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EFFECT OF EXERCISE ON THE BODY COMPOSITION OF ADULTS IN MOUNTAIN OF FIRE AND MIRACLES MINISTRY, ILORIN.

Surajudeen, Tosho Bakinde (Ph.D.) *, ADEYENI adesewa Ruth
Department of Human Kinetics Education, Faculty of Education,
University of Ilorin, Ilorin Nigeria

Abstract

The manifestation of chronic cardiovascular diseases is increasing every day, especially among adults. This could result from an unhealthy lifestyle and some underlying health conditions associated with increased body fat. Therefore, the study was conducted to ascertain the effect of exercise on the body composition of adults in Mountain of Fire and Miracles Ministry, Ilorin. The experimental research design of one group pretest-posttest was adopted for the study. The study population consisted of all religious leaders from Mountain of Fire and Miracles Ministries, Ilorin. Twenty (20) participants were selected for this study through the Systematic Sampling Technique. Consent of the participants was sorted, and health screening of the participants was conducted. FITT principle was followed for a duration of 8-weeks of exercise intervention. Standardized instruments (bioelectrical impedance analysis, non-elastic tape-rule, portable height-scale) were used to collect body composition parameters (% body fat, WHR, BMI). Data were analyzed using descriptive statistics of frequency counts and percentages to describe their body composition.

In contrast, inferential statistics of paired t-test was used to analyze the hypotheses formulated, adopting a p-value of 0.05 for statistical significance. The statistical package for social science (SPSS) software was used for data analysis. The findings revealed that a significant effect of exercise exists on the body mass index of adults in Mountain of Fire and Miracles Ministry, Ilorin. This study, therefore, concluded that there is a strong interaction between the body composition of adults and their physical activity level. It was recommended that there should be a frequent orientation on the need to participate in regular exercise to the general public.

***Keyword**: Exercise, Body Composition, and Adults*

*Corresponding address: Department of Human Kinetics Education, Faculty of Education, University of Ilorin, Ilorin Nigeria

*Corresponding e-Mail: Bakinde41@gmail.com

1. INTRODUCTION

Adulthood, an age characterized by increased economic demands and independence, is often accompanied by stress, decreased duration for leisure, and participation in physical activity, leading to sedentariness in many working populations and lack of sleeping hours. Sedentariness, nutritional pattern, sleeping pattern are some of the significant underlining lifestyle factors which could expose an individual adult to major life-threatening diseases such as diabetes, osteoporosis, and obesity in later life. World Health Organization (2016) classified adults into young adults (ranging from 20 to 40 years of age), middle adults (41 to 60 years of age), and late adults (61 years above). Many life-threatening diseases become more prominent in late adulthood, even though some individuals manifest these diseases at the early stage of life. Indeed, some physical decline can be expected as a biological consequence of age, but much of what is called aging is due to years of physical inactivity (Ajisafe, 2009; Talabi, 2016). Those who remain physically active throughout life demonstrate much

slower rates of physical decline than do the sedentary, and those who have been sedentary for many years can experience significant improvements through participation in physical activity.

Recent polls have verified that most people believe regular exercise and good nutrition are beneficial to continued health and longevity (Corley et al., 2021; Stefan et al., 2017; Talabi, 2016). Those same polls have also shown that only one in five people exercise regularly. There are, of course, many reasons people do not exercise. Some of the reasons include: not having enough time, being too expensive, not having the right clothes or shoes, and so on (Akdeniz & van Veelen, 2021). Exercise, a planned and structured form of physical activity that has as its aim the attainment of physical fitness, has been used as a non-pharmacological tool to help slow down the onset of obesity, high blood pressure, diabetes, and all of the aging-induced diseases. There is a concern that exercise may provoke heart attacks in some people, particularly those unaccustomed to exercising (ACSM, 2013). However, even though exercise may be hazardous for a few people, lack of exercise is the actual danger for most. When performed regularly and over the long term, numerous studies have shown that exercise reduces the risk of coronary artery disease and heart attack by 35 percent to 55 percent (Bangalore et al., 2020). Talagala (2021) recommended at least 150 minutes of moderate-intensity physical activity per week to achieve health-related fitness. Some of the exercises an individual could engage in include; walking, calisthenics, running, team sports, and individual sports. Numerous studies show that vigorous exercise protects against hypertension or reduces cardiovascular risk (Vesa, 2020; Romero, de Sá Feitosa, 2021; ACSM, 2013). Exercise training improves cardiac performance and increases the resistance of the heart to ischemic injury (Wang *et al*., 2021).

Exercise is sub-divided into aerobic exercise, anaerobic exercise, and flexibility exercises. Aerobic exercises are endurance exercises performed with the use of oxygen to improve cardiorespiratory endurance and health. Examples include walking, running, jogging, etc. On the other hand, Anaerobic exercise is the exercises involving short repetitions, performed without the use of oxygen, instead of making use of glycolysis and phosphor-creatine, and are mainly used for strength development. Examples include short meter dash sit-ups of short repetitions. *Flexibility exercises* are activities that improve the ability of a joint to maintain the movement necessary for carrying out daily tasks and physical activity, for instance, hamstring stretch. Exercises have been reported to have an impact on health. A major contributory factor determining the health of an individual is its body composition. Body composition is the percentage of body fat, fat-free mass, in the body (Bakinde, 2021). A high percentage of body fat is associated with obesity, one of the significant diseases battling the adult population (Nishida & Kumanyika, 2010). Non-fat mass includes bone, water, muscle, organs, and tissues. Body composition can be measured through different means such as bioelectrical impedance, skinfold measurements, waist circumference, hydrostatic weighing (Majumdar, 2009). To better evaluate body composition, it is safer to use two or more of these means of evaluation, with hydrostatic weighing having the highest bid to give the correct evaluation, even though expensive to set up.

This review uses the Body Mass Index (BMI), bioelectrical impedance (BIA), and waist to hip ratio to determine the participants' body composition. BMI, calculated as weight/height^2, is widely used as a relative weight index. BMI is a global index of nutritional status—used, for example, to categorize both overweight/obesity but its relation with body composition per se is controversial (Nishida & Kumanyika, 2010). BIA is relatively simple, quick, takes only a few minutes, and non-invasive, giving reliable body composition measurements with minimal intra- and inter-observer variability; the results are available immediately and reproducible with <1% error on repeated measurements (wells & fewtrell, 2006). BIA is a technique that applies an electrical current through the body to estimate muscle mass based on the current's conduction through the water since muscle has the most significant water composition of all body tissues. This technique became commercially available for the first time in the mid- 1980s and requires inexpensive, portable equipment, making it an appealing alternative to assess body composition in epidemiological studies. However, its validity is influenced by sex, age, and disease state (Dehgem & Merchant, 2008).

Waist to hip ratio (WHR) is the measurement that correlates the waist circumference to the hip circumference. Waist circumference (WC) is used as a risk assessment for metabolic syndrome, diabetes, and cardiovascular disease (CVD). WC consists of visceral fat area (VFA), subcutaneous fat area (SFA), muscle, intramuscular fat, viscera, and bone. WHO (2008) asserted that men should strive to maintain a waist circumference of 94 cm or less, and for women, the corresponding goal is 80 cm to maintain a health-fitness-related component. There are different submissions as to where to measure waist circumference appropriately. The WHO STEPS protocol for measuring waist circumference instructs that the measurement be made at the approximate midpoint between the lower margin of the last palpable rib and the top of the iliac crest (Ross, 2020). The United States (US) National Institutes of Health (NIH) protocol provided in the NIH Practical guide to obesity (NHLBI Obesity Education Initiative, 2000) that the waist circumference measurement should be made at the top of the iliac crest.

The researcher observed that the majority of the adult in the Mountain of Fire and Miracles Ministry indulged in physical inactivity that could predispose them to life-threatening diseases such as metabolic diseases, joint and skeletal problems, cardiovascular diseases, hypertension, and overweight.

Recent studies have verified that most people believe regular exercise is beneficial to continued health and longevity (Stefan et al., 2017; Talabi, 2016). These same studies have also shown that only one in five people exercise regularly. There are, of course, many reasons people do not exercise, some of which have been identified to be a lack of a well-defined exercise program. Hence, the imperative need for this study is to design an exercise intervention program and ascertain its effect on the body composition of adults in Nigeria. The objective of this study is to examine the effect of exercise on the body composition of adults in Mountain of Fire and Miracle Ministries. Two research questions are raised: What is the body composition (BMI, WHR, and BF) of adults in Mountain of Fire Ministry, Ilorin? What is the difference in the body composition (BMI, WHR, and BF) of male and female adults in Mountain of Fire Ministry, Ilorin? The hypothesis was tested at 0.05 level of significance; $H0_1$: There is no significant difference in the body composition of adults in Mountain of Fire Ministry, Ilorin, pre and post-exercise intervention.

2. METHODS

The experimental research design of One Group Pretest-Posttest will be adopted for this study. The one-group pretest-posttest design is a type of quasi-experiment. The outcome of interest is measured two times: once before and after exposing a non-random group of participants to a specific intervention/treatment. The weight of the participants is measured before the exercise. The population will consist of all religious leaders from Mountain of Fire and Miracle Ministries, Ilorin.

Population & Sample

Twenty participants will be selected for this study through Systematic Sampling Technique based on the following inclusion/exclusion criteria:Their average age was 53 $\pm$8.2 years. The majority of the participants were female, with 14 (70%), while 6 (30%) were male.

1. Participants who failed to fill the screening form will be excluded.
2. Participants who could not stand uprightly will be excluded from the exercise.
3. Participants who are diagnosed with one or more underlying health conditions will be excluded from the exercise

Instrument

The instruments to be used for data collection include among others, meter rule (to measure height of the participants), non-elastic tape rule (to measure waist and hip circumferences), body fat/ hydration monitor scale (to measure body weight and % BF) and data form. Other instruments like meter rule, body fat/ hydration monitor scale and none elastic tape rule will be calibrated and their conditions checked adequately before use. Prior to the main study, a pilot test will be conducted to

assess, calibrate, and confirm other instruments' conditions like meter rule, body fat/hydration monitor scale, and none elastic tape rule. During this period, six research assistants will be appropriately trained for data collection, adequate preparations against any possible problem that might surface during data collection, and accustomed to ways of solving the problem.

Procedure

Body Composition (BMI, WHR & BF)

Body composition variables (BMI, WHR & BF) were measured according to the International Biological Program (IBP) guidelines through BIA. The participants were instructed to put away all personal effects by emptying their pockets, putting on light clothing, and taking off their shoes before taking the measurements in order to avert wrong readings of measurements. BMI was calculated using the formula; weight/height (m^2). BMI was rated according to WHO (2012) standard reference cut off as shown in table one.

Table one: WHO Reference Cut-off for BMI

Classification	BMI cut-off points
Underweight	<18.50
Normal	18.50 - 24.99
Overweight	25.00 - 29.99
Obese class I	30.00 - 34.99
Obese class II	35.00 - 39.99
Obese class III	≥40.00

Source: WHO (2012)

Waist-to-hip ratio (WHR) was calculated in Table 1 as the ratio of waist circumference and hip circumference compared against norm reference cut-off in table two. Waist Circumference was measured to the nearest 0.1cm using non-flexible tape rule at the narrowest point between the bottom rib and the iliac crest in the mid-axillary plane. Hip Circumference was measured to the nearest 0.1cm around the most comprehensive portion of the buttocks above the gluteal fold using non-flexible tape rule. The tape was snug around the body parallel to the floor at the level at the measurement was taken for both waist and the hip. To calculate body fat; age, gender and height of the participants were configured into the Body Hydration Monitor Scale. The participants were instructed to mount it and place their feet on the aluminum sensor plates on the scale. It automatically read and calculated the variables using Bioelectric Impedance Analysis (BIA) technology. The body fat percentage of the participants was compared to the norm reference cut-off in table three.

Table two: WHR Reference Cut-off

Health risk	Women	Men
Low	0.80 or lower	o.95 or lower
Moderate	0.81-0.85	0.96-1.0
High	0.86 or higher	1.0 or higher

Source: healthline.com

Table three: Body fat Reference Cut-off

Classification	Women	Men
Low body fat risk	Under 15%	Under 5%
Ultra lean	15%-18%	5%-8%

Lean	18%-22%	8%-12%
Moderately lean	22%-30%	12%-20%
Excess fat	30%-40%	20%-30%
High body fat risk	Above 40%	Above 30%

Source: fitnescity.com

Table four: **Eight weeks exercises intervention program for the participant's Exercise Protocol**

Week	*Frequency*	*Intensity*	*Type*	*Time*
1	*2d/wk*	*Moderate* *(45-65% MHF*	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (jogging, aerobic dancing, jumping jack); flexibility exercises (active/passive stretching of arms, legs, and trunk); strength exercise modified push-ups x 3 sets, shoulder raise x 3 sets). All exercises interspaced with rest intervals of 20 seconds iii) warm down exercise.	*60 mins*
2	*2d/wk*	*Moderate* *(45-65% MHF*	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise(jogging, aerobic dancing, lounges); flexibility exercises (active/passive stretching of arms, legs, and trunk); strength exercise (modified push-ups x 3 sets, shoulder raise x 3 sets). All exercises interspaced with rest intervals of 20 seconds iii) warm down exercise.	*60 mins*
3	*3d/wk*	*Moderate* *(45-65% MHF*	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (jogging, aerobic dancing, lounges, hamstring curls); flexibility exercises (active/passive stretching of arms, legs, and trunk); strength exercise (tug of war x 3 sets, modified sit-ups x 3 sets). All exercises interspaced with rest intervals of 20 seconds iii) warm down exercise.	*60 mins*
4	*3d/wk*	*Moderate* (45-65% MHR)	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (jogging, aerobic dancing, lounges, hamstring curls); flexibility exercises (active/passive stretching of arms, legs, and trunk); strength exercise (pushing against the wall x 3 sets, modified sit-ups x 3 sets). All exercises interspaced with rest intervals of 20 seconds *iii) warm down exercise*.	*60 mins*
5	*4d/wk*	*Moderate* (45-65% MHR)	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (high knees, hamstring curls, aerobic dance); flexibility exercises (active stretching of arms, legs, trunk, and whole-body); strength	*60 mins*

			exercise (body carrier x 3-5 sets, modified sit-ups x 3 sets). All exercises interspaced with rest intervals of 20 seconds *iii) warm down exercise.*	
6	*4d/wk*	*Moderate* (45-65% MHR)	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (jumping jack, jogging, aerobic dancing); flexibility exercises (active stretching of arms, legs, trunk and whole-body); strength exercises (body carrier x 3-5 sets, modified sit-ups x 3 sets, push-ups x 3 sets). All exercises interspaced with rest intervals of 20 seconds iii) warm down exercise.	*60 mins*
7	*3d/wk*	*Moderate* (45-65% MHR)	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (jumping jack, jogging, aerobic dancing); flexibility exercises (active stretching of arms, legs, trunk, and whole-body); strength exercises (push-ups, tug of war). All exercises interspaced with rest intervals of 20 seconds *iii) warm down exercise.*	*50 mins*
8	*3d/wk*	*Moderate* (45-65% MHR)	*i) warm-up exercise* ii) workout: moderate-intensity aerobic exercise (bump kicks, jumping jack, jogging, aerobic dancing); flexibility exercises (active stretching of arms, legs, trunk, and whole-body); strength exercises (sit-ups, shoulder raise, body carriers). All exercises interspaced with rest intervals of 20 seconds *iii) warm down exercise.*	50 to 60 mins

Data Analysis

The results of the administered researcher-designed questionnaire will be analyzed and interpreted using descriptive and inferential statistics. Frequency counts, percentages, mean score and standard deviation, will be used to answer research questions, while an independent t-test will be used to test for hypotheses, while hypotheses will be tested using an independent t-test. Data collected will be coded and analyzed using Product and service solutions for windows at 0.05 level of significance.

3. RESULT

Table five: Descriptive analysis of demographic characteristics of the participants

Variable	**Mean**	**Standard deviation**
Age	53	8.2
Gender	**Frequency**	**Percentage**
Female	14	70.0
Male	6	30.0
Total	20	100.0

Table five above shows the result of the demographic characteristics of the participants at Mountain of Fire and Miracles Ministry, Ilorin. Their average age was 53 $\pm$8.2 years. The majority of the participants were female, with 14 (70%), while 6 (30%) were male.

Answers to Research Questions

Research Question One: What is the Body Composition (BMI, WHR, Body-Fat) of adults in Mountain of Fire Ministry, Ilorin?

Table six: Frequency table showing Body Composition of adults in Mountain of Fire and Miracles Ministry, Ilorin.

Variables	*Categories*	*Pre*	*Post*
BMI	Normal weight		2 (10%)
	Overweight	10 (50%)	8 (40%)
	Obese class 1	8 (40%)	8 (40%)
	Obese class 2	2 (10%)	2 (10%)
	Total	**20 (100%)**	**20 (100%)**
Body fat	Low body fat	4 (20%)	6 (30%)
	Ultra-lean	6 (30%)	6 (30%)
	Lean	6 (30%)	2 (10%)
	Moderate lean	2 (10%)	4 (20%)
	Excess fat	2 (10%)	2 (10%)
	Total	**20 (100%)**	**20 (100%)**
WHR	Low	4 (20%)	2 (10%)
	Moderate	6 (30%)	8 (40%)
	High	10 (50%)	10 (50%)
	Total	**20 (100%)**	**20 (100%)**

Table six above shows the descriptive analysis of the body composition of adults in mountain of fire ministry. Using the body-mass index (BMI) reference norm as provided by the world health organization (Ghram, 2021), it can be observed that 50% of the total population under study fall under the category of overweight, 40% classified as obese class 1, and 10% classified as obese class 2 before the exercise intervention programme. After the exercise intervention programme, postBMI shows 10% are classified as having normal weight, 40% classified as overweight, 40% classified as obese class 1 and 10% classified as obese class 2. The waist to hip ratio parameter (WHR) shows that (4)20% {female= 2(10%), male = 2(10%)} are at a low health risk status, 6(30%) {female = 4(20%), male = 2 (10%)} at a moderate health risk, 10(50%) {females = 8 (40%), males = 2 (10%)} at a high health risk, before the exercise intervention programme. After the exercise intervention programme, post WHR, reveals that 2(10%) {females} are at low health risk, 8(40%) {females =4 (20%), males = 4 (20%)} at moderate health risk, 10(50%) {females = 40%, males = 10%} at high health risk. Body fat variable shows that 4(20%) {females} are at a low body-fat risk, 6(30%) {females} ultra-lean, 6(30%) {females = 4(20%), males = 2(10%)} lean, 2(10%) {male} moderately lean, and 2(10%) {male} having excess fat before the exercise intervention programme. Post body-fat measurements shows that 6(30%) {females} are at a low body-fat risk, 6(30%) {females} ultra-lean, 2(10%) {females} classified as lean, 4(20%) {male} moderately lean, and 2(10%) {male} having excess fat.

Research question 2: What is the difference in the body composition (BMI, WHR and BF) of male and female adults in Mountain of Fire Ministry, Ilorin?

Table seven: Frequency table showing the difference in the Body Composition of male and female adults in Mountain of Fire and Miracles Ministry, Ilorin.

Variables	*Categories*	*Male*	*Female*
BMI	Normal weight		

	Overweight	2 (33.3%)	8 (57.1%)
	Obese class 1	2 (33.3%)	6 (42.9%)
	Obese class 2	2 (33.3%)	
	Total	**6 (100%)**	**14 (100%)**
Body fat	Low body fat		4 (28.6%)
	Ultra-lean		6 (42.9%)
	Lean	2 (33.3%)	4(28.6%)
	Moderate lean	2 (33.3%)	
	Excess fat	2 (33.3%)	
	Total	**6 (100%)**	**14 (100%)**
WHR	Low	2 (33.3%)	2 (14.3%)
	Moderate	2 (33.3%)	4 (28.6%)
	High	2 (33.3%)	8 (57.2%)
	Total	**6 (100%)**	**14 (100%)**

Table seven shows the descriptive analysis of the difference in the body composition of adults in the mountain of fire and miracles ministry. Using the body mass index (BMI) reference norm as provided by the world health organization (Pranata *et al*, 2021), it can be observed that in male, 33.3% male are overweight, 33.3% are obese class 1, and 33.3% also fall under the category of obese class 11. However, in females, 57.1% are overweight, while 42.9% are under obese class 1. The waist to hip ratio (WHR) parameter shows that in the male population, 33.3% are at low health risk status, 33.3% at moderate health risk status, and 33.3% also at high health risk status. However, 14.3% are at low health risk status, 28.6% at moderate risk status, and 57.2% at high health risk status. Finally, body fat variables shows that 33.3% are lead, 33.3% are moderately lean, and 33.3% have excess fat in the male population. However, in the female population, 28.6% have low body fat, 42.9% are ultra-lean, and 28.6% are classified as lean. The above differences are noted in the population before the commencement of the exercise program.

Testing of Hypotheses

Hypotheses: There is no significant difference in the effect of exercise on the body composition of adults in mountain of fire and miracles ministry, Ilorin pre and post-exercise intervention.

Table eight: Independent sample t-test showing the differences in the body composition of adults before and after exercise intervention

Variables	*Mean diff*	*Std.deviation diff*	T	df	*Sig (2-tailed)*
preWHR-postWHR	0.0020	0.02	0.438	19	0.666
Pre Body fat- post body fat	0.3000	1.719	0.780	19	0.445
preBMI-postBMI *(kgm^2)*	0.4930	0.337	6.541	19	0.001

Level of significance =0.05

Table eight above shows the result of t-test analysis on the effect of exercise on the body composition of adults in Mountain of Fire Ministry, Ilorin. It can be observed that t (19) = 0.438 at a significant value of 0.666. That is, the statistically significant value for waist to hip ratio (WHR) was more significant than the alpha value of 0.05 (0.666 > 0.05). Thus hypothesis was not rejected. There is no significant difference in the waist to hip ratio of the mountain of fire and miracles ministries, Ilorin, before and after the exercise intervention program. Also, t (19) = 0.780 at a significant value of 0.445 signifies that the statistically significant value for body fat index was greater than the alpha value of 0.05 (0.445>0.05). Thus, the hypotheses were not rejected. There is no significant difference in the body fat mass of Mountain of Fire and Miracles Ministries, Ilorin, before and after the exercise intervention program. Similarly, t (19) = 6.541 at a significant value of 0.001 signifies that the significant statistical value for Body Mass Index (BMI) was lesser than the alpha value of 0.05 (0.001 < 0.05), thus, the hypothesis was rejected. There is a significant difference in the Body Mass Index of Mountain of Fire and Miracles Ministries, Ilorin, before and after the exercise intervention program.

4. DISCUSSION

The study was conducted to determine the effect of exercise on the body composition of adults in the mountain of fire and miracle ministries, Ilorin. The participants consisted of 14 females and six males with an average of 53 ±8.2 years. The body composition characteristics considered for this study were Body mass index (BMI), waist to hip ratio (WHR), and percentage body fat. The importance of physical activity is seen to be more widespread among the adult population. This is also in support of a report by Mengesha, Roba & Ayele (2019). However, in participating in "regular exercise," many find the "regular" difficult as to the "exercise" itself.

No exercise is dangerous. Little is something (ACSM, 2016). This study shows that participating in an 8-weeks regular exercise has a significant effect in maintaining adults body composition. It much more helps in optimizing the body fat percentage both in male and female individual. This was according to a study conducted by Stefan, Cule, Milinovic, Juranko, & Sporis, (2017). In contrast, Radcliffe (2020) argued that there is no exact time for how long an exercise starts taking effects in the body, for this depends on the initial fitness of the individual.

Quality of life decreases with age, diseases such as diabetes, osteoporosis, obesity is seen to be shared among the adults. The level of physical activity of an individual have a significant effect on their body composition, and thus can help slow down the ageing process of adults and susceptibility to these significant diseases. In every 4 adults do not meet the global recommended levels of physical activity, (WHO, 2021). Having observed a level of sedentariness in her population, the researcher thought it wise to introduce an exercise programme in a group of selected adults to determine if a significant difference exists in their body composition variables before and after the treatment. The objective of this study was to examine the effect of exercise on the body composition (body fat, waist to hip ratio, body mass index) of adults in mountain of fire and miracles ministry, Ilorin.

The study commenced with a review of related literature through which knowledge of the concepts and interaction of variables were developed to establish the focus of the study. The research design was experimental research design, the population included all adults from Mountain of Fire and Miracles Ministry, Ilorin. Systematic sampling technique was used to select 20 adults from Mountain of Fire and Miracles Ministry, comprising 14 females and six males with an average of 53 years. The researcher, with six research assistants, carried out the measurements and administered the test before and after the study after the participants' consent had been sought and the consent form duly signed. The instruments used for data collection were standardized instruments (bio-electric impedance, height scale, non-elastic tape rule) and a data form. The participants were well informed about the study, screening, and informed consent form before data were taken from them. Two research questions and one research hypothesis were tested using descriptive statistics of frequency and percentage to describe the body composition parameters. In contrast, inferential statistics of paired t-test was used to analyze the hypotheses formulated to determine the significant differences in adults' lifestyle and body composition in Mountain of Fire and Miracles Ministry, Ilorin, before and after the treatment. The statistical analyses were done at 95% confidence level or 0.05 alpha level (p-value)., the statistical package for social science (SPSS) 20.0 software was used.

5. CONCLUSION

This study concluded that adults need the motivation to participate in a regular physical activity program. Some noted motivations that could enhance increased participation in regular physical activity include the presence of an exercise instructor—scheduling the exercise program in daily activities, easy access to exercise-fitness centers amidst others, and a strong interaction between the lifestyle of adults and their body composition. Therefore, the study recommended a need for a healthy-controlled true experimental environment to allow for more accurate judgment and generalization. Exercise and sport scientist associations in Nigeria, government parastatals, and

concerned individuals should raise more financial support conducive to conducting experimental research.

6. ACKNOWLEDGMENT

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