

## PHYSICAL SELF-EFFICACY LEVEL OF ADULTS INVOLVED IN PROGRAMMED PHYSICAL EXERCISES IN RIVERS STATE, NIGERIA

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### ABSTRACT

*The study considered the level of physical self-efficacy of adults involved in programmed physical exercise in Rivers State. A sample of 300 sample respondents were involved in the study. 150 were involved in a programmed physical exercise for at least 6 months and 150 were involved neither in programmed physical exercise, nor any form of vigorous physical exercise. Age range of respondents was 35 – 45 years with a mean age of 40 years. An adapted form of physical self-efficacy scale (PSE) by Ryckman et al (1982) was administered on them. The sub-scales of the instrument were PPA–Perceived Physical Ability, PSC–Perceived Self Presentation Confidence and PSE – Overall Score on PSE. The study hypothesized that there will be no significant difference between those involved in programmed physical exercise and those not involved on physical self-efficacy; that there will be no significant difference between males and females involved in programmed physical exercises on physical self-efficacy. The study utilized the mean and standard deviation and the student t-test statistical techniques in analyzing data. The study found significant differences between those involved in programmed exercise (participants) and those not involved, on the overall physical self-efficacy scale. The study further found significant differences between males and females involved in programmed physical exercises on the PSC and PSE scales respectively. The study concluded that programmed physical exercise improved self-esteem, physical fitness and self-confidence. Sound mind in sound body will enable the participants improve their efficiency in carrying out their daily programmes. The implication for education is that it is only healthy persons that can contribute meaningfully and be involved in study which requires a lot of mental energy. The study therefore recommends involvement in programmed physical exercises for adults.*

**Keywords:** Physical self-efficacy, self-esteem, physical fitness

### INTRODUCTION

Automation has made most work that was manually carried out, to be done now with the assistance of machines. Human being no more walk or trek long distances to go about their daily routine. Means of transportation has been made easy by air, road and sea. It has become easier, quicker and safer than before.

Physical fitness which is very important to existence has been neglected. This used to be achieved through manual labour or walking long distances which otherwise has been simplified

by automation. Hence physical self-efficacy which comes through physical involvement in exercises or work is lost in modern day Nigeria.

This is made worse by the introduction of information technology. The mobile phone system, the e-mail etc. Individuals no longer need to walk a distance to pick the telephone as the self-phone is handy everywhere, no need to walk to a post office or a courier service office to post a letter. All these help in stretching the muscles and nerves of the individual whereby he become physically fit which helps his physical self-efficacy. The problem of the study therefore is that most Nigerians have neglected physical exercises which has resulted in their being physically unfit. This in turn affects their physical self-efficacy. However, physical efficacy is considered a personal agency and pertains to an individual's confidence in his or her ability to obtain the desired result in a highly specific task (Bandura, 1997). Similarly, Singer (1980) refers to self-efficacy as one's confidence in being able to do what needs to be done.

Bandura (1986) posited that self-efficacy can be a useful explanation and may predict concept of an individual player or exercise participant. Omoluabi (1990) asserted that an individual's psychomotor component in the performance of sports skills depends on his physical self-efficacy. O'Leary (1988) has shown that there is evidence in research which shows that a high degree of self-efficacy has been shown to be related to behaviour change health-wise. However, evident abound in literature that involvement in programmed physical exercise has innumerable number of benefits to the individual. Various studies have pointed to the importance of exercises as a medium of enhancing the quality of life of persons through improved self esteem and physical self-perceptions (Fox, 2000).

So much benefits are derivable from engagements in physical exercise by adults especially physical self-efficacy which this study focuses on.

Exercise has been found to have the potential of enhancing self worth among older adult, Mutrie and Davidson (1994).

Efficacy is quite a dynamic rather than a static trait as it is constantly being reassessed and evaluated (Bandura, 1997). However, according to Engler (1991) Bandura believes that it is desirable to reintroduce internal variables, such as self-efficacy, which is a person's perception of his or her effectiveness into the study of behaviour. Using the trait in the study of behaviour of persons involved in competitive sports and exercise programmes is quite desirable.

It is believed that physical self-efficacy is a predictor of exercise adherence for a group of individuals involved in programmed physical exercises (Malherber et al, 2003).

Fox (1999) asserted that there is evidence to show that exercise can change persons perceptions of their physical self in a positive manner. In a study by Dionigi and Cannon (2009) on perceived changes in physical-self-worth associated with resistance training in older adults, it was found that resistance training had a broader effect on some of the participant's usual lifestyle and also enhanced their level of fitness and motivation to tackle other activities. They were reported to feel better in their overall health and perceived quality of life.

Programmed exercise has also been found to help adults feel good and improve their mental health (Plante, 1999). While Fox (1997) further reported that most studies that have been carried out in the area of self-esteem changes associated with exercise have mainly focused on physical self. Hence this study is in the right direction using Nigerian subjects as samples.

## PURPOSE OF STUDY

Physical self-efficacy of an individual is a good means of measuring an individual's health status. Note that health is wealth and it is only the healthy person that can contribute meaningfully to production thereby assisting economic growth of his country. Various diseases connected to sedentary work like arthritis which is common among adults in Nigeria can be eliminated through vigorous physical activities. Exercise gives an individual poise and self confidence which leads to self-efficacy and self-esteem. It is therefore necessary to carry out this research to determine the level of physical self-efficacy of individuals involved in programmed physical exercise as compared to those not involved in programmed physical exercise. Find out differences on physical self-efficacy between males and females involved in programmed physical exercise.

Exercise is said to be the major contributor to the physical self-efficacy of an individual. The paucity of research in Nigeria in particular and Africa in general on physical self-efficacy of individual and teams is one strong reason why this study is necessary. Further, there generally seems to be a dearth in literature on studies focusing on adults involved in physical exercise as they may not be regarded as active athletes. This is buttressed by Whaley & Ebbeck, (2002) who asserted that older adults are an underrepresented population in exercise and self-esteem research.

## Research Questions

1. Are there differences between those who participate in programmed exercise and non-participants on self-efficacy?
2. Are there differences between males and females exercise participants on self-efficacy?

## Null Hypotheses

The study hypothesized as follows:

1. That there will be no significance difference between adults involved in programme physical exercise and non participants on physical self-efficacy
2. That there will be no significance difference between male and female participants on physical self-efficacy.

## METHOD

### Design of the Study

The study utilized the one short case experimental design to enable the author get a grip on the relevant subjects of the study. It is a one group design. It did not involve a pre-test.

### Population

The population of the study comprise 3,000 adult males and females involved in daily/weekly programmed physical exercises in Port Harcourt, Rivers State for at least 6 months. The various sports clubs are spread throughout the Rivers State capital of Port Harcourt and its environs. The average age of participants was 40 years of age.

### Sample

150 subject samples comprising 75 males and 75 females between the ages of 35 – 45 years with a mean age of 40 years who have been involved in programmed exercise for at least 6 months

and 150 non-participants comprising of 75 males and 75 females of the same age range were involved in the study. That is a total of 300 subjects were used for the study. The exercise participants and exercise non-participants were matched in age and sex.

While 300 non-participants in programmed physical exercises were drawn from the normal population in the same environment of the study. The participants and non-participants were matched in age and sex.

The subject samples were drawn by means of the simple random sampling technique.

### Instrument

The instrument used for data collection is the Physical Self-Efficacy Scale (PSE) authored by Ryckman, R.M.; Robins M.A.; Thornton, B. & Cantrell, P. (1982).

It is a 22 item questionnaire with six options. It has three subscales namely:

- PPA – Perceived Physical Ability
- PSC – Perceived Self Presentation Confidence
- PSE – Overall Score on PSE. PSE was generally considered

Ryckman et al (1982) provided the psychometric properties of the instrument for American Samples while those of the Nigerian population was provided by Nworah, (1999) who gave the general norm for athletes for Nigerian Sample as 83.16 while non athletes 88.65 or general population.

The instrument however have been adapted for use in Nigeria as edited by Omoluabi (1999). The instrument has also been used for research on sportsmen by Nigerian professionals. Example, Nworah, (1999) and Vipene (2005) used it to carry out researches on Nigerian Sports participants.

The instrument was administered on the subject samples by the researcher with the aid of two research assistants.

### Data Analysis

The data collected was analysed, using the mean, standard deviation and the t-test statistical techniques to analyse the data obtained from the field at 0.05 level of significance.

## RESULTS

Here are the results obtained from the study.

**Table 1: Mean and Standard deviation scores of participants and non-participants**

Measures	Participants n = 150		Non-Participants n = 150	
	$\bar{x}$	SD	$\bar{x}$	SD
PPA	55.13	7.02	49.04	14.40
PSC	37	9.65	32.57	7.49
PSE	89.63	14.28	79.96	19.24

The results in table 1 shows that individuals involved in programmed physical exercise scored more on PPA which probably indicates that participants in programmed physical exercise have more perceived physical ability than non-participants. On PSC which is perceived self-presentation confidence, participants showed more confidence by the result. On the overall score, those involved in exercise scored 89.63 with an SD of 14.28 indicating that participants showed a high level of physical self-efficacy which may probably be as a result of involvement in graded programmed physical exercise.

**Table 2: Mean and Standard deviation scores of males and females involved in programmed exercise participants**

Measures (subs-scales)	Males n = 75		Females n = 75	
	$\bar{x}$	SD	$\bar{x}$	SD
PPA	55.2	6.14	55	9.85
PSC	41	10.41	30.33	1.53
PSE	96.2	6.38	78.67	8.56

Results in table 2 show that male participants scored higher on all the subscales of the test. The results indicate therefore that males involved in programmed, physical exercise possess more perceived physical ability, self presentation confidence and therefore probably of a higher level of physical self-efficacy than females involved in programmed physical exercise. This may be as a result of more vigour or intense effort put into exercise by male participants.

**Testing of Hypothesis**

**Table 3: t-test of participants in programmed and non-participants**

Measures (subs-scales)	Participants n = 150		Non-Participants n = 150		t
	$\bar{x}$	SD	$\bar{x}$	SD	
PPA	55.13	7.02	49.04	14.40	1.89
PSC	37	9.65	32.57	7.49	1.92
PSE	89.63	14.28	79.96	19.24	2.80*

Significant at P<.05 df = 248 critical t = 1.96.

Results presented in table 3 show that though differences existed between participants and non participants in programmed exercised they were not significant on PPA and PSC subscales. But on the overall subscale of physical self-efficacy programmed exercise participants differed significantly from non participants with a t-test value of 2.80.

**Table 4: t-test scores for male and female participants in programmed exercise**

Measures (subs-scales)	Participants n = 75		Non-Participants n = 75		t
	$\bar{x}$	SD	$\bar{x}$	SD	
PPA	55.2	6.14	55	9.85	0.06
PSC	41	10.41	30.33	1.53	4.29*
PSE	96.2	6.38	78.67	18.56	3.15*

Significant, P<.05, df = 148, critical t = 1.96.

In table 4 on the PPA subscale no significant difference was established between male and female participants. The score 0.06 is not significant. On the sub-scales of PSC and PSE significant differences were established between males and females who are involved in programmed physical exercise with PSC having 4.29 and PSE 3.15 respectively.

## DISCUSSION

Results in table 1 showed that individuals involved in programmed physical exercise had a mean score of 55.13 with SD of 7.02 compared to a mean score of 49.04 with SD of 14.40 by non-participants. This is indicative of the fact that those involved in programmed physical exercise probably have more perceived physical ability than those not involved in programmed exercise.

Similarly on PSC that is perceived self presentation confidence, exercise participant showed more confidence with a mean score of 37 and SD of 9.65 compared to mean of 37.57 and SD 7.49 by non participants. On PSE scale those involved in programmed physical exercise also scored higher with mean of 89.63 with an SD of 14.28 which is indicative of a high level of self-efficacy which may probably be as a result of programmed physical exercise.

Results in table 2 indicates that males and females participants were almost at par with males scoring a mean of 55.2 with SD of 6.14 while females scored a mean of 55 with SD of 9.85.

Differences occurred between males and females participants on PSC, male participants showed more confidence than female participants with a mean of 96.2 and an SD of 6.38 compared to that of the females with a mean of 30.33 and an SD of 1.53. On overall scales of PSE males scored higher, with a mean of 96.2 and an SD 6.38 compared to that of females with a mean of 78.67 and an SD of 8.56 indicative of self-efficacy.

In testing hypothesis 1, it could be observed that significant difference occurred between participants and non-participants on the overall/subscale of physical self-efficacy. This may probably be due to the effect of exercises on participants. This result is in agreement with an earlier study by Malherber, Steel and Theron (2003) who found that those involved in physical exercise had positive physical self-efficacy. Similarly Vipene (2005) found similar characteristics among participants in programmed physical exercise.

In testing hypothesis 2, significant differences were found between male and female programmed exercise participants on the two subscales of PSC and PSE. But the result show that though male and female involved in programmed physical exercises showed self-esteem, improved fitness. Males were more confident and had improved self-concept than females. The result agree with the studies of Fox (2000) and Plante (1999) who found exercise participants to have improved fitness and self-esteem.

## CONCLUSION

The results show that those involved in programmed physical exercise show improvement in self confidence, self-esteem, physical fitness and self concept which may probably be due to the effect of programmed exercise on them.

## RECOMMENDATIONS

1. It is therefore necessary that adults, in order to improve the quality of life through physical fitness, they should be involved in programmed physical exercise on regular basis as this will further enhance self-esteem and physical self-efficacy.

2. That all school programmes should include organized sports that have carry over value, that adults can be involved in after the school years. As this will lead to healthy and productive individuals in society.

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