

## Influence of self-concept on exercise behaviour of academic staff of some selected universities in Southwest Nigeria

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### Abstract

Self-concept has been consistently considered as a significant predictor of exercise behaviours and physical activity participation among people. This study examined the influence of self-concept on physical exercise participation among academic staff of some selected Universities in the Southwest Nigeria. An institutional-based cross-sectional survey was conducted from September 2023 through February 2024 to investigate the population of 3,199 academic staff of some selected Universities in the Southwest Nigeria. The sample of the study comprised 1800 participants selected through a proportionate sampling. A questionnaire was the instrument used for data collection. Data were collected from 1536 respondents on the influence of self-concept and physical exercise participation scale ( $r \sim 0.63$ ). Results indicated significant positive relationship ( $R = 0.49$ ;  $p < 0.05$ ) among the participants and contributed 24.4% to the variance of academic staff exercise behaviour. Self-concept variables predicted exercise behaviour ( $p < 0.05$ ) in sport morality, social-self, self-confidence and accommodation of conflicts while family sport was not significant. It was concluded that self-concept of the academic staff influences participation in physical exercise. The study recommended that university authorities should preserve the recreational quality of the institutions and their enjoyment value for academic staff.

**Keywords:** Self-Concept; Exercise Behaviour; Influence; Academic Staff; Southwest Universities; Nigeria

### 1. Introduction

Self-concept has been consistently considered as a significant predictor of exercise behaviours and physical activity participation among people. Research has viewed self-concept as people's knowledge on what or who they are and their evaluation on how they feel about themselves [1]. The definition of self-concept is multifaceted and identifies academic, social, and physical self-concept [2]. Academic self-concept is associated to people's achievement in different subjects like history, math, science, while the physical self-concept focuses on physical ability and physical appearances of the individual [2,3]. Social self-concept relates to social situations where peers and significant others are involved [2].

Physical self-concept which is one's perception or evaluation of individual physical ability and physical appearance, and it is one of the sub-factors of the global self-esteem with social self-concept and emotional self-concept [4]. The perception of physical self-concept has been categorized into four including sports competence, exercise behaviours,

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attractive body, physical strength, and physical condition. Physical self-concept which explains one's general self-perception in relation to exercise behaviours will form the focus of the current study [4].

Many studies have reported that the physical self-concept is positively related with happiness and well-being of an individual [2,4]. Physical self-concept is one of the psychosocial factors of the psychological well-being in workplace including university setting. The perception of one's physical state is correlated with self-concept, exercise behavior/physical activities participation [4].

Studies have associated the activities which individuals chose to engage in as closely related to the their-self-concept [1,2]. Moreover, thoughts, opinions, general notions or ideas of oneself, especially those formed by generalization from particular ideas are all serve as a boosters to self-concept [5,6]. Individuals build their self concept through experiences with and the interpretations of their environment, which are directly or indirectly influenced by evaluations through significant others, reinforcements and attributions for their behaviours. Individuals express different self-concepts from physical, social, psychological and even academic points of views [7].

Self-Concept and exercise behaviour of academic Staff and the level of participation in exercise/physical activities would serve as good avenues for character growth/moral development. It has been observed that in spontaneous games and free plays, interpersonal dependence develops quite naturally. Silver and Weinberg believed that communication is a major avenue through which such acceptable character or moral are developed in one through participations in physical exercise [8]. One may wonder if sport and physical activities participation helps in the development of academic activities among academic staff. Studies have affirmed this thus, physical activities and exercise helps individual to learn skills, attitudes, values and behaviours that enable them to function and relate effectively with one another in the work environment [9,10].

Advancement in industrialization and the changing nature of work today underscore the need for physical exercise within the workplace especially among academic staff of the university. Evidence from studies which revealed that self-concept, motor development and physical exercise can present a positive correlation with cognitive (working memory) and learning processes in school environment [6,11]. The enabling environment for work productivity and increased learning outcome and academic performance is attributed to the good work environment and good human relations including the relationship between the students, parents, teachers or academic staff [12]. In other words, physical exercise has been reported to increase academic performance, assertiveness, confidence, emotional stability, intellectual functioning, memory, perception, positive body image, self-control, sexual satisfaction and psychological well-being of workers [13-15].

Research had documented that individual who has good aerobic condition can improve their memory capacity, since physical exercise can strengthen specific areas of the brain and that the intake of oxygen during exercise improves connections between muscles [16]. Physical exercise improves cognitive function and has a positive influence on processes involving memory in both children and adults [17]. It can improve the memory capacity, as physical exercise can strengthen specific areas of the brain and the oxygen intake during exercise improves connections between muscles and as well enhance good behaviours in work place [18].

Studies have revealed that academic staffs are vulnerable to exercise related health and psychological problems because of their negative self-concept, poor behaviours and attitude towards physical exercises [13,15,18,19]. It is against these backdrop that the study's main objective is to examine the influence of self-concept on physical exercise among academic staff of some selected Universities in the Southwest Nigeria. Specifically, the study will determine the influence of self-concept on exercise participation in family sport, sport morality, social self, self-confidence and accommodation of conflict among academic staff of selected universities in southwest Nigeria.

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## 2. Research Method

### 2.1. Study Design and Setting

A descriptive cross sectional research design was conducted from September 2023 through February 2024 to investigate the influence of self-concept on physical exercise among academic staff of some selected Universities in the Southwest Nigeria. The sample of the study comprised 1800 participants selected through a proportionate sampling from the population of 3,199 academic staff from the first generation universities in southwest Nigeria, (University of Ibadan, Ibadan; University of Lagos, Akoka; and Obafemi Awolowo University Ile-Ife). Their physical activities included jogging 327 (21.3%), walking 177 (11.5) football 163 (10.6%) aerobics 107 (7.0%), table tennis 73 (4.8%) and tennis 47 (3.1%) among others.

The research instrument was an adapted modified questionnaire of a four point Likert scale type with response options more true, true, false and more false. Variables studied helped to elicit information on sport morality social self, self-confidence, accommodation of conflict family sport and the influence of exercise behaviour of the academic staff which were embedded within two sub-scales of self-concept ( $r = 0.63$ ) and exercise behaviour ( $r = 0.61$ ). Data were analyzed using descriptive statistics of frequency count percentage, mean and standard deviation along side inferential statistics of multiple regression @, t-test for more clarification. The test were set at 0.05 alpha level. The findings were presented using tables.

### 3. Results

One thousand five hundred and thirty six (1536) academic staff whose questionnaire forms were properly answered were used for data analysis. A total of 1028 (66.9%) of the participants were males while 508 (33.1%) were females.

**Table 1** Regression analysis for the correlation of family sport, sport morality, social self, self confidence and accommodation of conflict on exercise behaviour of academic staff of selected universities in southwest Nigeria

R	R2	AdjR2	Standard Error of Estimate	F-Value	Sig F
0.494	0.244	0.241	1.76	98.666	0.000

Table 1 showed the regression analysis for the variables of the self-concept fathers. The result indicated a significant relation of the variables  $F(5, 1530) = 96.666$ ,  $P < 0.05$ ,  $R^2 = 0.244$ , adjusted  $R^2 = 0.241$  and a standard error = 1.76 respectively.

**Table 2** Statistical values of the Variables

	B	Standard Error of B	Beta	T-Value	SigT
Family sport	0.009	0.023	0.046	1.731	0.084
Sport morality	0.146	0.012	0.331	12.203	0.000
Social self	0.0025	0.009	0.074	2.672	0.008
Self confidence	0.111	0.014	0.218	8.067	0.000
Accommodation of conflict	0.009	0.016	0.147	5.797	0.000

Table 2 showed the predictive value of the variables and exercise behaviour which are significant ( $B = 0.146$ ,  $t = 12.203$ ,  $P < 0.05$ ;  $B = 0.0025$ ,  $t = 2.672$ ,  $P < 0.05$ ;  $B = 0.111$ ,  $t = 8.067$ ,  $P < 0.05$  and  $B = 0.009$ ,  $t = 5.797$ ,  $P < 0.05$ ). However family sport ( $B = 0.09$ ,  $t = 1.731$ ,  $P < 0.05$ ) was not significant. The beta value of 0.046, 0.331, 0.074, 0.218 and 0.147 reflect the measure of correlation between the independent variables (exercise behaviour) with  $R^2$  of 0.0244. The independent and dependent variables share a common variance of 24.4%, which is highly significant ( $P < 0.05$ ) hence the null hypothesis which stated that there will be no significant effect of self concept on exercise behaviour is rejected

### 4. Discussion

The purpose of this study was to assess the self concept and exercise behaviour of academic staff. The self-concept variables sport morality had positive significant relationship with exercise behaviour. This goes to buttress the fact that sports and physical activities build acceptable characters and morals using effective communication. Sport serve as a useful machinery to foster social and emotional development by inculcating within the individual positive citizenship and leadership qualities of selflessness, humility tolerance, fair play [1,11]. Social self had significant relative effect on exercise behaviour. Several studies have revealed important relationship between social self for both athletes and non-athletes and that females in the university participated less in exercises than their male counterparts [9,10]. There was strong significant relationship between self-confidence and exercise behaviour. This supports the studies which revealed that sports help in the development of team spirit and self-confidence [2,5]. It is also in line with the finding of studies which noted that with effective communication and feedback, sporting groups are bound together which help in dousing the conflict inherent in them [4,20]. On the other hand, "family sport had no significant relationship with

exercise behaviour. Although the family played very important role in socialization into sports, evidence from studies which explained that young married people particularly with children participated less in physical activities [1,21].

## 5. Conclusion

There was high correlation coefficient of the variables sport morality, social self, self-confidence, and accommodation of conflict. Family sport did not significantly correlate with exercise behaviour. This could be explained due to the different demands on the attention of the academic staff for limited time (leisure), finance, and availability for participation avenues in physical activities. It is therefore recommended that the authorities of these universities should preserve the recreational quality of the institutions and their enjoyment value for the academic staff.

## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

## References

- [1] Wehrle, K., Fasbender, U. (2019). Self-Concept. In: Zeigler-Hill, V., Shackelford, T. (eds) Encyclopedia of Personality and Individual Differences. Springer, Cham. [https://doi.org/10.1007/978-3-319-28099-8\\_2001-1](https://doi.org/10.1007/978-3-319-28099-8_2001-1)
- [2] Rahe, M., Schaefer, J., Schürmann, L. et al. Influence of Boxing Training on Self-Concept and Mental Rotation Performance in Children. *J Cogn Enhanc* (2024). <https://doi.org/10.1007/s41465-024-00297-y>
- [3] Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, 46(3), 407–441. <https://doi.org/10.3102/00346543046003407>
- [4] Kim I, Ahn J. The Effect of Changes in Physical Self-Concept through Participation in Exercise on Changes in Self-Esteem and Mental Well-Being. *Int J Environ Res Public Health*. 2021 May 14;18(10):5224. doi: 10.3390/ijerph18105224. PMID: 34069040; PMCID: PMC8157161
- [5] Stratton, R. (2000). Self esteem in youth sport: Coaching youth sports. [www.bls.gov/spotlight,2010.sport](http://www.bls.gov/spotlight,2010.sport) and exercise. BLS Spotlight on Statistics.
- [6] Fernández-Bustos JG, Infantes-Paniagua Á, Cuevas R and Contreras OR (2019) Effect of Physical Activity on Self-Concept: Theoretical Model on the Mediation of Body Image and Physical Self-Concept in Adolescents. *Front. Psychol.* 10:1537. doi: 10.3389/fpsyg.2019.01537
- [7] Duarte-Clíments, G., Sánchez-Gómez, M.B., Palenzuela-Luis, González-Abreu, J., Guzmán-Fernández, C.J., Ramos-Santana, S., Gómez-Salgado, J., Rodríguez-Gómez, J.Á., Romero-Martín, M. Relationship between the self-concept and physical activity towards the prevention of chronic illnesses. *Medicine* 99(28):p e20884, July 10, 2020. DOI: 10.1097/MD.0000000000020884
- [8] Silver, J.M. and Weinberg, R.S. (1984). Psychological foundations of sport. Human Kinetics Publishers. Inc. II
- [9] Nazaro, A and Strazzabosco, J. (2003). Group dynamics and team building, hemophilia organization development.
- [10] Chen, M.H. (2000). The relationship between sport-specific self-concept and exercise behaviour. The 44th ICHPER-SD World Congress Proceedings. Tapei, Taiwan. 2000. 371-375.
- [11] JacAngelo, N. (2003). The relation of sports participation to academic performance of high school students [Unpublished doctoral dissertation]. Florida International University.
- [12] Guay, F., Marsh, H., & Boivin, M. (2003). Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology*, 95(1), 124-136. <https://doi.org/10.1037/0022-0663.95.1.124>
- [13] Paulo, R. (2014). Effects of Physical Activity on Body Composition and Physiological Parameters with Impact on Health Status of Higher Education Students] [Unpublished doctoral dissertation]. University of Beira Interior.
- [14] Lipscomb, S. (2007). Secondary school extracurricular involvement and academic achievement: A fixed effects approach. *Economics of Education Review*, 26, 463-472. <https://doi.org/10.1016/j.econedurev.2006.02.006>

- [15] Rigoli, D., Piek, J., Kane, R., & Oosterlaan, J. (2012). Motor coordination, working memory, and academic achievement in a normative adolescent sample: testing a mediation model. *Archives of Clinical Neuropsychology*, 27(7), 766-780. <https://doi.org/10.1093/arclin/acs061>
- [16] Trudeau, F., & Shephard, R. (2008). Physical Education, School Physical Activity, School Sports and Academic Performance. *International Journal of Behavioural Nutrition and Physical Activity*, 5, 10. <https://doi.org/10.1186/1479-5868-5-10>
- [17] Barnea-Goraly, N., Menon, V., Eckert, M., Tamm, L., Bammer, R., Karchemskiy, A., Dant, C., & Reiss, A. (2005). White matter development during childhood and adolescence: a cross-sectional diffusion tensor imaging study. *Cerebral Cortex*, 15(12), 1848-1854. <https://doi.org/10.1093/cercor/bhi062>
- [18] Batista, M., Ramos, L., Santos, J., Serrano, J., Petrica, J., & Honório, S. (2022). Exercise Influence on Self-Concept, Self-Esteem and Academic Performance in Middle-School Children. *Revista Românească pentru Educație Multidimensională*, 14 (4Sup1), 369-398. <https://doi.org/10.18662/rrem/14.4Sup1/678>
- [19] Infantes-Paniagua, Á., Palomares Ruiz, A., Fernández-Bustos, J. G., & Contreras Jordán, O. R. (2021). Physical activity and self-concept in gifted students: A comparison with non-gifted students. *High Ability Studies*, 33(2), 211-226. <https://doi.org/10.1080/13598139.2021.1978404>
- [20] Hagemann, H. (2003). Sports and the environment, ways towards achieving the sustainable development of sports. *The Sport Journal by the 4th Pierre de Couberton School Forum*. Arizona. United States: Sport Academy.
- [21] Groove, J.R. (1995). Issues in sport psychology: an introduction to exercise psychology in T. Morris & Summers (Eds.), *Sport Psychology, Theory, Application and Issues*. John Wiley & sons.