

# Benefits Of Physical Fitness And Exercise To Pregnant Women In Ekiti State.

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08102328937, 08060790299.

DOI: 10.29322/IJSRP.10.07.2020.p10387

<http://dx.doi.org/10.29322/IJSRP.10.07.2020.p10387>

**Abstract:** *This paper focused on benefits of physical fitness and exercise to pregnant women in Ekiti state. It has been proved through literature evidence that exercise can enhance easy and safe delivery for pregnant women. Yet, these days many pregnant women in Ekiti State suffer from discomfort, pains and chronic diseases, which could be linked to non-participation in exercise. This could be attributed to the perception and attitude of the pregnant women towards exercise. This has to do with their level of knowledge about benefits inherent in exercise participation to pregnant women. As well as their knowledge and skill relating to choice of exercise and mode of participation .Hence this paper is to enlighten the pregnant women in Ekiti Sate on the benefits of physical fitness and exercise participation during pregnancy and how it will really assist them in easy and safe delivery. And to stay healthy without any disease during and after the period of their pregnancy.*

**Keywords:** Pregnancy, Exercise, Fitness, Physical and Health

## I. INTRODUCTION

Pregnancy is a thing of joy to many people, it is the expectation of most women and it is one of the things that depicts womanhood. Most especially in the African culture. Pregnancy is the period in a woman's life in which a fetus develops inside her uterus. According to Kristeen et al. (2019) pregnancy occurs when a sperm fertilizes an egg after it's released from the ovary during ovulation. Pregnancy can be defined as a state of carrying a developing embryo or fetus within the female body (William, 2018). The period of pregnancy is a delicate period in the life of a woman. It requires physical fitness and good health status. Exercise is a major means through which these can be achieved, aside nutrition. Exercising during pregnancy improves health status and keeps the mother and child stay safe. World Confederation for Physical Therapy (WCPT, 2011) affirmed that exercise in pregnancy enables pregnant women to develop, maintain and restore maximum movement and functional ability throughout their pregnancy. Physical fitness for pregnant women during pregnancy is vital care that can improve their health status and make them stay healthy without illness.

The researchers observed that today, many cases of maternal mortality, stress, difficulty in breathing, pelvic pain, diabetes and chronic diseases are very common among pregnant women in Ekiti state. People of intellect and vast wisdom have equally failed in their mission to rescue the chaotic situation (Famayo, 2017). There is need for revisitation of the primitive era, where vigorous

physical activities and exercises were given priority, thus, reasons for their good health, longevity, less of contagious and chronic diseases, rare cases of untimely death etc. (Famayo, 2019). Pregnancy is a critical period of body weight regulation.

Maternal obesity and excessive gestational weight gain have become increasingly common and contribute to poor obstetrical outcomes. Many pregnant women in the area of study do not consider it necessary to exercise their body system during pregnancy. Except during child labour when they are compelled by the physician to do exercise vigorously. They perceive it as a mere waste of time and this may have implications on their health. This could cause them a lot of stress and discomfort more than necessary during delivery, aside other things. This paper therefore aims at enlightening pregnant women and significant others on the benefits of physical fitness and exercise to pregnancy in Ekiti State.

## **II. CONCEPT OF PHYSICAL FITNESS**

Physical fitness can be defined as the capacity to perform an assigned duty efficiently without any record of casualty and have reserved energy to perform other daily recreational activities and stay healthy. According to the Centers for Disease Control and Prevention (CDC) (2020) physical fitness is defined as the ability to carry out daily tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure-time pursuits and respond to emergencies. Physical fitness is the capacity of the heart, blood vessels, lungs and muscles to function at optimum efficiency.

Physical fitness components are divided into five health-related and six skill-related components which are required for good health and optimal performance. The health-related are those physical fitness components that are required for physiological functioning of the body. These components contribute to positive health status of humans generally and pregnant women by reducing the stress, pains, chronic diseases and increasing work efficiency. The skill-related physical fitness components are those components that are responsible for locomotive movement of the body. They are required in order to make one cope with day to day activities, aside optimal performance in sports.

Here are brief descriptions of health-related physical fitness components:

### **Cardiovascular endurance**

This is the ability of the heart and lungs to work together to provide the needed oxygen and fuel to the body during sustained workloads. It is the ability of the heart and lungs to gather, process and deliver oxygen to body cells for usage. This could be developed through jogging, cycling and swimming. The Cooper Run is used most often to test cardiovascular endurance (Groose, 2017). Cardiovascular endurance is also referred to as cardiorespiratory endurance that means body's ability to efficiently and effectively intake oxygen and deliver in body's tissues by way of the heart, lungs, arteries, vessels and vein (Laura, 2020). This is the ability to measure how long or fast a person can perform an activity and how this impacts on measurements such as heart rate and oxygen consumption.

### **Muscular strength**

Muscular strength is the amount of force a particular muscle group can produce in one, all-out effort. This could be developed by using the bench press, leg press or bicep curl. The push up test is most often used to test muscular strength (Laura, 2020 & Groose, 2017). This is the ability of how weight can be moved in relation to repetitions. Exercises of multiple joints and muscle groups such as squats or bench press are often used. Also, it is the ability of a muscular unit or combination of muscular units, to apply force. This is the "power" that helps a person to lift and carry heavy objects. Without muscular strength, the body would be weak and unable to keep up with the demands placed upon it.

### **Muscular endurance**

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<http://dx.doi.org/10.29322/IJSRP.10.07.2020.p10387>

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Muscular endurance is the ability of the muscles to perform continuously contract against a given resistance without fatiguing. Examples of activities that require muscular endurance are cycling, step machines and elliptical machines (Laura, 2020 & Goose, 2017). The sit up test is most often used to test muscular endurance. It is the ability of body systems to process, deliver, store and utilise energy. Muscular endurance is the ability of a muscle or group of muscles to sustain repeated contractions against a resistance for an extended period of time (Elizabeth, 2020).

### **Flexibility**

Flexibility is the ability of each joint to move through the available range of motion for a specific joint. Example is stretching individual muscles or the ability to perform certain functional movements such as the lunge (Laura, 2020 & Goose, 2017). This is the ability to maximise the range of motion at a given joint. Flexibility is one of the most important, yet often overlooked, components of physical fitness. Without flexibility, the muscles and joints would grow stiff and movement would be limited. The ability to achieve an extended range of motion without being impeded by excess tissue, i.e. fat or muscle (BrianMac Sports Coach [BMSC], 2020).

### **Body composition**

Body composition is the body's ratio of fat mass to fat-free mass. This is the component that reduces the negative health outcomes, such as heart diseases and type 2 diabetes, attaining and maintaining a healthy body composition is a goal of just about all regular exercise routine (Laura, 2020). Body composition is the amount of fat mass compared to lean muscle mass, bone and organs. This can be measured using underwater weighing, Skinfold readings and bioelectrical impedance. Underwater weighing is considered the "gold standard" for body fat measurement, however because of the size and expenses of the equipment needed very few places are set up to do this kind of measurement. Body composition refers to primary distribution of muscle and fat in the body, measured by body fat percentage (Jennifer, 2020 & Topend Sports [TS], 2019).

Here are also brief descriptions of six skill-related physical fitness components:

### **Agility**

The rate at which an individual is able to perform a movement and change entire body in space with speed and accuracy. This is ability to move and change direction with speed whilst maintaining control. Also it can be defined as the ability to rapidly and accurately change the direction of the body in space. The act of a sports performer to quickly and precisely move or change direction without losing balance or time. Agility is the ability to move and change direction and position of the body quickly and effectively while under control (Elizabeth, 2019).

### **Balance**

The ability to maintain centre of mass over a base of support. The ability to maintain equilibrium while stationary or moving. Also is a maintenance of a centre of mass over a base of support. The time between the presentation of a stimulus and the onset of movement. Balance is the ability to stay upright and in coordinated control of our body and its movement (Sport Resilience [SR], 2016).

### **Power**

Power can be defined as the ability to exert maximum muscular contraction instantly in an explosive burst movement. Power can also be defined as the amount of force a muscle can exert. The product of strength and speed expressed as the work done in a unit of time. The ability to use two or more parts together. Power is the ability to exert a maximal force in as short a time as possible, as in accelerating, jumping and throwing implements (TS, 2020).

### **Speed**

Speed can be defined as the amount of time it takes the body to perform specific tasks. Also is the ability to retain the centre of mass of the body above the base of support. Speed is a maximal rate in which an individual is able to perform a movement or cover a distance in the shortest period of time. The ability to minimise the time cycle of a repeated movement (Groose, 2017).

### **Coordination**

This is the ability that integrates the skill components so that effective movement are achieved. The ability to combine several distinct movement patterns into a singular distinct movement (Groose, 2017). Coordination is a way of using two or more parts of the body together, smoothly and efficiently. The ability to use the sense and body parts in order to perform motor tasks accurately without deficiency.

### **Reaction time**

This can be defined as time taken to initiate a response to a stimulus. This can further be defined as time required for a sports performer to respond to quick reaction or stimuli and the initiation of their response e.g sprint. Reaction time is the key of getting faster to favourite game. This is the length of time between a stimulus and response to that stimulus (Timothy, 2019).

## **III. CONCEPT OF EXERCISE**

Exercise is physical activity that is planned, structured for the purpose of conditioning any part of the body. It is a sub-set of physical activity. Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure – including activities undertaken while working, playing, carrying out household chores, travelling and engaging in recreational pursuits (World Health Organization [WHO], 2018). Exercise is one of the remedies used to improve health, maintain fitness and is important as a means of carrying out physical rehabilitation. Exercise is defined as a planned, structured and repetitive subset of physical activity that improves or maintains physical fitness, overall health or well-being as an intended intermediate or final objective (WCPT, 2011). Exercise can also be defined as a program that improve health status and reduce the risk of developing several diseases. Exercise is defined as any movement that makes muscles work and requires body to burn calories (Arlene, 2017).

There are three main types of exercise which are: aerobic exercise, resistance exercise and stretch exercise.

### **Aerobic exercise**

This is a form of exercise that works with the major muscles, including the lungs and heart. It helps carry oxygen around the body and pumps more blood to the heart. This helps the heart and lungs become stronger, along with other muscles (Diabetes Care Community [DCC], 2018). Aerobic exercise is the activities that increase breathing and heart rate for an extended period of time – keeping the heart, lungs and circulatory system healthy. Encyclopedia (2020) stated that aerobic exercise is sustained exercise that increases blood flow to the muscles, strengthening the cardiovascular system and lungs. Aerobic activities are great for burning calories and helping with weight loss when combined with a healthy diet. Examples are brisk walking, running, cycling, jump rope, dancing, spinning, hiking, swimming etc.

### **Resistance exercise**

Resistance exercise forces the muscles to work repeatedly to overcome a resistant force. The resistant force may come from an external source, such as weight lifting. Alternatively, it may come from the body's own weight, such as push-ups and sit-ups (CDC, 2018). Resistance exercise are activities that make human muscles work harder and help to maintain muscle and bone strength e.g weight lifting, push up, squat thrust, dumbbells, kettlebells etc. These are the activities that break down glucose for energy without using oxygen.

### **Stretch exercise**

Stretch exercise is also known as flexibility exercise. These are exercises that increase flexibility and extend muscle mobility. This can be important to help prevent falls (CDC, 2018). Flexibility exercises stretch your muscles, helping your body to stay supple e.g rolling, lower back, arm cycling, rotation of the neck, waist and twisting etc.

## **IV. PERCEPTION AND ATTITUDE OF PREGNANT WOMEN IN EKITI TOWARD EXERCISE PARTICIPATION**

It has been observed by the researchers that many of the pregnant women do not exercise during pregnancy, because they believe that exercise can lead to miscarriage. Also they do not register early for antenatal care where advice can be given to them on exercise. They perceive it to be a mere waste of time. This may have implication on their health and their pregnancy. Many of the pregnant women are afraid to participate in exercise because of the fear that exercise would have negative influence on their health and pregnancy. Also they believe that exercise do cause a lot of pain to the body during pregnancy, stress the baby and affect the position of the baby in the womb. They also believe that exercise does weaken the body and they feel it is not good for their body. It was also observed that majority of the pregnant women do not have the knowledge of the benefits of exercise to pregnancy. Few of them that have the knowledge of benefits of exercise to pregnancy and wish to participate in exercises do not have spousal support. More so, many of the pregnant women believe that walking from one place to another and doing their house chores e.g sweeping, washing of clothes, cleaning of dishes, fetching of water etc. are the same as exercising. It was also observed that some of them do not have time for exercise due to the nature of their job and are of the opinion that exercise during pregnancy is additional burden. Also some are of the opinion that they do not need to exercise their body until their delivery period. Some of them that wish to participate in exercise find it difficult getting started, because they do not have instructor to take them on the type of exercises they need to do.

Visitation to fitness centres across Ekiti State, most especially Ado-Ekiti the State capital. Revealed that pregnant women do not register there. Through observation of major roads in the State capital and some local government headquarters in the morning and evening. It was noted that pregnant women do not come out for walk. Also, visitation to Oluyemi Kayode Stadium, Ado-Ekiti; which is the state owned stadium on Saturdays. Revealed that only on a very few occasions do we have few pregnant women coming to keep fit. From all the above mentioned, it is clear that the attitude of pregnant women in Ekiti is not tilted toward exercise participation. This could be attributed to the fact that many of them lack the knowledge of the benefits inherent in exercise participation for pregnant women. Aside that, they lack the knowledge and skill required for the choice of exercise and the how, when and where exercise is to be performed.

## **V. BENEFITS OF EXERCISE TO PREGNANT WOMEN**

The period of pregnancy is usually accompanied with some challenges which could be emotional, psychology, physical etc. Due to the change in physiological state of the woman. Exercise could be a way to overcome these challenges. Exercise also assists the pregnant woman to cope with symptoms of pregnancy and make her feel better.

Below are the benefits of exercises to pregnant women:

### **Reduce pain**

Exercise during pregnancy improve the health status of the pregnant women, it drastically reduce pains that they do undergone during pregnancy such as pelvic pain and backache. It also enhance their quality of life by lubricating the joints and reduce stiffness. Also exercise decrease the level of discomfort in their flexibility. Research has shown that regular exercise during pregnancy can ease pain long term by improving muscle tone, strength and flexibility. Exercise may also cause a release of endorphin the body's natural painkillers (WebMD, 2019).

### **Improve mood**

Physical fitness can enhance your mood through the release of dopamine, neurotransmitter, endorphins and endocannabinoids (Famayo & Adubi, 2019). Regular exercise reduces the risk of depression and anxiety of the pregnancy as it makes pregnant women feel happy and more relaxed. Exercise during pregnancy reduces depression, releasing endorphins that help improve mood while diminishing stress and anxiety (Bellefonds, 2018).

### **Increased energy**

It enhances the level of fitness during pregnancy and makes pregnant women to be agile and work effectively without undue stress. It boosts their capacity in caring out their day to day activities. Regular exercise improves muscle strength and endurance to deliver oxygen and nutrients to body tissues and help cardiovascular system to work more efficiently. Taking part in exercise help the lung to produce enough air and extracting sufficient oxygen to produce the energy required by the body. Jennifer (2006) stated that new research suggested that regular exercise during pregnancy increase energy levels even among people suffering from chronic medical conditions associated with fatigues like cancer and heart diseases.

### **Improved posture**

Exercise reduces the level of postural defects; it rebuilds the shape of the body and makes the posture of pregnant women look attractive. Regular exercise reduces the level of swelling in ankles, hands and face during pregnancy. It mostly strengthens the muscles and improves balance and coordination that might want to lead to postural defects. Regular exercise during pregnancy can improve body posture and decrease discomforts such as backaches and fatigue (WebMD, 2020).

### **Muscular strength**

Regular partaking in exercise builds muscle tone and strength that makes pregnant women to endure the delivery stress. This can also increase their stability and improves blood supply to the muscles to work effectively, also increase their level of endurance to make use of oxygen. Exercise increase muscular strengths that helps to build strong, healthier muscles and bones. It enhances more stability, balance and flexibility to endure child labour (Emily, 2019).

### **Improved blood circulation**

This can enhance heart fitness in pumping the blood properly into the body and reduce high blood pressure which is peculiar to pregnant women. Regular exercise services the heart, because it builds the heart against blood failure in the body system. It enhances regular flow of blood by reducing the work force of the arteries in transporting the blood into our body system. Medline Plus (MP) (2017) stated that exercise strengthens heart and improves circulation. The increased blood flow raises the oxygen levels in the body. This helps lower risk of heart diseases such as high cholesterol, coronary artery diseases and heart attack. Regular exercise also lower pressure and triglyceride level.

### **Disease prevention**

Exercise reduces the risk of cardiovascular disease of pregnant women during and after the pregnancy, it also improves the body insulin to work effectively. Regular exercise reduces the risk of diseases like preeclampsia, gestational diabetes and hypertension that do combat with pregnant women during pregnancy. Exercise boosts immune system and insulin to protect the heart against disease. Regular exercise reduces the morbidity and mortality rate associated with cardiovascular disease, hypertension and type 2 diabetes mellitus among other chronic diseases (Hinman et al., 2015)

### **Easy delivery**

Exercise prepare pregnant women's body for labour as it makes delivery easy for them and build more stamina needed for labour and delivery. It makes the body respond to every care being giving to them during childbirth. Also reduce the risk of childbirth pains and allow their body to be flexible. Regular exercise throughout pregnancy enhances active labour for 4 hours and 24minutes

compared with 6 hours and 22 minutes for those that do not use to exercise. It shortens the duration of labour, reduces the risk of cesarean section and operative-assisted vaginal delivery (Suzanne, 2017 & Hinman et al., 2015)

### Post-delivery recovery

Exercise speed up body recovery from maternal tears after birth and quicken recovery from blood wasted during labour. It enhances the quick response to treatment after birth and makes pregnant women healthy. Regular exercise during pregnancy give a great chance of recovery physically after childbirth, the more fit during pregnancy the more will after delivery (Bellefonds, 2018).

## VI. CONCLUSION

Based on literature evidence from previous studies, the impact of exercise on pregnancy can not be underestimated. Exercise is one of the prenatal activities that pregnant women are supposed to be doing while in pregnancy so as to enhance the level of their fitness. Exercise is one of the most reliable activities that need to be properly done by women during pregnancy in order to attain /maintain a high level of fitness. As well as ensure easy and safe delivery. Against this backdrop, the researchers recommended that: physicians should encourage the pregnant women during their prenatal check up to always exercise. Health care providers who care for pregnant women should enlighten them on the benefits of exercise. Pregnant women should be performing at least 20–30 minutes exercise 3 days in a week.

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