turnovers or violations.(http://www.ducksters.com/sports/basketball passing.Php).

### 2.3.5 Effect of technical exercises on Dribbling

Dribbling is the act of bouncing the ball continuously with one hand, and is a requirement for a player to take steps with the ball. To dribble, a player pushes the ball down towards the ground with the fingertips rather than patting it; this ensures greater control. When dribbling past an opponent, the dribbler should dribble with the hand farthest from the opponent, making it more difficult for the defensive player to get to the ball. It is therefore important for a player to be able to dribble competently with both hands.

M. Gladys Scott, in 1963, is quoted as having said, "Basketball is a sport consisting almost entirely of ball handling and body balance in running and jumping." (28:265) this statement was made with reference to principles of kinesiology.

Good dribblers (or "ball handlers") tend to bounce the ball low to the ground, reducing the distance of travel of the ball from the floor to the hand, making it more difficult for the defender to "steal" the ball. Good ball handlers frequently dribble behind their backs, between their legs, and switch directions suddenly, making a less predictable dribbling pattern that is more difficult to defend against. This is called a crossover, which is the most effective way to move past defenders while dribbling. A skilled player can dribble without watching the ball, using the

dribbling motion or peripheral vision to keep track of the ball's location. By not having to focus on the ball, a player can look for teammates or scoring opportunities, as well as avoid the danger of having someone steal the ball away from him/her.When ball handlers are balanced-holding,a steady posture and readyto explode to the hoop with a single-leg push-they are confident.They feel in control and ready to attack their opponent. A balance ball handling position includes bending th knees, standing on the balls of their feet,while keeping their head up and maintaining sturdy center of gravity. It is easy enough to show the correct position to players in a stationary or low-speed setting but coaches must also load the drills to simulate the intensity of aggressive of ball pressure.

Dribbling while to play tennis ball, ball handling while stepping through a speed late and Making full-speed ball mores while keeping the core centered over a line on the court will condition balance (MacKay, 2011).

### 2.3.6. Effect of technical exercises on Blocking

A block is performed when, after a shot is attempted, a defender succeeds in altering the shot by touching the ball. In almost all variants of play, it is illegal to touch the ball after it is in the downward path of its arc; this is known as goaltending. It is also illegal under NBA and Men's NCAA basketball to block a shot after it has touched the backboard, or when any part of the ball is directly above the rim. Under international rules it is illegal to block a shot that is in the downward path of its arc or one that has touched the backboard until the ball has hit the rim. After the ball hits the rim, it is again legal to touch it even though it is no longer considered as a block performed.

To block a shot, a player has to be able to reach a point higher than where the shot isreleased. Thus, height can be an advantage in blocking. Players who are taller and playing the power forward or center positions generally record more blocks than players who are shorter and playing the guard positions. However, with good timing and a sufficiently high vertical leap, even shorter players can be effective shot blockers.(Ford, 2011).

## 2.4. Relationship of specific skills

Shooting can be improved with an explosive vertical jump and defense necessitates the ability to accelerate, decelerate and change direction. Youth who are deficient in these explosive skills will be utilized less in game situations (Separovic and Nuhanovic, 2008).

These sport-specific skills also weigh heavily on playing time in professional basketball. The athlete who lacks size can develop their explosiveness and level in playing field A short guard may need another few inches on their vertical leap when executing a floater in the lane or an undersized rebounder can compensate by recovering after landing and jumping again before the bigger opponents can react. Elite coaches want to close out the three-point line, limit opponents to one-and-done possessions.

## 2.5. Preparation and Anticipation

Athletes who recognize patterns are capable of reaching more quickly and seem more agile (Syed,2010).For example,when playing defense, basketball players should observe the core and pillar of their opponents, not their feet, or the ball. On offence, players need to understand common situation and what is likely to happen so they can be better positioned than the other team, creating another agility advantage. Professional soccer players demonstrate superior visual search strategies when handling the ball, an aptitude that would suit guards equally well. After athletes master the skilled movement, they should practice agility in reactive setting. Instructors should design task-relevant cues so that players practice their mental training skills(Holmberg, 2009).

At the youngest age level, all athletes should develop their balance first. Athletes, who pursue quickness, speed, or explosiveness without stability will play off-balance, unable to apply their physical skills efficiently. After wards, they should train their agility so they can play the game at a fast pace (Messina,).Balance, footwork and movement skills must be consistent to permit feedback such as :the closest was missed because their player initiated their short chopy strides to late and could not regain their control (Syed, 2010).It is important to form good habits before

loading the drills with more complicated movements.Repetition of specific actions, supervised by an expert instructor, is critical.

## 2.6 . Additional related basic exercises

### 2.6.1. Aerobic and Anaerobic fitness for basketball players

Basketball requires running for extended periods of time; therefore, players must be able to produce energy aerobically. However, although basketball players need to be aerobically fit, they do not need to be distance runners. Be balanced in approach to fitness. Set standards, yet do not place fitness ahead of the ultimate goal of developing good basketball players and a good basketball team. A fit, skilled team is much more powerful than a fit, unskilled team.

Tessitore,A; (2006) study Aerobic fitness has some primary benefits that are such as creates good cardiovascular capacity and strengthens muscles and tendons, allows players to run at a steady pace without incurring oxygen debt, getting really tired and being unable to recover and allows players to recover quickly from short sprints, making them more effective in the game.

Aerobic fitness is best developed during preseason training. However, if schedule cannot be extended to include fitness in the preseason, it can integrate fitness exercises and activities into weekly training sessions. This can be achieved through steady pace runs, ball skill drills, or fitness circuits (http://www.daneprairie.com).

### 2.6.2. Effects Coordination on Basketball Skill

Coordination is a skill that recruits the senses such as sight and hearing in conjunction with body parts to perform tasks accurately and with efficiency of movement. Coach Brian Mac contends that coordination integrates the various skill-related components of fitness intoaccurate and effective movements. Juggling, hitting a baseball with a bat and dribbling a basketball are all coordination skills (http://score card research.Com).

### 2.6.3. Effects of Agility on basket ball skill

Basketball demands agility, quickness, and speed. Players consistently change direction as they move up and down the court. Agility is a major physiological ability among elite basketball player and training designed to improve this movement skill should be a priority for all coache (Chaouachietal.,2009). Given the rule changes, especially Canada ‟decision to adopt F.I.B.A. rules a all levels, it is imperative that all players are agile under game conditions, especially guards (Abdelkrimet al., 2007). Basketball is a fast paced and technically a complex difference in agility may be slight.(Hoare,2000).Agility is typically measured by performing a time shuttle run. Sports teams use zigzag drills to enhance agility.

### 2.6.4. Effects of good balance on skills of basket ball

- Body Position:Coaches must master the simple fundamentals, especially if they endeavor rto Coach youth basketball. Controlling balance helps both young and old players achieve at a higher level; they are able to attain and maintain impressive gains in quickness, explosiveness, and agility.In order to mirror game situations, players should training dynamic conditions, which test their body control (Stein, 2010).
- Ready Position: Elite basketball players must utilize excellent position and possess exceptional balance because the initial component to movement is being ready to move(Messina, 2008). Athletes should be on the balls of their feet with their knees bent, heads up to read the play and hands upto catch the ball or play defense. A player who is ready to move will appear quicker than a more athletic counterpart who is not prepared.

Injury Prevention: The body must be able to perform the movement without injury. Basketball players are at risk for ankle sprains, especially ankle inversion, due to jumping and landing out of balance, stepping the foot of another player or while making a sudden change in direction (Cumpsetal.,2007). A single ankle sprain can reduce confidence, increase postural way, and elevate the risk of future injury(Le Andersonetal., 1993). Ankle injuries are the most common in game basketball injury. During a single high school season,17.9%offmaleplayersand 20.3%]of male players will sustain an ankle injury. Lateral ankle sprains comprise eighty-five Percent of all

sport-related sprains (Shaw,etal.,2008). Strengthening the ankles and core allows the athlete to place greater stress on the body.

In addition to prevention, balance helps athletes recover from injuries, permitting athletes to move without favoring one side and restoring confidence. Balance training is effective in reducing the Risk of ankle sprains without the negative costs, such as expensive supplies or the chance of skin Irritation (Cumpsetal.,2007). This is note worthy for youth coaches because most adolescent athletes do not use ankle support and many are un able to afford the costly equipment (Mc Guineet et al., 2000). Since basketball players may devote more time to strength training, they may in advertently shorten the gastronomies muscle and tighten the A chills tendon. This may create more plantar flexion and expose the ankle joint. Flexibility training- during cool-down routines and at home-will improve balance and reduce injuries (Lee anderson et al., 1993).

Post players should assume a balanced position before receiving the ball. Good balance helps players absorb contact so they can catch the ball in a high-percentage scoring position. Core and Pillar muscles provide a solid foundation that enables the lower body to apply and resist force (Willard son, 2007).

### 2.6.5. Effects of vertical jumping on basket ball skills

In the field of training, there is a new technique emerged similar to the nature of performing basketball skills by developing the ability of vertical jump (Kassem, 2010). According to Kassem vertical jump skill isused to measure the power or explosive strength. For this skill the performer stand with one side near the wall, Heels close together then he extended the arm near to the wall without raising the heels and makes a mark on the wall. Then take a crouch position and jump up a shighas possible to perform accurate shoot and make another mark. The distance between reel one. (Johnson and Nelson, 1979).

## 2.7. Basketball Coach- Player relationship

As (Martin & Coe 1997), state the best relationship is a partnership. When a basketball player chooses a coach, he or she also assumes the obligation to submit reasonably to that coach's discipline. The basketball players coach relationship and mutual dependence by saying that the mutual dependence between both parties is framed by the "…basketball players need to acquire the knowledge, competence and experience of the coach, and in the coach' need to transfer their competences and skills into performance and success. Therefore basketball players and coach develop a partner or a professional relationship and they spend a great deal of time together in order to ultimately achieve performance success."Furthermore, (Martin & Coe 1997), underline that if an basketball players-coach relationship is to be a journey of mutual discovery, both minds must be working together, not separately, communication between basketball players and coach must be effective because both utilize the knowledge provided each other's perspective on the training process and its effects, coach and basketball players should analyze the progress with basketball players collaboratively. Regarding this, (Martin & Coe1997) point out that careful observations and recording of training responses and results of time trials can be adequate by themselves to permit meaningful analysis of progress and preparation, therefore, the coach and basketball players must work closely.

## 2.8.Trainees Interests

Different trainees have different interests towards basketball training. Some trainees believe that psychological education has great benefit for them Bucher (1975:2) stated as follows "in training physical skills, the exercise it supplies for becoming physical fit, the social contributions such as the development of sports man ship qualities training hero to get along with others team work this psychological benefit is the form of self-confidence and out let for mental frustration; improvements of personality and development of qualities coverage and self-discipline and the knowledge learned inter respect to the role of sport in the culture of world".Even though, some trainees accept the importance of training as mentioned in above paragraph education negligible number of trainees think that physical activity has very little value for them.This may be because of a bad experience, like poor

instruction; absence of planning and organization, large number of trainees in one categories and poor availability of facilities and equipment.

## 2.9. History of basketball

In early December 1891, Canadian Dr. James Naismith, a physical education professor and instructor at the International Young Men's Christian Association Training School (YMCA) (today, Springfield College) in Springfield, Massachusetts, was trying to keep his gym class active on a rainy day. He sought a vigorous indoor game to keep his students occupied and at proper levels of fitness during the long New England winters. After rejecting other ideas as either too rough or poorly suited to walled-in gymnasiums, he wrote the basic rules and nailed a peach basket onto a 10-foot (3.0 m) elevated track. In contrast with modern basketball nets, this peach basket retained its bottom, and balls had to be retrieved manually after each "basket" or point scored; this proved inefficient, however, so the bottom of the basket was removed, allowing the balls to be poked out with a long dowel each time.(Naismith, 1941).

FIBA(Federation International Basketball Federation) was formed in 1932 by eight founding nations: Argentina, Czechoslovakia, Greece, Italy, Latvia, Portugal, Romania and Switzerland. At this time, the organization only oversaw amateur players. Its acronym, derived from the French Federation International de Basket-ball Amateur, was thus "FIBA.” Men's basketball was first included at the Berlin1936 Summer Olympics, although a demonstration tournament was held in 1904.

## 2.10. High school basketball

Before widespread school district consolidation, most American high schools were far smaller than their present-day counterparts. During the first decades of the 20th century, basketball quickly became the ideal interscholastic sport due to its modest equipment and personnel requirements.

In the days before widespread television coverage of professional and college sports, the popularity of high school basketball was unrivaled in many parts of America. Perhaps the most legendary of high school teams was Indiana's

Franklin Wonder Five, which took the nation by storm during the 1920s, dominating Indiana basketball and earning national recognition. Today virtually every high school in the United States fields a basketball team in varsity competition.

Basketball's popularity remains high, both in rural areas where they carry the identification of the entire community, as well as at some larger schools known for their basketball teams where many players go on to participate at higher levels of competition after graduation. In the 2003–04 season, 1,002,797 boys and girls represented their schools in interscholastic basketball competition, according to the National Federation of State High School Associations. The states of Illinois, Indiana and Kentucky are particularly well known for their residents' devotion to high school basketball, commonly called Hoosier Hysteria in Indiana; the critically acclaimed film Hoosiers shows high school Basketball's depth of meaning to these communities. There is currently no tournament to determine a national high school champion. The most serious effort was the National Interscholastic Basketball Tournament(NIBT) at the University of Chicago from 1917 to 1930. The event was organized by Amos Alonzo Stagg and sent invitations to state champion teams.

The tournament started out as a mostly Midwest affair but grew. In 1929, it had 29 state champions. Faced with opposition from the National Federation of State High School Associations and North Central Association of Colleges and Schools that bore a threat of the schools losing their accreditation the last tournament was in 1930. The organizations said they were concerned that the tournament was being used to recruit professional players from the prep ranks. The tournament did not invite minority schools or private/parochial schools.(Naismith,J,1941).

## 2.11. Introduction to Basketball in Ethiopia

Basketball was first introduced in Ethiopia in the year 1946-47 (1939 E.C).It was first played in the Teferi Mekonnen (Entoto Comprehensive) and Kokebe Tsebah secondary schools. It was introduced by physical education teachers who came from Canada. Beginning from 1950-51, basketball became populating most primary and secondary school of Addis Ababa. To this effect, Addis Ababa Inter-school Association included during that time basketball in the inter-school competition,

which was held every year. Later on physical education instructors of Addis Ababa University College and other colleges, coupled with members of Juventus club organized the competition programs of basketball in Addis Ababa.These programs were conducted in ancient cinema hall which was found inthe present day Science Faculty of Addis Ababa University. This greatly contributed for an increased popularity of the game as well as number of participant teams. As a result the Arat killo YMCA (now Arat killo sports training center). Organized ateam and registered as an additional team members. The Ethiopian Basketball Federation was established in the year1953-54(1946 E.C), since having five Federations is compulsory for a country to be a member of International Olympic committee(IOC) as participant member of the modern Olympic games.Consequently, Ethiopia became a member of International Olympic committee and participated in the modern Olympic games for the first time at Melbourne Olympiad in the year 1956 (1948 E.C).Being established as a Federation, the Ethiopian Basketball Federation becomes a member of the Federation of International Basketball Association (FIBA).To this effect, Ethiopian participated in the first African Basketball competition in the year 1962 (1954E.C).This was the first time for Ethiopia to participate in International Basketball Competition.

# 3. MATERIALS AND METHODS

## 3.1. Description of the Study Area

The study was conducted at Yesmala which is a town in western Ethiopia located on the South Western shore of lake tana in the west Gojjam Zone of the Amhara Region, this town has a latitude and longitude of 11°36´ N 36°57´E with an elevation of 2072 meters above sea level and 1040km far away from Haramaya university and has above 500,000 peoples live in this town. It was the administrative center of Achefer Wereda.A notable point of interest in Yesmala is the church of yeldet Giyorgis (The Daughter of George).The town is located in the mid-way between Bahirdar and Kunzila, Yismala is located next to Dilamo (small town of Debub achefer wereda.The big Tana-Beles hydroelectric power plant is located in this route near Kunzila. Debub and Semen achefer wereda were one wereda (Achefer wereda)before they split into two.Achefer is historical district which was first mentioned in the 16 century.

One of famous and legend Ethiopian novelist and playwright Abe Gubegna (1934-1980) was born in Achefer, yesmala Giorgis and attended the local church school where he become acquainted with liturgical poetry and music. His most famous novel is Aliwalidm (I will not be born, 1962). Standing from this All the tests and physical activity trainings are done in Yesmala preparatory school of basketball field for three months beginning from October 2017-December2017. (G.W.B. Hunting ford, 1989).

## 3.2. The Research Design

For this study pre post research design was used. 28basketball trainees with age of 17-20 years would be selected from grade 11 students of yesmala preparatory School. The pre and post tests on skill abilities and physical talent parameters such as, accuracy throw, speed dribble, speed pass and dribbling control test were administered for selective subjects.

The experiment consisted of different kind of exercises such as sprint, dribble in a speed, passing in a speed, dribble shoot, control dribbling, accuracy throw, and lay up

shoot with moderate intensity for three days (Monday, Wednesday, and Friday) per week for 12 consecutive weeks.

## 3.3. Source of data

The primary data was collected from the experimental variables through pre and post tests on selected technical exercise and basic skill parameters and the secondary data was selected from different materials and sources like books, journals, different research or thesis, different searching availability on internet (Google scholars, you tube, Facebook, twitters, etc).Then this materials were analyzed, interpreted, and postulated to give supportive and meaning full value for the research study.

## 3.4. Study Population

For this study the population was selected from yesmala preparatory school of grade 11 some active and interesting male students they involve in daily regular exercise and also in football project of our school in this grade level. All of them were males. This training of population was not including students those were females and disable students out of them and 28 young male students were selected purposefully for the training.

## 3.5. Sample Size and Sampling Techniques

For this study, purposive sampling technique was used. The total sample size for this study was 28 active and interesting basketball trainees between the ages 17-20 years from yesmala preparatory School students at yesmal town.

## 3.6. Experimental Materials Equipment

The investigator used yesmala preparatory School basketball court for field test as well as to give the training program to the study groups. The material and equipment used for the study were included stopwatch, pen, whistle, paper, pump, scoring sheet, tape, jumping rope, cones, basketball, and mat during training and for tests.

## 3.7. Inclusion and Exclusion Criteria

Subjects who fulfill the health history questionnaire and whose age was between 17-20 years included for this study. In addition, the subjects were having any recent physical injury and medical condition restricted by physician and whose age were under 17 and above 20 years were excluded for this study.

## 3.8. Measurement Tools and Applications

Independent variables was used to measures those factors that contribute to the improvement of dependent variables (dribble, pass, shoot, block, agility with ball,).The exercise were like(speed pass, speed dribble with cone, dribble control, accuracy throwing, field goal shoot, jumping. A qualitative data was collected from the test measures like speed dribble test, speed pass test, dribble control test, and accuracy throw tests. The following tests were selected parameter for technical exercise and skills. Changes were recorded especially before training and after the intervention were made.

### 3.8.1. Speed dribble test

- ✓ Purpose; To evaluate skill in ball handlng with obstacles.
- ✓ Procedure ; With the signal “go” the subject picks up the ball and dribbles forward and back through the line of hurdles put on half of the given 50m distance. The watch will be start with the signal “go” and will stop as the subject returns to the start–finish line.
- ✓ Equipment; watching, signals, balls were used in this test.
- ✓ Score; the score was counted as the total number of second from the command “go” until the subject returns to the start-finish line.(Robert D.Knox1947).

### 3.8.2. Speed passing test

- ✓ Purpose; to measure the ability of passing skill.
- ✓ Procedure; A line was marked on the floor 5 metre from the wall and parallel to it. The subjects were stands behind the line and rebounds the basketball from the wall as rapidly as possible fifteen times , using the chest pass.

- ✓ Equipment; stop watch, balls,floor,coins,papers were used in this test.
- ✓ Score; The score was registered the number of seconds from the signal "go" until the ball hits the wall the fifteen time. If any rebound requires the subject to take more than one-step recovery, the test would be repeated. (Krause J.V., Meyer D., Meyer J. (1999).

### 3.8.3. Dribbling control test

- ✓ Purpose: To measured skill in handling the ball while the Body was in movement.
- ✓ Equipment: Standard inflated basketball ten cones with one-meter difference Stopwatch and tape were used for made.
- ✓ Test/Target Dimensions; An obstacle cones marks by ten cones with one meter distance was set up in zigzag at Basketball court.
- ✓ Scoring; If they perform failed to begin at the point in course where control was lost and the trail was stopped and the performer had to return lost and began again. (Cinii,2000).

### 3.8.4. Accuracy free throw test

According to Special Olympics (2007), Younger athletes can practice by shooting to a partner, at a target on the wall or at a lower basket.

- ✓ Purpose; Accuracy test was used to measure the ability of basketball throwing on a wall accurately.
- ✓ Equipment; Wall, stopwatch, tape, basketball wasusedto arrange the test. (Mazumdar, 2012) also conduct throwing basketball to wall accurately was important to develop over arm pass for accurately.
- ✓ Score; The subjects were asked to stand the free throw line and throw the ball to the target. Inner rectangle, middle rectangle and outer rectangle had different scoring. If the ball touches the inner rectangle the subject got 3 points, for the middle 2 points and for the outer only 1 point. Total ten chances were given to the participant. Altogether, total was count to each subject. Maximum score was 30 and minimum score was zero. (Barros, 1979).

## 3.9. Data Quality Control

To ensure quality of data, only standardized physical skill was used. To minimize the mistakes during data collection the assistant skill test recorders would trained to collect the appropriate data.only the standardize tests were used to ensure data quality .Additionally, all the mentioned tests were recorded with video and photograph for further check on the test procedure. Finally the data had code and fed to software twice, with different persons to avoid error in data feeding.

## 3.10. Methods of data analysis

The data was collected through basic skill tests were analyzed, interpreted, and tabulated into meaningful idea using manually and in a computer in order to evaluate the changes observed among participants that underwent the physical training. The data was analyzed and descripted by using computerize statically package software (SPSS) version 20. The paired sample T-test was used to compare the pre training, and post training data as described by Kothari. The level of significant was set at 0.05%.

## 3.11. Ethical Issue and code of conduct

This study was carried out in the line with ethical issues. The privacy of the participant was protected. Generally this research had been conducted as pre rules, policies and research ethics of Haramaya university.

## 3.12. Training schedule

The training session was for about 12 weeks. Participants were trained three times a week. Each training session involved in warming up period, main practice session, and cooling down activities followed by 40 minutes low and moderate intensity exercises. The FITT became increased through training time to time. In this schedule the technical exercises were speed dribbling, controlling dribble, overhead pass, chest pass, bounce pass, accuracy shoot, set shoot and lay up shoot.

# 4. RESULTS AND DISCUSSION

This chapter deals with the analysis of data collected from the subject under study. The purpose of this study was to find out the selected type of technical exercises of basic skills on improving skill of basketball trainees among yismala preparatory School at west gojjam zone Amhara region. To achieve the purpose of the study 28 basketball trainees were selected from yismala preparatory School as study subject and their ages were 17-20 years. The parameters selected for this study was speed dribble, speed pass, dribbling control and accuracy free throw test. The pre and posttest were conducted for all twenty-eight trainees on selected technical exercises and basic skill variables and the score were recorded. The collected data were analyzed by paired sample T- test. The results for each fitness variables were discussed below.

## 4.1 Result of Speed Dribble Test

**Table1**: The mean and standard deviation values of speed dribble test (hurdles) (sec) of Basketball trainees (basic skill parameters).

| Tests | Mean | N | SD | Std. error |
|---|---|---|---|---|
| PT for speed dribble | 26.36 | 28 | 2.483 | .469 |
| PoT for speed dribble | 20.46 | 28 | 1.732 | .327 |

*Values are mean and standard deviation, PT =pretest, POT =posttest, SD= standard deviation, N=no of subjects.*

The above table showed that there was improvement in speed dribble test for the study group. The mean difference revealed that there was an improvement in the skill of technical exercises parameters due to exercises in which they were engaged in. The mean value of speed dribble test of study units were increased from pre to post test, in pretest the skill was 26.36 sec but after 12 weeks training it was recorded as 20.46sec. The rationale behind the improvement in dribbling skill was due to the exercise that they took in the training schedule.

The results clearly showed that regular participation in speed dribbling exercise can improve basic skills of basketball trainees. The result of this finding was consistent with the finding of Robert D. Knox(1947), who conducted the study on the effects of technical exercise use on the skillful performance of basketball trainees. His study results revealed that twelve weeks technical exercises program could significantly improve the basic skill of basketball. The other study conducted by (Jose, 2000) different type of technical training as dribbling with maximum speed is enhances when the players run the fast –break until they reach the other side. The following graph described more about the changes.

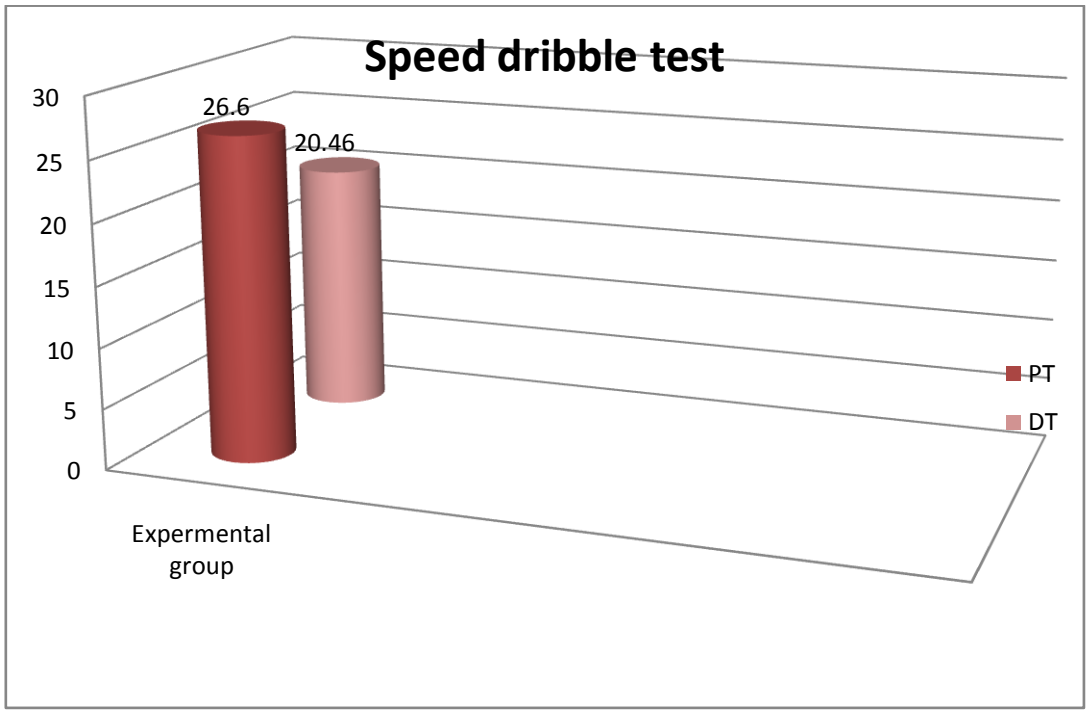


**Figure 1** ; Graphical presentation of speed dribble test.

As the collected data and graph indicated; even if ball handling drills had a significant change at $p<0.05$, there is a difference in their pre and post mean values of speed dribble test. In pretest, the speed dribble was 26.36 sec but after 12 weeks, training it was recorded as 20.46. This shows that there was improvement due to exercise.

## 4.2. Result of Speed Pass Test

**Table 2;** The mean and standard deviation values of speed pass test (sec) of Basketball trainees.

Paired sample statistics

| Tests | Mean | N | SD | Std. error |
|---|---|---|---|---|
| PT for speed pass | 21.64 | 28 | 2.147 | .406 |
| PoT for speed pass | 19.11 | 28 | 1.663 | .314 |

*Values are mean and standard deviation, SD = standard deviation, PT = pretest, POT = posttest N =no of subjects.*

The above table 2 showed that there was improvement of speed pass test for subjects. The mean difference showed that there was improvement over the pre test due to 12 week training program. The mean value of speed pass test of study units was increased from pre to post test, in pretest 21.64second and in posttest 19.11 second. The rationale behind the improvement in speed passing test and was due to the exercises that took in the training schedule. The measure clearly showed that regular technical exercises training program could have great effect on their passing skill in basketball trainees.

According to (Krause J.V., Meyer D (1999) Technical pass training is used to develop the passing skill of an athlete. Passing is considered to be a method of moving the ball between players .The researcher also stressed that the combination of dribbling and speed pass training are important to increase the skill levels especially speed pass of athletes. Similarly this finding was also consistent with the finding of (Krause), who conducted the study on the effects of technical exercises use on the physical and skillful talent of basketball players. His study results revealed that twelve weeks of speed passing test and related exercises program could significantly improve the passing skill of basketball players. (Krause 1999).The following graph shows that more clarify about the changes.

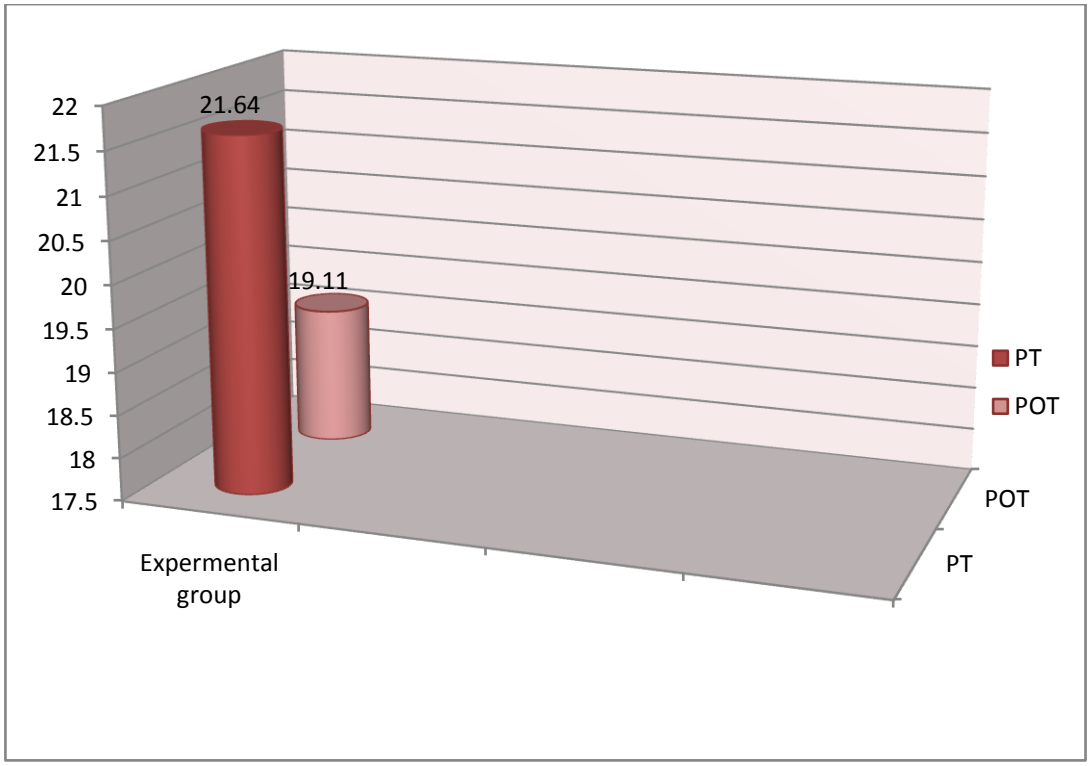


**Figure 2; Graphical presentation of Speed passing test index PT and POT results**

As the collected data and graph indicated, speed passing exercise had a significant change and gradual improvements in passing tests. There was a difference in change of pre and posttests. However, there was also an improvement in pre and post mean values of speed passing test.

## 4.3. Results of Dribble Control Test

**Table 3**:The mean and standard deviation values of dribble control test of Basketball trainees.

Paired Samples Statistics of dribble control test

| Tests | Mean | N | SD | Std. error |
|---|---|---|---|---|
| PT for dribble control | 26.54 | 28 | 2.502 | .473 |
| PoT for dribble control | 22.75 | 28 | 1.777 | .336 |

*Values are mean and standard deviation, SD = standard deviation, PT = pretest, POT = post test N =no of subjects.*

The Above table 3 measurement results indicated that there was an improvement in dribbling control test among basketball trainees. Dribbling control test increased from 26.54 sec to 22.75sec second. And If we measure the mean difference for dribbling control test it was recorded 2.536 sec from pre to post test. This showed that because of training technical exercises there was great improvement in dribbling control skill of beginner basketball players.

(Cinii, 2000).used the experimental approach which resulted in the most important results show that the technical exercises leads to improve the basic skill of talent while adapting the technical exercise with the direction of dribbling control skills leads to the improvement of the ball handling rate. Recent studies have shifted the focus to the relationship between basic skill and performance skill. As (Zimmerman, 2005) found many top professional players spend time performing corrective work to ensure that they maintain good technique to match their athleticism. (Kassem, 2010) he also conducted that the training program which contains technical exercises for the development of ball handling drills lead to the improvement of skill full performance of the players and increasing speed dribble control.

The following graph gives more clarification about the changes and improvements between pre and post training.

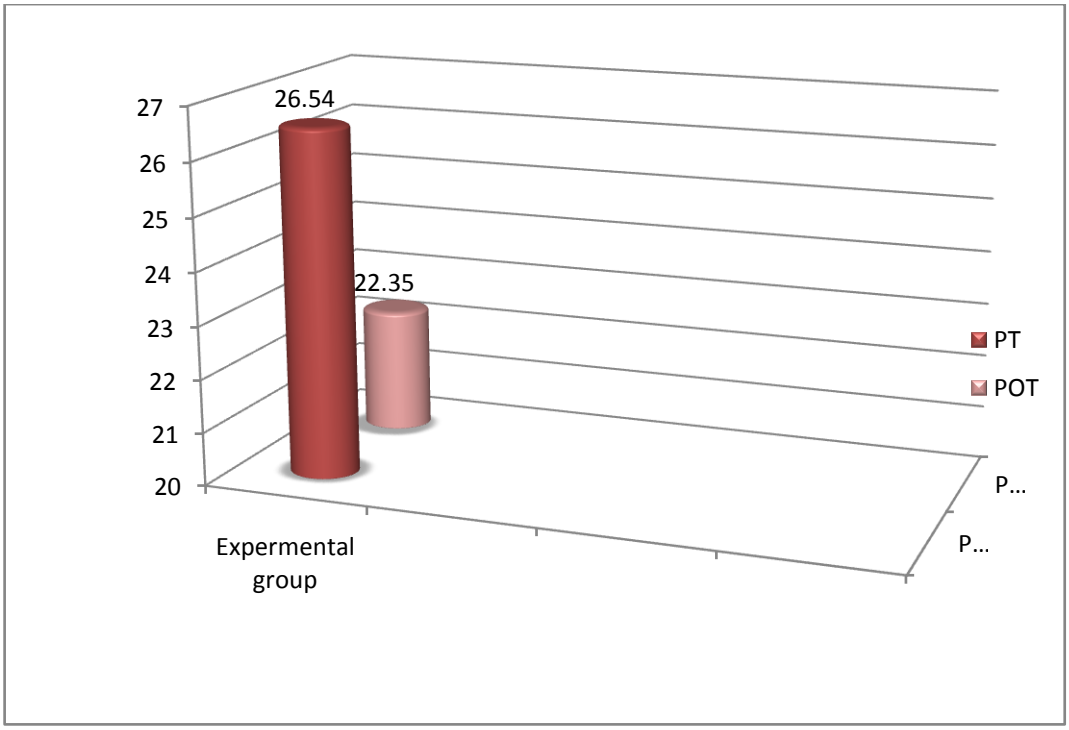


Figure 3.Graphical presentation of dribbling control test index PT, DT and POT results of beginner Basketball players;

As the above data and graph indicated; even dribbling control had a significant change in dribbling at $p<0.05$, there was a difference in their pre and post mean values in which mean difference of dribbling control increased by 2.536 sec which is high change.

## 4.4. Results of Accuracy throw test

**Table 4:** The mean and standard deviation values of accuracy free throw test of Basketball trainees.

| Tests | Mean | N | SD | Std. error |
|---|---|---|---|---|
| PT for Accuracy free throw | 16.36 | 28 | 3.186 | .602 |
| PoT for Accuracy free throw | 20.00 | 28 | 2.177 | .411 |

The above table 4 measurement results indicated that there was an improvement in accuracy free throw among basketball trainees . Accuracy throw increased from 16.36 to 20.00 point. If we measure the mean difference for accuracy throw, it was

recorded 3.64 point from pre to post test. This showed that because of training exercises there was great improvement in accuracy skill of beginner basketball players. There fore, these data indicated that there was a significant difference and gradual improvement of players accuracy throw between two consecutive tests of experimental group of students.

(Maunder, 2012) used the experimental approach which resulted in the most important results show that the technical accuracy exercise leads to improve the ability of the shooting skills while adapting the technical exercise with the direction of shooting skills leads to the improvement of the shooting rate. Recent studies have shifted the focus to the relationship between physical fitness and performance skill. As (Zimmerman, 2005) found many top professional players spend time performing corrective work to ensure that they maintain good technique to match their athleticism. (Kassem, 2010) he also conducted that the training program which contains technical exercises for the development of skills lead to the improvement of skillful ability of the players and the increasing of the accuracy and speed of skillful performance. So that regular technical physical training program can have significant benefits for the development of basketball performance skill. (Abdlkrim et al.,2007). Additionally see the following changes from the graph.

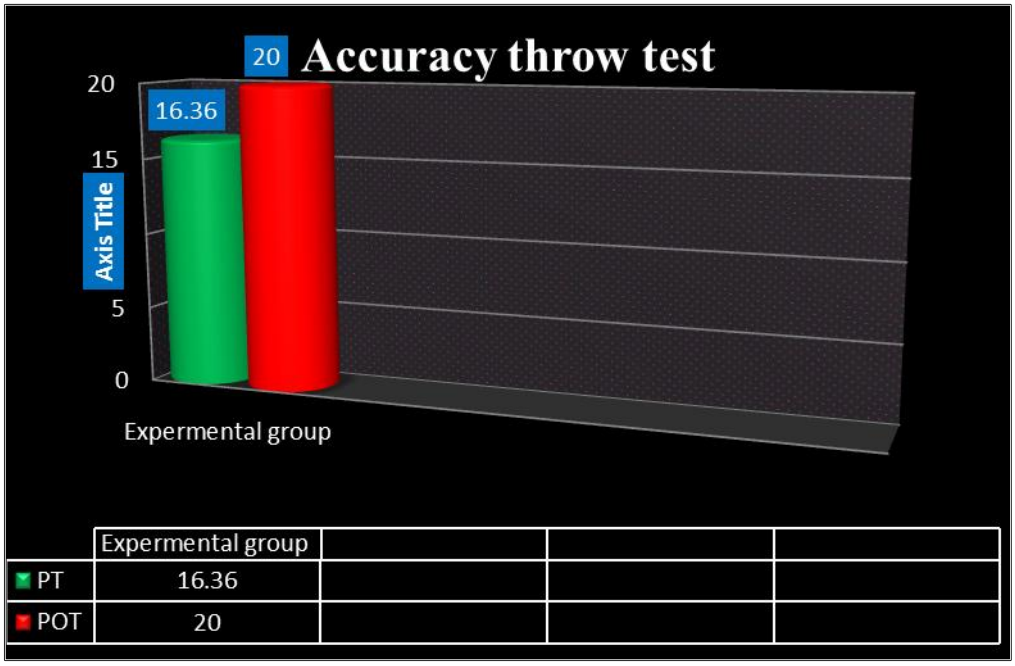

**Figure 4**: Graphical presentation of Accuracy free throw test index PT, DT, and POT results of beginner basketball players.

As the collected data and graph indicated training shooing exercises was important to improve accuracy throw of basketball trainees. This indicated that there was an improvement in accuracy free throw test among basketball trainees. Accuracy free throw test increased from 16.32 to 20.00 second.

Generally, Three months of technical exercise training had a significant change of improvement in dribbling, passing and shooting of yismala preparatory of Experimental groups of students though three months of regular basketball training has its own positive effect on such skills too.

# 5. SUMMARY, CONCLUSIONS, AND RECOMMEDATIONS

## 5.1. Summary

- Technical exercises of basketball in the school had a beneficial effect on the improvement of skill of dribbling, passing and shooting for students developed by knowledge, tactics and abilities in the training of basketball, where students were trained in developing basketball fundamentals, undergo fitness and endurance exercises and learn various basketball skills.
- This study assessed and tried to investigate the effect of technical exercise on improving basic skills of basketball trainees of yismala preparatory school west gojjam zone Amhara region. These subjects were selected from grade 11 students with the age of 17 to 20 years old. Major finding of this investigation were the improvement of basketball skill through the exercise of passing, dribbling, rebounding and shooting.
- The training schedule was arranged in the first semester for twelve weeks. The intensity for exercise was low to moderate, for three days per week (Monday, Wednesday, and Saturday) after their regular classes.
- The effect of speed dribble with hurdle, speed pass, dribbles control and accuracy free throw test were seen on improving the basic skills of beginner basketball trainees. All basic skills (speed dribble, speed pass on a wall, dribble control and accuracy free throw test) were tested before and post training. Data was analyzed using computerized statistical package software (SPSS) version 20 of Paired sample T-test. The level of significance was set at 0.05%.
- Test results from pre training to post training showed significant improvement in all the aforementioned basic skills. The improvement was observed and recorded from pre test to post test.
- The investigator noticed that the improvement of the variables was due to the vital role of speed dribble, speed passing, shooting, and accuracy free throw test training leads to the improvement of the special abilities as well as improving in skillful performance. Accuracy throw, speed ball handling, and dribbling control test mean difference were the evidence for the effect of

technical exercise training in improving the performance skill of beginner basketball players.

## 5.2. Conclusion

In light of the results of the study and the limits of the sample and the framework of statistical treatments used, the following points were concluded:

- Technical exercises like ball handling drills; passing, rebounding, shooting and pivoting exercises had significant effects on the improvement of beginner basketball players‟ physical fitness and performance skills.
- Regular participation in physical activity had a significant effect on the improvement and enhancement of physical skill and performance.
- The performance and the technique of speed dribbling. Passing, rebounding and shooting exercises in the direction of the work of skill leads to improvement in the level of skillful performance.
- The time of the application of the proposed program for ball handling, speed pass, and shooting exercises is appropriate to assess the special physical abilities and skillful performance of the basketball players.
- In general, after three months of technical training, statistically significant improvement and change were observed in yismala preparatory school player's dribbling, passing and shooting. 12 weeks technical skillful training has an explosive effect on player's motoric capabilities such as; standing long jump, shuttle run with ball, speed pass, and vertical jump on a shoot, which are some of an important parameters of basketball skill and agility. Therefore, this finding complies with this study.

## 5.3 Recommendations

Based on the above results, discussions and finding of this study, the following points were recommended to investigate more on the relationship of ball handlig drills, speed pass and shooting exercises and performance of basketball players.

- The proposed training program including the technical exercise of ball handling, passing, pivoting and shooting on target and agility exercises

should be a part of physical skill preparation of basketball players, because of their significant influence on raising the level of the player physically and skillfully.

- ❖ It is necessary to raise awareness among trainers with the importance of the technical exercise of ball handling, passing, pivoting and shooting on target and agility exercises in raising the physical fitness and skillful performance of basketball players.
- ❖ Coaches, physical education teachers and other basketball trainers who support this project shall consider and aware of the impact of basic technical training on skill related technical talent and added it on their regular basketball training.
- ❖ Studies should be conducted in the same area on different samples in terms of age and gender.
- ❖ Further study shall be done on other specific skill and technical talent through increasing subjects, adding players of other teams and classifying by their positional play.

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# 7. APPENDICES

# Appendix A

Investigator name: Ashenafi degu

Supervisor name: Abinet Ayalew (Phd)

Wegene waltenigus (Phd)

Thesis title:-Effect of selected technical exercises on improving basic skills of Basketball trainees the case of yesmala preparatory ,west gojjam zone, Amhara Regional State.

You are kindly requested to participate in this research study as described below. This research study would be carried out and governed by the regulations for research on human beings. These regulations require that the researcher should obtain assign agreement(consent) from you to participate in this research project.

The researcher would explain to you in detail the purpose of the project, the procedures to be used, the potential benefits, and the possible risks of participation in this study. You coud ask the researcher any questions that you may have about the study, and expect to receive satisfactory answers regarding the same. A basic explanation of the project was summarized below.

After discussion, if you agreed to participate in the study, please sign this form in the presence of the researcher. You might discontinue at anytime from the study if you chose to do so.

**1. Purpose of the Study:**

The purpose of this research project was to investigate the effects of technical exercises on improving basic skills of basket ball trainees of the students. The findings of this study could have a paramount importance for learning how to dribble, pass, and shoot the ball with appropriate technical exercises, helped to provide popularity of the game, increase awareness and produce skillful and knowledgeable student in yesmala town.

Moreover, the aim of this study was to write a thesis as a partial requirement for the fulfillment of Med a master's program in physical education for principal investigator.

**2. Time duration of participation:**

The experiment of the study period was taken 3 months. This study would take 28 subjects from yesmala preparatory basketball players. Your trainees will participate in moderate intensity training 3 days per week for 12 weeks. Participation in the study was not exceeded forty minute per session. Subjects also participate in basic technical skill test in three phases, at the beginning, at the middle and final test at the end of 12 week training. Your trainees were received all the current standard care for their health.

**3. Risks and the Safeguards:**

If physical activity would performed during abnormal physiological condition, it would result in pain, eventually it would result death. Therefore, your trainees wouldnot perform physical activity, if they show one of the following signs: abnormal heart rate; too fast or too slow breathing rate; coughing etc. Incase if they face injury or pain, I would give them first aid. If it were severe, I would cover every cost for their recovery.

**4. Benefits:**

There might be no personal benefit for participating in this study. However, it was hoped that, in the future the society would be beneficial from this study by improving the techniques and skills of basket ball game and selection of future elite athletes through physical trainings.

**5. Confidentiality:**

Their test results and other related personal information would be kept confidential. There would be no information that would identify your trainees in particular. The findings of the study would be general for the study community and would not reflect anything particular of individual persons. The data/test results would be

coded to exclude showing names. No reference would be made in oral or written reports that could link participants to the research.

**6. Rights:**

Your student and sport office had the right to declare them to participate or not in this study. If your school or administration decided not to participate, your trainees had the right to withdraw from the training at any time and this would not label your trainees for any loss of benefits, which they otherwise are entitled but it was not advisable.

**7. Contact address:**

If there were any questions or enquires anytime about the study or the procedures please contact:

Ashenafi Degu Mekonnen +251922555802

Email, ashitidegu@gmail.com

Abinet Ayalew(Phd) Mekonen +251911827322

Wegenie Waltenegus(Phd) +251923670360

In addition, any problem and complain could be address to IRERC (institutional research ethics review committee).

**8. Declaration of informed Voluntary consent:**

We read the participant information sheet. We clearly understood the purpose of the research, the Procedures, the risks and benefits, issues of confidentiality, the right of the trainees on participating and the contact address for any queries. We informed as our trainees had the right to withdraw from the training at any time.

# Appendix B

## 1. Health History Questionnaire to be fill by a Physician

This questionnaire was designed to obtain information on the health status of the subjects participating for the research study. Physician would be examining youths and decide their participation for the study by answered the questionnaire and finally approved by parents/caregiver. The information would be kipped strictly confidential.

Instruction: examined youths and indicated your correct response to each question by encircling it on the choice letter given. Finally, approved, as the youths were ready to participate in moderate intensity exercise training program, which engaged for three months.

1.Have you ever said that you have heart condition or mental problem?

A.yes B.No

2.Do you feel pain your joints or leg when you do physical activity?

A. Yes B. No

3 Do you lose your balance because of dizziness or do you ever lose consciousness?

A. Yes B.No

4.Do you have bone or joint problem (e.g. ankle, hip,back,shoulderect) that could be made worse by a change in your physical activity?

A. Yes B. No

5.Have you ever been diagnosed with another chronic medical conditions (other than heart disease of high blood pressure?)

A. Yes B. No

6.Do you lose your psycho motor because of the painstaking of motor mower?

A. Yes B. No

7. Does this person have a recent physical injury such as bone, muscle and joint which will be aggravated by physical exercise?

A. Yes B. No

If yes indicate the type of injury that he had:

8. Is this individual taking any prescription medicines recently?

A. Yes B. No

If yes, name them below: _

Name of drug Dosage

_____ _____

_____ _____

_____ _____

9. Is this individual fit for three month of moderate exercise?

A. yes B. No

10.Does this person have a great interest and motivation to participate other related ball games like football volleyball, etc?

A. Yes B. No

I hereby state that I hadexamined the medical condition of this person and answered honestly the above questions. Finally, I was proofed that this individual was healthy and ready to participate on moderate exercises for three months.

Physician name_____ signature_____ date_____

I hereby that I had read, understood the questions answered by physician and I was provide permission to my son to participate in activities, which might include different exercise.

## Appendix C

**Table 1**. Basic skill test data records sheet

Participant code no _____

Age_____

Sex_____

height_____

Weight_____

| No | Type of skill test | units | Variables to meeasure | Data collect during experimental period | | |
|---|---|---|---|---|---|---|
| | | | | Pre training | During training | Post training |
| **1.** | Speeddribbletestwith hurdle | second | Ballhandling skill | | | |
| **2.** | Speed pass | second | Passing skill | | | |
| **3.** | Dribbling control test | second | Dribbling skill | | | |
| **4.** | Accuracy free throw test | Point basket | Shooting skill | | | |

# Appendix D

## Training schedule

According to Special Olympics Basketball Coaching Guide, Teaching Basketball Skills (2007), the training program for basketball players the intensity was maintaining moderate (65% of maximum heart rate. (Brain E. Colman, 1978), given more emphasis on below listed exercises to develop basic techniques of dribbling, passing, shooting and pivoting skills of beginner basketball players. All of these would be perform with the appropriate movement patterns for the correct skill acquisition. Therefore, the following training schedule would be to improve basic skill and techniques of beginner basketball players at yismala preparatory school.

**Table 2**; Session plan for twelve weeks (three months of experimental study).

Intensity_____ frequency _____Duration _____

Goals; to create psycho motor and baic skill adaptation to technical exercise

| week | days | Type of exercise | dose | | | objectives |
|---|---|---|---|---|---|---|
| | | | Repetition&intensity | Time(min) | duration | |
| 1-3 | Monday | Warming up | - | 10 | 40min | To improve ball handling and dribbling |
| | | basic stance position | 2 | 5 | | |
| | | Ballhandling technique | 2 | 10 | | |
| | | RightLeft hand dribble | 2 | 10 | | |
| | | Stretching/cooling | - | 5 | | |
| | Wednesday | Warming up | - | 10 | 40 min | To improve dribbling skill |
| | | high dribbling | 3 | 10 | | |
| | | low dribbling | 3 | 10 | | |
| | | leg dribble | 3 | 5 | | |
| | | starching cooling down | - | 5 | | |
| | Friday | Warming up | - | 10 | 45 min | To improve strength, endurance and passing skills |
| | | Aerobic exercise | 2 | 10 | | |
| | | Chest pass | 2 | 10 | | |
| | | Overhead pass | 3 | 10 | | |
| | | Cooling down | - | 5 | | |

Light intensity

| | | | | | | |
|---|---|---|---|---|---|---|
| 4-6 | Monday | Warming up, jogging | - | | 10 | To improve passing and dribbling skil |
| | | Baseball pass | 3 | | 10 | |
| | | Pass with partner | 2 | | 10 | |
| | | Back dribbling | 3 | | 10 | |
| | | Cooling down | - | | 5 | |
| | Wednesday | Warming up | - | | 5 | To improve endurance, strength and passing skill |
| | | strength exercises | 2 | | 10 | |
| | | bounce pass | 4 | | 10 | |
| | | chest pass | 4 | | 10 | |
| | | back pass | - | | 10 | |
| | | stretching cooling | | | 5 | |
| | Friday | Warming up | - | Moderate intnsiy | 10 | To improve dribbling and passing skil |
| | | Low dribble | 3 | | 10 | |
| | | High dribble | 3 | | 10 | |
| | | Speed dribbling | 3 | | 10 | |
| | | Speed pass | - | | 5 | |
| | | Stretch/cool down | | | 5 | |
| 7-9 | Monday | Warming up, | - | Moderate intensity | 10 | To improve dribbling and passing skill |
| | | Running on spot | 3 | | 10 | |
| | | Dribbling control | 3 | | 10 | |
| | | Chest pass | 3 | | 10 | |
| | | Over head pass | 3 | | 10 | |
| | | sterching,cooling down | - | | 5 | |
| | Wednesday | Warming up | - | | 10 | To improve pivoting and shooting skill |
| | | Pivoting | 3 | | 10 | |
| | | Two hand set shoot | 3 | | 10 | |
| | | One hand set shoot | 4 | | 10 | |
| | | Jump shoot | 4 | | 10 | |
| | | Cooling down | - | | 5 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Friday | Warming up | - | | 10 | |
| | | Running on spot | 2 | | 10 | To improve |
| | | Speed dribble | 3 | | 10 | dribbling, |
| | | Speed pass | 3 | | 5 | passing and |
| | | Jump shoot | 4 | | 10 | shooting skill |
| | | Lay up shot | 4 | | 5 | |
| | | Stretch /cool down | - | | 5 | |
| | Monday | Warming up, | - | | 10 | To improve |
| | | runing on the spot | 3 | | 5 | dribbling and |
| | | pivoting | 4 | | 10 | passing skill |
| | | forward pivoting | 4 | | 10 | |
| | | reverse pivoting | 4 | | 10 | |
| | | faking | 4 | | 10 | |
| | | sterching,cooling down | - | | 5 | |
| **10-12** | Wednesday | Warming up | - | | 10 | To improve |
| | | Set shoot | 2 | | 10 | pivoting and |
| | | Lay up shoot | 3 | | 5 | faking skill |
| | | Jump shoot | 3 | | 10 | |
| | | Systematic accuracy | 3 | | 10 | |
| | | faking | 4 | | 10 | |
| | | cooling down | - | | 5 | |
| | Friday | Warming up | - | | 10 | To improve |
| | | Set shoot | 4 | | 10 | accuracy and |
| | | Lay up shoot | 4 | | 10 | shooting skill |
| | | Jump shoot | | | | |
| | | Systematic accuracy | 4 | | 15 | |
| | | Cooling down | 5 | | 15 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Friday | Warming up | - | | 10 | |
| | | Running on spot | 2 | | 10 | To improve |
| | | Speed dribble | 3 | | 10 | dribbling, |
| | | Speed pass | 3 | | 5 | passing and |
| | | Jump shoot | 4 | | 10 | shooting skill |
| | | Lay up shot | 4 | | 5 | |
| | | Stretch /cool down | - | | 5 | |
| | Monday | Warming up, | - | | 10 | To improve |
| | | runing on the spot | 3 | | 5 | dribbling and |
| | | pivoting | 4 | | 10 | passing skill |
| | | forward pivoting | 4 | | 10 | |
| | | reverse pivoting | 4 | | 10 | |
| | | faking | 4 | | 10 | |
| | | sterching,cooling down | - | | 5 | |
| **10-12** | Wednesday | Warming up | - | | 10 | To improve |
| | | Set shoot | 2 | | 10 | pivoting and |
| | | Lay up shoot | 3 | | 5 | faking skill |
| | | Jump shoot | 3 | | 10 | |
| | | Systematic accuracy | 3 | | 10 | |
| | | faking | 4 | | 10 | |
| | | cooling down | - | | 5 | |
| | Friday | Warming up | - | | 10 | To improve |
| | | Set shoot | 4 | | 10 | accuracy and |
| | | Lay up shoot | 4 | | 10 | shooting skill |
| | | Jump shoot | | | | |
| | | Systematic accuracy | 4 | | 15 | |
| | | Cooling down | 5 | | 15 | |

# Appendix E

**Paired Sample T-test Results of Parameter**

**Table 3:** Pairedsample T-test results

| Test | Training | Mean | SD | N | St.error mean | Sig |
|---|---|---|---|---|---|---|
| Speed dribble test | PT | 26.36 | 2.483 | 28 | .469 | .000 |
| | DT | 22.39 | 2.006 | 28 | .379 | |
| | PoT | 20.46 | 1.732 | 28 | .327 | |
| Speeed pass test | PT | 21.64 | 2.147 | 28 | .406 | .000 |
| | DT | 21.54 | 1.774 | 28 | .335 | |
| | PoT | 19.11 | 1.663 | 28 | .314 | |
| Dribbling control test | PT | 26.54 | 2.502 | 28 | .433 | .000 |
| | DT | 25.39 | 2.025 | 28 | .383 | |
| | PoT | 25.35 | 1.777 | 28 | .336 | |
| Accuracy throw test | PT | 16.36 | 3.186 | 28 | .602 | .000 |
| | DT | 18.16 | 2.009 | 28 | .512 | |
| | PoT | 20.00 | 2.177 | 28 | .411 | |

# Appendix F

## F1: Test protocols or norms

**1. Table 4:**Parameters used to speed dribble test(hurdle)

| | **Male (sec)** |
|---|---|
| Execellent | <15 |
| Good | 15-19 |
| Average | 19-23 |
| Poor | >23 |

Source :( Robert. D. Knox, 1947)

**2. Table 5:**Parameters used to speed chest pass(15 times)

| | **Male(sec)** |
|---|---|
| Excellent | <16 |
| Good | 16-19 |
| Average | 19-22 |
| Poor | >22 |

Source:(Krause J.V.,Meyer D.Meyer.J.1999)

**3. Table 6:**Parameters used to dribble control test

| | **Male(sec)** |
|---|---|
| Excellent | <20 |
| Good | 20-24 |
| Average | 24-28 |
| Poor | >28 |

Source:(Cinii,2000)

**4. Table 7:**Parameters used to accuracy free throw test

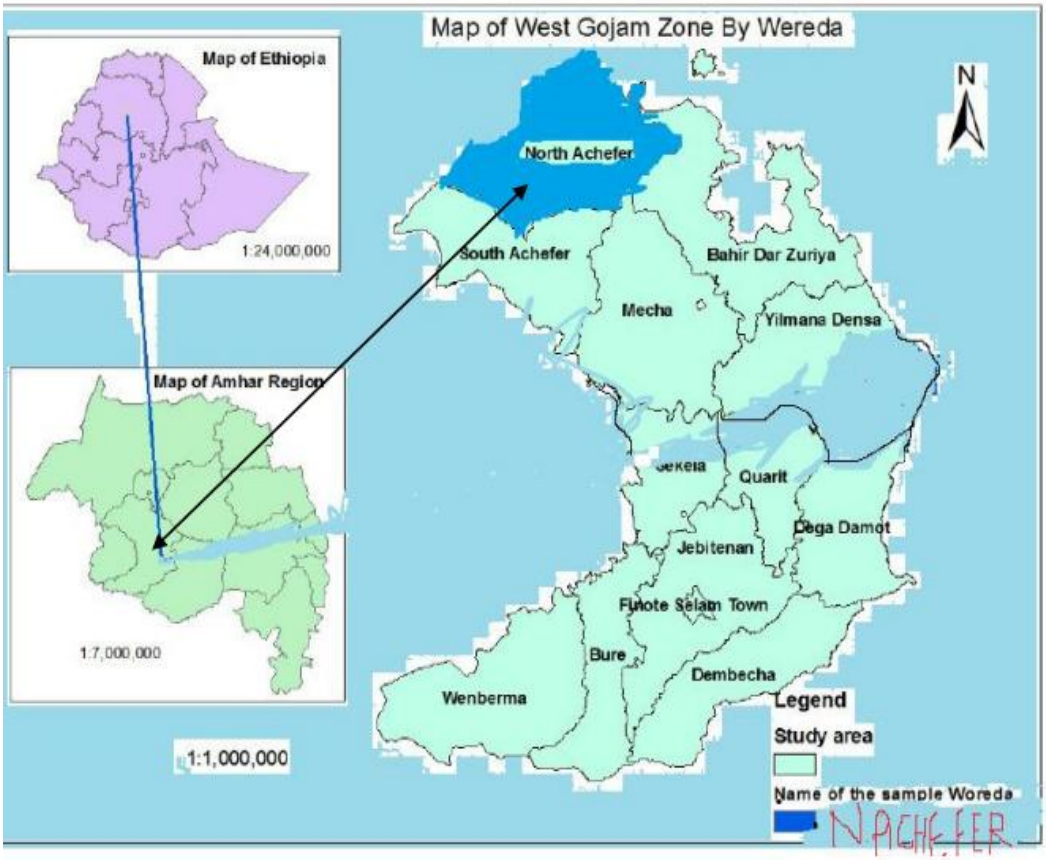
| | **Male(point)** |
|---|---|
| Excellent | >25 |
| Good | 25-20 |
| Average | 20-15 |
| poor | <15 |

Source:(special olympics,2007)

# Appendix G

## Map of the study area

**Map of Yesmala Town: West Gojjam Zone; Amhara Regional State**




Source ;. (G.W.B.Huntingford, 1989)