

The Relationship between Exercise Imagery and Exercise Self-Efficacy among University of Ibadan Students



Ajibua Michael Alayode¹ --- Michael Peculiar²
^{1,2}Sport Centre, Federal University of Technology, Akure, Ondo State, Nigeria
( Corresponding Author)

ABSTRACT

The awareness of the importance of exercise as a panacea to chronic diseases has continued to grow. In spite of this popularity, most people do not exercise or exercise enough to accrue the gains. Study indicated that exercise imagery has assisted athletes to do well in their various sports. The researchers were of the opinion that since it has helped athletes to achieve self-determination and higher performance, it should assist exercisers to attain self-efficacy and therefore motivate them to continue to participate in exercise. For the study, a total of one hundred and fifty students of the University of Ibadan were used. The sporting events for the study include athletics, swimming, football, volleyball, handball, badminton, basketball, table tennis, cricket, hockey etc. The age cadres of different levels of the teams were used. A standardized questionnaire with likert scaling method was used. The demographic data was analyzed using descriptive statistic of mean, standard deviation, frequency and percentage, while the inferential statistic of Pearson Moment Correlation (PPMC) was used to analyze the hypothesis to arrive at 0.05 alpha level. The results showed that there is significant relationship between exercise imagery and exercise self-efficacy ($r=0.311^{**}$, $N=150$, $P<.01$).

Keywords: Exercisers, Self-efficacy, Self-talk, Physical activity, Motivation, Self-statement, imagery.

DOI: 10.20448/800.3.1.14.21

Citation | Ajibua Michael Alayode; Michael Peculiar (2016). The Relationship between Exercise Imagery and Exercise Self-Efficacy among University of Ibadan Students. International Journal of Independent Research Studies, 3(1): 14-21.

Copyright: This work is licensed under a [Creative Commons Attribution 3.0 License](https://creativecommons.org/licenses/by/3.0/)

Funding : This study received no specific financial support.

Competing Interests: The authors declare that they have no competing interests.

History : **Received:** 18 May 2016/ **Revised:** 2 June 2016/ **Accepted:** 8 June 2016/ **Published:** 13 June 2016

Publisher: Online Science Publishing

1. INTRODUCTION

The overwhelming benefits of exercise have grown to become a strategic health importance (Ajibua, 2013). Exercise can be described as a subset physical activity done with the intension of getting physically fit. It is a principal form of physical activity that is planned, structured, repetitive and purposive bodily movement participated in, in order to improve or maintain one or more components of physical fitness (Haappanen-Nremi, 2000). Exercise has both preventive and rehabilitative power. It is a low cost, effective and sustainable approach to healthy living (Arthritis Foundation, 2012). Regular participation in exercise is one of the four strategies recommended by the United Nations Organization (UNO) to reduce global epidemics of non-communicable disease (NCD). Mandigo (2010) referring to 2002 World Health Organization report said in

2001, 1.9 million global deaths were attributed directly to lack of exercise. He remarked that lack of exercise caused 15% of some cancers, diabetes and heart diseases. In Nigeria, chronic diseases caused by lack of exercise accounted for 24% of all deaths (WHO, 2005). The organization further revealed that total deaths in Nigeria in 2005 were 2,014,000 out of which 478,000 were due to chronic disease. In economic terms, according to the report, Nigeria lost 400 million dollars to chronic disease caused by inactivity and projected that these losses will increase to 10 billion in 2017. Consequent upon this, several governmental agencies and international organizations have focused on the need for people to get involved in regular exercise (Akindutire, 2012; Ajibua, 2012) to reduce the menace of non-communicable diseases. Exercise has protective effect against the on-set of over 25 chronic diseases including cardiovascular diseases, type II diabetes mellitus, colon and breast cancers, stroke and osteoporosis (Kirk, M and Rhodes, 2010). Results from epidemiological researches provide convincing evidence that increasing level of exercise/physical activity especially for those who are sedentary, has multiple health effects (Sparling, Owen, Lambert and Haskell, 2000). It is a fact that exercise makes one fit, gives exercisers more energy, greater mental alertness and reduces stress. While it is well established that exercise has significant physical and psychological benefits, most people do not exercise or do not exercise enough to accrue the benefits (Taylor and Schneider, 1989). Hall (1995) proposed that the use of imagery could motivate people to get involved regularly in exercise. Calgar, Canlan and Demir (2009) and Philips, Schneider and Mercy (2004) both explained that understanding the factor such as imagery is very important to encourage persistence involvement. Recent research works have shown the importance of cognitive and motivational functions of mental imagery (Kim, 2006). In his study, Onifade (2005) referred to mental imagery as all those quasi-sensory and quasi-perceptual experiences of which one is self consciously aware and which is known to produce their genuine sensory or perceptual counter-parts in the absence of those stimulus conditions that are genuine sensory or perceptual counter-parts. It is a quasi-sensory experience that mimics real events and situation (White and Hardy, 1998). Kim (2006) said, it is a perceptual experience, but occurs in the absence of an appropriate stimulus for the relevant perception. Again, mental imagery can be seen as a set of activity to create and recreate in mind a correct object, occurrence or motor experience, kept in memory to improve behavior (Kossert and Channler, 2007). Imagery is a psychological skill that has helped both athletes and coaches in achieving high performance. This is so because performance in sport requires about 90% mental and 10% physical preparations (Ajayi, 2005). In other words, the status of one's mind determines to greater extent the intensity, frequency and duration of exercise. Imagery has profound effects on physical performance (Onifade, 2005). Hall (1995) was the first to propose that imagery can also be used by exercise participants, may be because exercise and sport have the same elements. According to him, imagery can be powerful motivation for participation in exercise. Hall, Mack and Paivio (1998) remarked that imagery can be employed to develop, maintain and regain motivation to exercise. Gammage, Hall, and Rodgers (2005) study found out that exercisers can use imagery for three reasons: energy, appearance and teaching. Energy imagery refers to image that are associated with increase feelings of energy and relief of stress. Appearance imagery is related to image of a leaner, fit and healthy body. Teaching Imagery refers to proper execution of body positioning when performing a particular exercise. Imagery just as it does to athletes can help manage energy level, learn and perfect skill, and evaluate performance. Hall (1995) assumed that judging from the results achieved with imagery in sport setting, there is

likelihood that it will have beneficial effects on exercisers. There is the need therefore to have in-dept understanding of imagery so that it can be used as intervention for regular participation in exercise among Nigerians. Mental imagery helps to increase self-confidence and improve individual's belief in himself to perform self-selected activity. And this is what self efficacy does. Efficacy described the confidence an individual has in his ability. It is an individual's confidence in his or her ability to engage in behavior that will yield desired outcome (Bandura, 1986). It makes differences in the way people, feel and act. People with self-efficacy perform more challenging tasks, set high goals and stick to them (Scherbaum, Charash and Kern, 2006). It can influence events that affect a person's life. Perceived self-efficacy determines how people feel, think and behave. It has the capacity to motivate people, influences the choices they make, the effort they put forth, how persistent they are when confronted by obstacles, and how they feel. Bandura, Barbaranelli, Caprara and Pastorelli, (1996) stated that unless a person believes that they can produce a desired effect by their actions, they will have little incentive to act. The benefits of having an increased level of self-efficacy may benefit a child's life in many ways. In the context of exercise behavior, the role of self-efficacy has been suggested by many as one of the paramount factors leading to exercise participation (Williams and Kim, 2014).

1.2. Statement of the Problem

Research evidence has efficacy of exercise to prevent the occurrence of chronic diseases and conditions. There is now worldwide acceptance among medical Professionals that exercise constitutes a fundamental element of healthy living (WHO, 1995). Despite this documented and confirmed evidence, the number of people that engage in regular exercise has continued to decline. Psychosocial theory suggested that for physical activity to improve among population there must be change in behaviour. It has been found out the Exercise imagery can produce indices of self-efficacy which in turn will enhance activity lifestyle among population. Some of the constraints of physical activity is lack of skill and confidence. The purpose of this study therefore is to find out if there is relationship between exercise imagery and exercise self-efficacy.

1.3. Study Objective

The study sought to answer this question:

What is the relationship between Exercise Imagery and Exercise Self-Efficacy among University Students?

1.4. Hypothesis Testing

Ho: There will be no significant relationship between Exercise Imagery and Exercise Self Efficacy.

H1: There will be a significant relationship between Exercise Imagery and Exercise Self Efficacy

2. METHODOLOGY

2.1. Research Design

The descriptive survey method was used for investigating the relationship between 'Exercise imagery and Exercise self-efficacy among students of Faculty of Education of University of Ibadan'.

2.2. Population of Study

The population of this study comprised of both male and female students of Faculty of Education, University of Ibadan.

2.3. Sampling and Sampling Techniques

A total of one hundred and fifty students were used for this study. Simple random sampling technique was used to select the students. The events for this study were athletics, swimming, football, volleyball, handball, badminton, basketball, cricket, table tennis, and hockey etc. The age cadres of different levels of the teams were used.

2.4. Research Instrument

The main instrument used for this study is a standardized questionnaire consisting of the use of five point Likert Scale of Strongly Agree, Agree, Undecided, Strongly Disagree, and Disagree response options which the respondents were expected to select by ticking the option that best suits them.

The questionnaire form contains two sections (A and B). Section A sought the demographic data of the respondents, while section B consists of question on the variables under study and responses were designed so as to enable the respondents indicate their extent of Agree, Strongly Agree, Undecided, Strongly Disagree, Disagree.

2.5. Validity of Instrument

Validity of instrument is the degree to which the degree actually measures what it is supposed to measure and how well it measures it. To ensure validity, draft copy of the questionnaire was given to the researcher's supervisor for constructive criticism.

2.6. Reliability

In order to ensure the reliability of the instrument, the corrected version of the questionnaire was administered twice within three (3) weeks to 60 athletes from different sport teams of the University who were not part of the study but possess the same characteristics with the respondents that were used for actual study. The collected data was collated and subjected to Cronbach's Alpha statistics to determine the internal consistency of each of the scales. The result showed that Cronbach's Alpha was 0.853. Since the value was above 0.5 which was the average, it showed that the research instrument was reliable and consistent.

3. DATA COLLECTION

The copies of questionnaire were properly administered by the researcher with the help of research assistants. The questionnaire forms were completed by the students after being properly briefed. The same questionnaire forms were collected back on the spot.

4. DATA ANALYSIS

The data were collected, coded and analyzed using both descriptive and inferential statistics. Descriptive statistics of mean, standard deviation, frequency and percentages were used to analyze demographic data, while the inferential statistics of Pearson Product Correlation (PPMC) formulated hypotheses at 0.05 alpha level.

5. ANALYSIS AND DISCUSSION OF RESULTS

5.1. Analysis of the Demographic Data

Table-1. Distribution of the respondents by sex

| Sex | Frequency | Percentage |
|--------|-----------|------------|
| Male | 69 | 46.0 |
| Female | 81 | 54.0 |
| Total | 150 | 100.0 |

Source: Michael, 2014

Table 1 shows that 69 (46.0%) of the respondents were males while their female counterparts were 81 (54.0%). This indicates that the respondents used for the study were both male and female.

Table-2. Distribution of the respondents by level

| Level | Frequency | Percentage |
|-----------|-----------|------------|
| 100 | 19 | 12.7 |
| 200 | 55 | 36.7 |
| 300 | 40 | 26.7 |
| 400 | 24 | 16.0 |
| Above 500 | 12 | 8.0 |
| Total | 150 | 100.0 |

Source: Michael, 2014

Table 2 above shows that 19(12.7%) of the respondents were in 100level, 55(36.7) were from 200level, 40(26.7%) were from 300level, 24(16.0%) were from 400level, while 12(8.0) were from 500 level.

Table-3. Distribution of the respondents by sport

| Sport | Frequency | Percentage |
|--------------|-----------|------------|
| No response | 37 | 24.7 |
| Basketball | 6 | 4.0 |
| Cricket | 16 | 10.7 |
| Athletics | 14 | 9.3 |
| Football | 16 | 10.7 |
| Badminton | 11 | 7.3 |
| Volleyball | 15 | 10.0 |
| Swimming | 19 | 12.7 |
| Table Tennis | 10 | .7 |
| Track events | 1 | .7 |
| Tennis | 1 | .7 |
| Handball | 1 | .7 |
| Hockey | 2 | 1.3 |
| Running | 1 | .7 |
| Total | 150 | 100.0 |

Source: Michael 2014

Table 4 above shows that 37(24.7%) of the respondents did not respond, 6(4.0%) indicated Basketball, 16 (10.7%) indicated Cricket, 14(9.3%) indicated Athletics, 16 (10.7%) indicated Football, 11(7.3 %) indicated Badminton, 15(10.0%) indicated Volleyball, 19(12.7%) indicated Swimming, 10(6.7%) indicated Table Tennis, 1(.7%) indicated Track events, 1(.7%) indicated Tennis, 1(.7%) indicated Running, 2(1.3%) indicated Handball, while 1(.7%) indicated Hockey.

Table-4. The Relationship between Exercise Imagery and Exercise-Self Efficacy

| Variable | Mean | Std. Dev. | N | R | P | Remark |
|------------------------|---------|-----------|-----|--------|------|--------|
| Exercise Imagery | 39.8600 | 4.9332 | 150 | .311** | .000 | Sig. |
| Exercise Self Efficacy | 30.0000 | 6.8434 | | | | |

Source: Michael, 2014

**Sig. at .01 level.

It is shown in the table above that there was a significant relationship between 'Exercise Imagery and Exercise Self-Efficacy among Undergraduate Students of University of Ibadan' (r equals .311**, N equals to 150, $P < .01$). Therefore one can conclude that exercise imagery has influence on exercise self-efficacy. So the null hypothesis is rejected. The result of this study was in tandem with that of Hall (1995). He posited that mental imagery conducted before, during or after individual engaging in exercise behavior can increase individual self-efficacy and motivation to exercise. Kok, Omar-Fauzee and Rosli (2010) opined that when people use imagery, they imaging themselves being successfully performing a skill and through this efficacy expectation is developed and eventually leads to self-efficacy. Jone, Mace, Bray, MacRae and Stockbridge (2000) study maintained that imagery increases the levels of self-efficacy for performing physical tasks. Nech and Manz (1992) argued that individuals with functional beliefs will exhibit positive self-statements. He added that the more times a person experiences success, the greater will be the likelihood that this person will enact positive self-talk and self-efficacy. It can help exercisers to adjust their thought, feelings and physical sensations in order to improve performance of their tasks (Kossert and Chandler (2007). This logic is supported by Bandura's (1977, 1986) empirically based theory of self-efficacy. The major thrust of this theory involves the individual's perception of his/her ability to overcome challenges. Munroe, Giacobbi and Weinberg, (2000) pointed out that to belief a considerable empirical event or outcome will actually take place increases after imagining the event. They also added that desirable images can motivate behavior change. Hall (1995) proposed that imagery may be a powerful motivator for exercisers through its impact on self-efficacy expectations. Boban, Pharner and Stokes (1999) maintained that imagery can help improve knowledge and also be used throughout learning experience.

6. CONCLUSION

Based on the results of the research, and the previous studies, it can be concluded that the exercise imagery has relationship with exercise self-efficacy. Thus, it means that at the centre of exercise self –efficacy lies exercise imagery. In order words, imagery can be used as intervention to encourage non-exercisers to start exercising. Study has shown that exercise imagery will enhance skill acquisition and confidence of exercisers. When an individual has skill and confidence in a particular activity he wants to continue to engage

in it. Therefore, coaches and fitness trainers should use exercise imagery as a tool for positive physical activity behavior change.

REFERENCES

- Ajayi, M.A. (2005). Attention and concentration in sport: A must for excellent performance. A Paper Presented at the National Workshop on Essential of Mental Techniques for Sport Organized by the National Institute for Sport in conjunction with Femtel Consult Held at the National Stadium, Surulere, Lagos, Nigeria from 5th-6th July, 2005.
- Ajibua M.A., Olorunsola, H.K. and Bewaji, O.B. (2013). Perceived motivational factors influencing leisure-time physical activity of teaching and non-teaching staff of tertiary institutions in Ondo State, Nigeria. *International Journal of Asian Social Science*, 3(1): 10-19.
- Ajibua, M.A. (2012). Involvement in physical leisure activity of academic and non-academic staff of tertiary institutions in Ondo State. An Unpublished Master Thesis. Department of Physical and Health Education, Obafemi Awolowo University, Ile-Ife, Nigeria. pp: 70-101.
- Akindutire, O.I. and Adegboyega, A. J. (2012). Participation in leisure-time physical activity by public servants in Ekiti State, Nigeria. *European Journal of Social Sciences*, 31(2): 251-260.
- Arthritis Foundation (2012). Environment and policy strategies to increase physical activity among adults with Arthritis, Washington D.C. pp: 1-31.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, N. J.: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A., Babaranelli C, Caprara, G.V. and Pastorelli C. (1996) Multifaceted impact on self-efficacy beliefs on academic functioning. *Child Development*, 67: 1206-1222.
- Boban, M., Pharner, J.A and Stokes, A.F. (1999) When does imagery practice enhance performance on motor tasks? *Perceptual and Motor Skills*, 88: 657-658.
- Caglar, E. Canlan, Y and Demir, M. (2009). Recreational exercise motives of adolescents and young adults. *Journal of Human Kinetics*, 22, 83-89
- Gammage, K.C., Hall, C.R and Rodger W.M. (2005) A pragmatic research philosophy for applied sports psychology. *Sport Psychology*, 14: 348-359.
- Haapanen-Niemi N. (2000). Association of smoking, alcohol consumption and physical activity with health and health care utilization. A Prospective Follow-up of Middle-Age and Elderly Men and Women, Academic Dissertation, Faculty of Medicine, Tampere University.
- Hall C.R., Mach D. E., Paivio, A. and Hausenblas, H.A.(1998) Imagery used by athletes: Development of the sport imagery questionnaire. *International Journal of Sport Psychology*, 29: 73-89.
- Hall, C.R (1995). The motivational functions of mental imagery for participation in sports and exercise. In J. Annet, B, Cripps & H. Steinberg (Eds.) *Exercise addiction: Motivation for participation in sport and exercise* Leicester. England: British Psychological Society. pp: 15-21.
- Jone, M.V., Mace, R.D., Bray, R, MacRae, A.W., and Stockbridge (2002) The impact of motivational imagery on the emotional state and self-efficacy levels of novice climbers. *Journal of Sport Behaviour*, 25: 57-73.
- Kim. B.H.B (2006). Use of exercise related mental imagery by middle-aged adult. An Unpublished Master vThesis Presented to the Graduate School of the University of Florida, USA. pp: 1-40.

- Kirk, M and Rhodes, S. (2010). Physical activity beliefs of new professional employed as academic professionals: An application of the theory of planned behavior. PHENex Journal/Revue phen EPS, 2(2): 1-23.
- Kok, M.O, Omar-Fauzee, M. S. and Rosli M. A. (2010) Relationship between levels of physical activity and exercise imager among Klang Valley citizens. International Journal of Social Management, Economics and Business Engineering, 4(1): 1-12.
- Kossert A.L and Chandler J.M. (2007) Exercise imagery: A systematic review of the empirical literature in journal of imagery. Research in Sport and Physical Education, 2(1): 1-15.
- Mandigo, J. L. (2010) Presenting the evidence: Quality physical education for Canadian children and youth position statement by physical and health education Canada. PHENex, 2(1): 1-12.
- Michael, P. (2014). Relationship between exercise imagery and exercise self-efficacy among undergraduate students of University of Ibadan. An Unpublished Bachelor of Education Degree Thesis in Human Kinetics, Dept of Human Kinetics and Health Education, University of Ibadan, Oyo State, Nigeria.
- Muruoes, K.L Giacobbi, R.R., Hall, C.R. and Weinberg, R. (2000). The four W's of imagery use: when, why, where and what, Sport Psychology, 14: 119-137.
- Neck, C.P. and Manz, C.C (1992) Thought self-leadership: The influence of self-talk and mental imagery on performance. Journal of Organizational Behavior, 13(7): 681-699.
- Onifade, A. (2005). Mental imagery for performance enhancement in sports. A Paper Presented at the National Workshop on Essential of Mental Techniques for Sport Organized by the National Institute for Sport in conjunction with Femtel Consult held at the national Stadium, Surulere, Lagos from 5th-6th July, 2005.
- Philips, E.M., Schneider, J. C. and Mercy, G. R. (2004). Motivating elders to initiate and maintain exercise. American Academy of Physical Medicine and Rehabilitation, 85(Suppl 3): S52-S57.
- Scerbaum, C.A. Charash, Y.C. and Kem, M.J. (2006). Measuring general self-efficacy: a comparison of three measures using Item.Response Theory, Education and Psychology Measurement, 66(6): 1048-1063.
- Sparling, P.B., Owen, N., Lambert, E.V. and Haskell, W.L. (2000). Promoting physical activity: The new imperative for Public Health. Health Education Research, 15(3): 367-376.
- Taylor, E.K. and Schneider, S. K. (1989). Coping and stimulation of events. Social Cognition, 7: 174-194.
- White, A. and Hardy, L. (1998). An in-depth analysis of the uses of imagery by high-level slalom canoeists and artistic gymnasts. Sport Psychologist, 12: 387-403.
- Williams A.S and Kim D.Y. (2014). Self-efficacy for youth sports. Sport Management International Journal, 10(1): 29-44.
- World Health Organization (1995). Exercise for Health. WHO/FIMS Committees on physical activity for health. Bulletin of the World Health Organization, 73: 135-136.
- World Health Organization (2005). Economic benefits of physical activity. <http://www.who.int/upr/phsactv/economicbenefits.shtm>. Access in 2011.

Online Science Publishing is not responsible or answerable for any loss, damage or liability, etc. caused in relation to/arising out of the use of the content. Any queries should be directed to the corresponding author of the article.