Effect of Dance-exercise and Brisk-walking on Anthropometric and Cardiorespiratory Indices of Obese Undergraduates in Lead City University, Ibadan, Nigeria

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Certification

This is to certify that Olawale Oluwaseun OLADAPO with matriculation number LCU/PG/001129 carried out this research work titled "Effect of Dance-exercise and Brisk-walking on Anthropometric and Cardiorespiratory Indices of Obese Undergraduates in Lead City University, Ibadan, Nigeria" in the Department of Kinesiology, Sports Science and Health Education, Faculty of Arts and Education, Lead City University, Ibadan, Oyo State for the award of Master Degree (M.Sc(ED) in Exercise Physiology and that this has not been previously submitted.

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Prof. S. A. Adeyanju Date

(Supervisor)

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Dr. Faderera Adepoju Date

(Head of the Department)

Dedication

Firstly, this research work is dedicated to God Almighty. I also dedicate it to my late father, Pa Gabriel Oladapo Awoniyi.

Acknowledgement

This research work was conducted in Lead City University, Ibadan, Oyo State and all of the data for analysis were collected in Lead City University Ibadan, Oyo State, Nigeria. I sincerely appreciate Lead City University, Ibadan for this great privilege.

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Abstract

The aim of this study was to investigate the effectiveness of dance-exercise and brisk-walking on the anthropometric and cardiorespiratory indices of obese Undergraduates in Lead City University, Ibadan, Nigeria. The population for this study consisted 60 obese who were purposively sampled through randomized experimental Pretest-posttest control group design. The participants were required to Dance-exercise and Brisk-walk 3 times a week and 50 minutes per session at 100-120bpm for 8 weeks. Analysis of Co-variance (ANCOVA) and T-test were used to test the hypotheses formulated at 0.05 level of significance. Result showed that there was no significant main effect of treatments on the anthropometric indices ($F_{(2,36)}$= 1.260, $p<0.05$, η^2=0. 296) of obese undergraduates but a significant treatment effect on Body Mass Index (BMI) among obese undergraduates. Also, there was a significant main effect of treatments ($F_{(2,36)}$=3.442, $p<0.05$, η^2=0.043) on the Cardiorespiratory indices of obese undergraduates. Furthermore, the result shows that there was no significant main effect of sex on the anthropometric ($F_{(1,37)}$=2.922, $p>0.05$, η^2=0.073) and Cardiorespiratory ($F_{(1,37)}$=0.598, $p>0.05$, η^2=0.016 indices of obese undergraduates. Result shows that there was no significant interaction effect of treatments and sex on the anthropometric ($F_{(2,33)}$=1.405, $p>0.05$, η^2=0.078) and cardiorespiratory ($F_{(2,33)}$=0.063, $p>0.05$, η^2=0.004) indices of obese undergraduates in Lead City University, Ibadan, Nigeria.. The study concluded that Dance-exercise and Brisk-walking are exercise modes that can bring positive changes in the anthropometric and cardiorespiratory indices of obese participants. It was further concluded that sex was not a determinant of the outcome of Dance-exercise and Brisk-walking exercise modes on anthropometric as well as cardiorespiratory indices of obese undergraduate in this study. The study recommends that the school authority should organize periodic sensitization programme on different exercises including Dance-exercise and Brisk-walking as means of improving fitness of obese students.

Keywords: Dance-exercise, Brisk-walking, Anthropometric, Cardiorespiratory, Obese.

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List of Acronyms

Abbreviation	Meaning
LCU	Lead City University
WHO	World Health Organisation
BMI	Body Mass Index
WHR	Waist-Hip-Ratio
HR	Heart Rate
BP	Blood Pressure
CF	Cardiovascular Fitness
DE	Dance-exercise
BW	Brisk-walking
CG	Control Group
HT	Health Talk
NE	Nutrition Education
ACSM	American College of Sports Medicine
ISSN	International Society of Sports Nutrition
AI	Anthropometric Indices
CI	Cardiorespiratory Indices
HBP	High Blood Pressure
HREC	Health Research Ethical Committee
WC	Waist Circumference
HC	Hip Circumference

RHR	Resting Heart Rate
PA	Physical Activity
CE	Cardiovascular Exercise
CRF	Cardiorespiratory Fitness
CS	Cardiovascular System
CVD	Cardiovascular Disease
NCD	Non-communicable diseases
HIT	High Intensity Training
AM	Anthropometric Measurements
VO_2	Oxygen Consumption
PRQ	Physical Readiness Questionnaire
SPSS	Statistical Package Social Sciences Software