

EFFECTS OF THERAPEUTIC EXERCISE PROGRAM ON THE SELF-CONCEPT AND SELF-ESTEEM OF CONVICTED INMATES IN CORRECTIONAL CENTRES IN NIGERIA

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Abstract

Correctional educational therapeutic Exercise Program for health and positive emotional development has become an interesting area in the field of sports and exercise science. Studies confirmed that exercise has proven to be effective in improving and maintaining efficiency of the body physiological and psychological status. However, it is not certain whether Human Kinetic exercise program has the acclaimed potency among individuals who are in correctional centres as a result of convictions and what they stand to gain from it as they transit back to the society hence, this study investigated the interrelationships among incarcerated people with depressed mind and therapeutics exercises. Simple random sampling technique was used for the selection of correctional centres. Participants were purposively selected based on the inclusion criteria, such as fitness level, willingness, readiness, volunteerism and educational status. Seventy four (74) out of one hundred and six (106) convicted inmates who volunteered to partake in this study and were randomly assigned into control and experimental groups. Standardized instruments used for the study were the Exercise Motivation Inventory -2($r = .91$) and Modified Exercised Self-Esteem Model ($r = .82$). Two hypotheses were tested. Data collected were analyzed using analysis of covariance at 0.05 level of significance. Result obtained shows significance differences in the self-concept and self-esteem of the experimental group over that of the control group ($f(2.391) = 2, <0.5$). Therapeutic exercise program were therefore found to be a significant correctional education tool for self-concept and self-esteem of inmates in correctional centres. it is therefore recommended that the Government and the Correctional Centres Authorities at all levels should collaborate with experts in the field of Sports and Exercise Science to design appropriate Exercise program and put in place facilities that would boost self-concept and self-esteem status of prison inmates, so that upon completion of convicted term, their integration and re-entry back into the society would be smother and highly integrating for a long term success and avenue for positive contributions

Key words: Therapeutic exercises, prison inmates, myths, self-concept, self-esteem

Introduction

Exercise for health in the twenty first century has become a major area of interest in the field of sports science. (Thomas, Lee, Frank, & Paffenbarger, 2006). It has equally been established that there is significant positive relationship between exercise and individual's self-concept, self-efficacy and self-esteem (McAulay & Jacobson 2006; Morgan, Robert & Feurman, 2004). Dishman (2008) opined that the body segment is designed and constructed for movement and sometimes for vigorous activities but not for inactivity.

Brawley (2004) equally submitted that many factors are involved in helping the body to become stronger and psychologically efficient. One of these factors is cardiovascular endurance which is the ability of the heart, lungs and blood vessels to process oxygen and deliver it to the muscle where it becomes the fuel for energy. This in turn enhances the ability of the body to perform physical activities involving large muscle group continuously for an extended period of time.

Brustard (2005) conducted a multi dimensional approach on the study of athlete's self-concept and those of non athletes, the results of the study showed that individuals do not just have one global perception of themselves, rather they are specific to situation. Brustard therefore asserted that physical self-concept of athletes and non athletes may be different from their social self-concept. According to him, exercise ensures accelerated heart beat, increased respiration and burning of fat. More importantly, Aldana, Sutton, Jacobson & Quirk (2006) confirmed that exercise play key role in the way a person views him or herself, they went ahead to report that exercise has a power to decrease stress level in adults.

There are forms of exercise for enhancement of the general body functions and performances, aerobics and anaerobic are the broad classifications of these exercises. The American College of Sports Medicine (2006) defines aerobic exercise as any activity that uses large muscle group and which can be maintained continuously and is rhythmic in nature. On the other hand, aerobic is a type of exercise that overloads the heart, the lungs and causes them to work harder than at rest, aerobic exercise types include aerobic dance, cycling, jogging, fitness walk, skipping with ropes, running or stair climbing (Brawley, 2004). To be able to carry out these activities, there must be improved therapeutic training which in turn leads to supplies of sufficient oxygen to the muscle for enhanced ability to perform work, because the more oxygen the body is able to take in and use, the more work a person should be able to perform before fatigue sets in (Dishman, 2008).

In summary, aerobic exercise is the activity which uses oxygen while anaerobic activity does not use oxygen, instead, it uses energy already stored in the muscle. Both aerobic and anaerobic exercises can improve the physical, social and psychological well-being of an individual. Gauvin & Spence (2006), citing Numata (2004) in a study conducted on 30 middle-aged women athletes, the effects of exercising either aerobically or anaerobically were the same but statically significantly different in comparison to a control group of women who were sedentary. Fontane (2006) reported that weight training translates into an increased awareness which ultimately increase one's psychological well-being. This holds true for self-efficacy and self-esteem being elevated. In other words, unsuccessful experiences enhance the psychological well-being negatively (Ajayi, 2001). Similarly, a study on exercise and self-esteem model by Vallerand & Losier (2006),

revealed that exercise affects perceptions by changing specific self as a result of perceived physical competence and physical acceptance, ultimately enhancing global physical self-efficacy and self-esteem.

Abubakar (2011), holds that, self-esteem is the favorable view one holds regarding oneself and is considered a focal aspect of psychological health. Aro (2004) posited that individuals with high self-esteem when faced with psychological disorders are better equipped to reduce the negative consequences that may result. According to him, if self-esteem can be enhanced, the psychological consequences of disorders can be reduced. Aro is of the view that self-esteem being a very broad construct could be seen as how individuals evaluate their self-concept encompassing intellectual, physical and emotional constructs, such that self-efficacy or the belief in one's ability to perform certain tasks are achieved. The enhancement of self-concept, self-efficacy, self-dignity and sense of control could be an important contributing variable to both the prevention of psychological and physical illness and the maintenance of positive social and emotional health. Considering the regimented life pattern of inmates in Nigeria correctional centres, they hardly take part in any formal exercise, the regular activities with them is to engage in manual labour in form of grass cutting, wood splitting and clearing of the soundings (Nkwocha, 2008). These, according to Akinremi (2008), cannot be substituted for organized healthy physical activity. Apart from this, the psychological consequences of incarceration according to Badura (2001), in no small measure affects the level of self-concept, self-efficacy and self-esteem of a psychologically disturbed mind. Nkwocha is equally of the view that if inmates are to achieve good standing in the society on discharge, there is the need to establish in them the will to lead and participate in activities geared toward such a corrective, useful and an improved life. It is in the light of this that the researcher developed interest in studying the effects of a 12-week therapeutic Exercise programme on physiological well-being (self-concept and self-esteem) of selected prison-inmates in Nigeria.

Hypothesis

The following hypotheses were tested in the study

- i. There is no significant difference in the self-concept status of the experimental and control group following a 12-week therapeutic exercise program among selected inmates in Nigeria Correctional Centres
- ii. There is no significant difference in self-esteem status of the experimental and control groups following a 12-week therapeutic exercise program among selected inmates in Nigeria Correctional Centres

Theoretical Framework

Studies indicate that physically challenged and depressed athletes have higher self-concept and self-esteem, when compared to the physically challenged and depressed non-athletes. The later also exhibited greater life satisfaction, happiness, more externalized habits and attain more goals than non-athletes. Participation in sport has shown to help emotionally disturbed adolescent become more confident, more expensive, more independent and autonomous. Sport also helped them feel confident and more capable of making new

friends; these are generally call improved psychological well-being mechanism of positive change.

Design of the Study

Pre-test, post-test experimental design was used for the study, it was posited that the design employs two group of subjects, (control and experimental groups). The experimental and control groups are generally kept as identical as possible with the exception that the experimental group is exposed to treatment. Clifford (1997), Itsuokor (1998) and Keringer (1999) all attested to the fact that the pre-test post-test experimental design is one of the most commonly used experimental design by educational researchers. The design involves, administration of pre-test to both groups, administration of treatment to the experimental groups only and administration of post-test to both group. This design effectively controls for both internal and external threats (Itsuokor, 1998)

Population of the Study

The population for this study were male and female convicted inmates in the selected correctional centres across Nigeria.

Research Design

A pretest-posttest research design was adopted for this study i.e six weeks pretest procedure was used to expose part of the respondent to training while another six weeks was used to posttest the respondents so as to determine the extent at which the level of training has influence the respondent level of self-concept and self-esteem.

Research Limitation

Because of the limited financial resources at the disposal of the researcher, selected correctional centres were used for the study. Similarly, prevailing security challenges during the conduct of the research prevented maximum support and allocation of time for the researcher, research assistants and the inmate. The correctional centres used for study were scattered and this equally minimized movement possibility for the researcher and his assistants. Another limitation that affected this research was non availability of therapeutic exercises equipment in most of the prison yards. It was the researcher that supplied the equipment used for the study.

Research Instrument

The instrument for this study were structured questionnaire designed to specifically measure the variables selected for the study. The questionnaire has two sections; A and B. Section A was on demographic characteristics of respondents while section B elicited information on the variable selected for the study viz: self-concept and self-esteem scale

- 1) Selected items from the Exercise Motivation Inventory: 2 (EMI-2) developed in 1981 and revised (2007) by Dishman, R.K & Irkes, was used to measure the self-concept of the respondents. The Self-concept is rated as More True (MT) = 4. True (T) = 3. False (F) = 2 and More False (MF) = 1. The authors reported a co-efficient alpha of .83 and .84

- 2) Exercise and self-esteem model (EXSEM) developed by Sostreom and Morgan (1999) and revalidated by Sostreom, Morgan and Seff (2004) was used to measure the self-esteem of the participants. The self-esteem scale is rated as Strongly Agree (SA) = 4. Agree (A) = 3. Disagree (D) = 2 and Strongly Disagree (SD) = 1. The authors reported co-efficient alpha of .79 & .81 as against the modified one that reported $r = .82$

Reliability of the Instrument

The exercise motivation inventory- 2 (EMI-2) and the modified Exercise self-esteem Model (MEXSEM) were administered on twenty (14 male and 6 female) prison-inmates at the Nigeria prison yard Sokoto, North-Western Geo-political zone of Nigeria to ascertain and ensure adequacies. These two set of tests were analyzed using the Croabach Alpha to determine their consistence and reliability. The following results were obtained (EMI-2) $r = 0.74$ and (MEXSEM) $r = 0.75$. This reliability is almost in association with Sostreom Morgan & self (2004) , in the study on multi model stress management techniques.

12 Weeks Test Schedule Table

Groups	Pre-test	Treatment	Post-test
Experimental	EMI-2	T.E for 12 weeks	EMI-2
Control	EMI-2 MEXSEM	Placebo (video film on traditional festivals and dance including other positive documentaries)	EMI-2 MEXSEM

Key

T.E = Therapeutic Exercises (jogging, Dancing, rope Skipping, Stir Climbing, Pleasure Trek within the yard and modified cycling).

EMI – 2 = Exercise motivation inventory – 2

MEXSEM = Modified Exercise Self-Esteem Model

Procedure for Data Analysis

The completed questionnaire were collated, coded and analyzed, using the descriptive statistics of Analysis of Co-variance (ANCOVA) was used to test the hypotheses at 0.05 alpha level.

Results and Discussion of Findings

Ho1 There is no significance difference in Self-Concept status of the experimental and control groups following a 12-week therapeutic exercise program.

Table 4.11

SOURCE	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.	REMARK
Co varies	1535.296	1	1535.296	9.452	.002	
Main effects	243.043	1	243.043	1.496	.222	
Treatment groups	243.043	1	243.043	1.496	.222	
Explained	1778.340	2	889.170	5.474	.005	
Residual	63511.00	391	162.432			
Total	65289.340	393	166.131			

The table shows there was no significant difference in Self-Esteem status of the experimental and control groups following the 12-week therapeutic exercise program ($f_{2,391}$).

Null hypothesis is accepted.

The mean score for the experimental group = 70.20 while that of the control group = 72.19

Generally, the correlation research examining self-esteem and other similar constructs has shown a relation between self-esteem and probability of engaging in exercise and maintain an exercise program. a research review by Gauvin and Spence (2006) indicates that exercise adherer reports higher self-esteem as well as physical proficiency in exercise activities, studies utilizing the physical self-perception profile (PSPP) successfully demonstrated that positive physical self worth showed a relationship between global self-esteem and the sub-domain levels of sport confidence, physical condition, attractive body image and strength.

1. There is no significant difference in the self-concept status of the experimental and control group following a 12-week therapeutic exercise program among selected inmates in Nigeria Correctional Centres
2. There is no significant difference in self-esteem status of the experimental and control groups following a 12-week therapeutic exercise program among selected inmates in Nigeria Correctional Centres

Conclusion

The condition of the prison yards in Nigeria and the condition of its occupant according to Akinremi (2007) in "The Reformer" a quarterly Prison Service Information Publication (PSIP, 2007) is a source of concern in terms of availability of social amenities like water, electricity, health services and infrastructures for participation in sports. The International Human Rights Organization (IHR), (2004). cited by Akinremi (2008), has also described the Nigeria Prisons as not meeting the United Nation's standard, apart from the poor physical and psychological life threatening risks, like rigidity of life schedule and non exposure to exploration facilities. By the standard of the International Human Right Organization (IHRO), Nigeria prison yards as they are now are far from being reformatory, rather they are arena of promoting criminality (Braithwaite, 2003). With this observation, it is necessary for sport and exercise psychologist to start thinking of the

reversal for the purpose of positive change. In the same vein, sport psychologist according to Alexander (2002) equally identified that a significant aspect of prison reform is the ability to successfully change the mindset of inmates through several rehabilitation programs. To achieve this researcher have confirmed the significant positive relationship among exercise and the development of positive self-concept self-eastern (Mc Auley & Jacobson 2006).

Recommendations

This study has revealed that there are psychological dimensions to participation in exercise and physical activities. Whatever the status and condition of an individual, there is the need to boost one's self-concept and self-esteem through participation in exercises. As a result of this, the following recommendations were made for the authorities of Nigeria prisons and experts in the field of Human Kinetics and sports science especially sport psychologist that:

- The prison authority and management should improve on the standard of inmates by embarking on the provision of sport facilities in the prison yard to meet the psychological needs of inmate.
- The prisons authority and management should employ the services of sports and exercise scientist to serve as instructor who will design exercise related to the needs of the inmate.
- Sport unit should be created at the command head quarters where sport program will be designed, equipment purchased and distributed to various units across the nation.
- The prison authority should collaborate with relevant authorities like the National Sports Commission, State Sports Councils and other sport related organization on how best to improve physical activity needs of the prison personnel and the inmates.
- Physical education experts, especially sport psychologist should organize seminar and workshops for personnel of Nigeria prisons on the need to enhance the psychological well-being of inmates through physical exercises.
- More studies on how to meet the sociological and physical needs of the inmates should be encouraged.
- Coaching clinics could be organized for the in-mates and prison personnel at regular intervals by experts.

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