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Physical self concept, global self esteem, academic achievement between PE and non PE students in female university

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ABSTRACT

Physical self concept is an important mediator of outcome in physical education. The Students, among which study at female university are under study to examine the relationship between physical self concept and academic achievement. Participants were 100 female students from two groups, group: 1 physical education students (PE) and group 2: non physical education students (non PE) that randomly assigned in this study. Global self-esteem (GSE) and physical self-concept were measured using the physical self-descriptive questionnaire (PSDQ); academic achievement (GPA) was assesses by overall scores which is gained from educational office department. There were no significant differences on GPA and GSE between PE and non PE students ($p>0.05$). Global physical self concept had significant differences between two groups ($p<0.05$). Multiple regression analysis was examined to see which subscales of PSDQ were significantly related to academic achievement. Strength ($r=-0.28$), physical activity($r=0.26$), body fat ($r=0.26$) had significant relationship with GPA but strength had stronger predictor with (-.65 beta weight). This result demonstrates, more score in strength correlated with lower GPA in PE students. This study revealed PE students in female university was not differing on (GSE), and academic achievement with their counterpart. Non PE students probably could compensate the lack of self esteem and confidence by environmental opportunity which female university provided.

Key words: physical education students, non physical education students, physical self concept, global self esteem, academic achievement.

INTRODUCTION

Our understanding of the self has greatly increased in the preceding years, especially in the area of measurement and structure [6]. An important reason for the continued focus on the self is the recognition that enhanced self-esteem is strongly associated with improved health and mental well-being [4]. Evidence show that self concept is a protective against depression and obesity [16].Self-perceptions are central to the degree of self-esteem that an individual feels and Perceptions of the physical self form a large component of these self-perceptions [9-18] higher levels of physical self-perceptions, in this respect, have repeatedly been found to be associated with higher levels of global self-esteem [7]

Examinations of the relationship of physical activity and physical self-concept have produced mixed results. Researchers [10] found that athletes have lower self concept than non athletes, Vicent also [22] contends that athletes had higher self concept than non athletes, and young [23] reported no differences in global self concept between athletes and non athletes.

Physical activity (PA) not only enhances health but also improves academic performance among students [3-8-13](PA) during the school day improves on-task behavior [13] and behavioral problem among 3-6 years old children [24],in addition resulted less fidgety behavior during class [11] among children. Increased on-task behavior may be one of the mechanisms, that by which academic performance gradually will improved .the available evidence contradicts this view for example a study which is conducted in 2006 with 214 sixth-grade students in Michigan found that students enrolled in PA had similar grades and standardized test scores as students who were not enrolled in PA [14]. and the another research indicated Adding time to "academic" or "curricular" subjects by taking time from physical education programmers does not enhance grades in these subjects and would be detrimental for health[21]

In [20] authors found out PA had a positive relation with self esteem and a trivial negative relation with academic achievement. Parrot was investigating that athletes and non athletes were not differ from each other on any of self esteem measures [17].

In according to academic achievement and self esteem, some researchers investigated that self esteem and academic achievement improve in single gender university. Research conducted by Salomon [19] supports the assertion that single gender education helps to boost self-esteem and self-confidence. Other researchers have recently published results that same to Salomon's findings for example, Lee and Lockheed's [12] study on ninth-grade students in Nigeria indicates that single-sex schools improve girls' mathematics achievements.

It is important to study physical self concept and global self esteem and their relation to academic achievement on female PE students. Few studies examine the physical self concept that influences academic success of PE students. It was hypothesized that PE students would exhibit higher score of physical self concept, global self esteem than non PE students and it was also hypothesized that academic achievement would significant differences between PE and non PE students. The present study was design to:

1-examine group differences in global self esteem, physical self concept and academic achievement between PE and non PE students.
2-determine which subscale of physical self concept would be stronger predictor for academic achievement in PE students.

Traditionally, the terms self-concept and self-esteem have been used interchangeably [14]. To avoid this confusion, we have defined our terms using the theory of Marsh [14]. For the purposes of the current study, Global self-esteem is defined as a general self-description profile based upon the multitude of roles and attributes that make up our self. [5] Global physical self-concept refers to a specific component of global self-esteem (PSDQ).

MATERIALS AND METHODS

Participant

A random sample of 100 students was used in this study. Of these 50 were considered to be in physical education students, 50 in the non physical education students.

Physical education students were defined as students who were studying in faculty of physical education and sport science and 43 student of this group involved in university sport teams. Non physical education students were defined as students who were studying in other faculty such as (Art, Engineering, Science, Educational science and psychology) and they have never participate in sport . Some different sport were represented in this study include individual sport for example (karate, taekwondo, table tennis, shooting, badminton, aerobic) and team sport (e.g., volleyball, basketball). Participation in this study was voluntary.

Procedure

Data collection occurred across a number of locations. Some PE students were approached to participate and complete PSDQ during work out and the non PE students were approached to participate and complete PSDQ during class time or break time. Informed consent was obtained from students prior to the test. Confidentially of subjects information and data was addressed.

Instrument

Global self-esteem and physical self-concept were measured using the physical self-descriptive questionnaire (PSDQ). The theoretical framework and design of the PSDQ were based on the well-established multidimensional self-description questionnaire [15]. The psychometric properties of the PSDQ have been validated in diverse cultures.[15], The PSDQ consists of 70 items designed to measure nine specific Components of physical self-concept (health, coordination physical activity, body fat, sports competence, appearance, strength, flexibility, endurance),global physical self-concept, and global self-esteem[16]. Each of the 70 PSDQ items is a simple declarative statement that can be answered on a six-point true–false response scale. Sample items from the global self esteem scale and global physical self-concept scale are' Overall, I have a lot to be proud of' and 'I am satisfied with the kind of person I am physically active. An example of an item from the appearance subscale of physical self-concept is 'I am attractive for my age.' The PSDQ scale scores were computed by averaging the responses to items designed to measure each component. Negatively worded items were reverse scored.

Academic achievement in this study defined as grade point average (GPA). Overall GPA score of students obtain from graduate department of university.

Statistical analysis

Descriptive statistic for physical self concept and academic achievement were calculated. Multiple regression analysis was conducted to investigate the ability of physical self concept and global self esteem to predict academic achievement of PE students. Independent t-test was conducted to examine if there were any significant differences in global self esteem, physical self concept and academic achievement between PE and non PE students.

RESULTS

Descriptive statics are presented in table1.the mean GPA, GSE, GPSC for PE and non PE students was (17.01, 17.31), (40.30, 38.28), (29.96, 24.98).GPSC has high mean in PE (M=29.96) students than non PE students.

Table1. Descriptive statics for PE and non PE students

variable	PE Student		Non PE student	
	M	SD	M	SD
GPA	17.01	.94	17.31	1.11
GSE	40.30	6.02	38.28	6.54
GPSC	29.96	5.49	24.9800	6.40

Independent t-test to determine differences in GPA, GPSC and GSE between PE students and non PE students indicated in table 2.

Results show GPA and GSE is not significantly differences between PE and non PE students ($p>0.05$) but GPSC is significantly differences between PE and non PE students.

Table2. Independent t-test for PE and non PE students

	variable	M	SD	DF	Sig
GPA	PE students	17.01	.94879	98	0.14
	Non PE students	17.31	11990		
GPSC	PE students	29.96	5.49568	98	.000
	Non PE students	24.98	6.40946		
GSE	PE students	40.30	6.02		
	Non PE students	38.28	6.40	0.11	0.11

In attempt to examine measures of PSDQ subscales that might serve as potential predictor of GPA, GPA was regressed on health, endurance, coordination, strength, flexibility, appearance, physical activity, body fat, sport competence, global self esteem and global physical self concept.

Multiple regression results are presented in table3. Independent variable such as, strength(r=-.28), physical activity(r=0.26), body fat(r=0.26) were significantly correlated ($p<0.05$) with GPA. Together these measures of physical self descriptive questionnaire subscales explained 0.33 of the variance (MULTIPLE R=0.57) in GPA. The standard error of the estimate (SEE) for predicting GPA was 0.86. The stronger predictor of GPA was strength with beta weight of -.65.the beta weight for physical activity and body fat were (0.47).

Table3.multiple regression to predict GPA from PSDQ subscales scores in PE students

	In standardize	Standardize	
	b-weight coefficient	**β coefficient**	**Sig**
CONSTANT	11.627		.000
Health	-0.01	-0.11	0.48
Endurance	-0.004	-0.03	0.88
Coordination	0.01	0.07	0.77
Strength	-0.11	-0.65	0.01
Flexibility	0.008	0.05	0.75
Appearance	0.08	0.04	0.83
PA	0.064	0.41	0.04
Body fat	0.064	0.41	0.04
Sport competence	0.063	0.37	0.15
GSE	0.012	0.07	0.70
GPSC	0.013	0.07	0.73
R	0.57		
R^2	0.33		
SEE	0.86		

DISCUSSION

The main objective of this study was to determine the relationship between physical self concept and academic achievement while examine the potential mediating effect of physical activity that PE students involved. The relationship between physical activity and physical self concept, academic achievement, global self esteem previously investigated [2-3-13-20].Furthermore, the association between global self esteem and physical self concept have been examined, but these studies didn't involve physical education students, also the association of physical self concept, academic achievement, and global self esteem in PE students who are studying in a female university remained unexplored.

The first hypothesis was not supported. Results indicate that there was no significant difference on GSE and GPA between PE and non PE students. Several researches have documented that athletes have higher self esteem compared to non athletes .One of the reasons could be environment where students studying As shown in salmon's findings. single gender education helps to boost self esteem and self concept. So it seems that studying in single gender university has led to equal GSE between PE and non PE students, In order word it has positive effect on self esteem of PE students. Moreover, results revealed that the differences in GPA between two groups were not significant In contract, some other researches indicate athletes have high GPA than non athletes (1, 2, 13). It is probable that in a single university no competitiveness among students result in lower GPA.

On the other hand, PE students, having practical units (such as basketball, volleyball, badminton, and so on), spend more time and energy in these activates, and do not pay attention to theatrical units(physiology, kinesiology, psychology), so that is why these two groups has shown no significant GPA. Regarding to same self concept and self esteem in both groups, it seems that PE students cannot look at themselves as real athletes. Therefore, it is respected that GPA between PE and non PE be the same

Regression analysis to predict GPA was performed with all of the PSDQ subscales. In the current sample of PE students, perceive of strength (β=%-.60 P=0.01) was the best predictor of GPA and perceive of physical activity and body fat was the next best predictor. Previous studies that examined the relationship between physical activity and academic achievement have demonstrated mix results.

Result of the present study demonstrates that perceive of body fat was predictor of academic performance. The present study support that spends time in physical activity is associated with a lower perception of body fat that related to academic achievement.

Perceive of strength inversely related to academic performance since PE students don't spend more time in study and this related to have low academic achievement.

CONCLUSION

The current study has reported on the relationship between physical activity, subscale of physical self concept, global self esteem and academic achievement in single gender university.

Several unique finding were reported, which could indicate that GSE, academic achievement between PE and non PE students have significant differences. Specifically compared to the single gender university the PE and non PE students have equal GSE, academic achievement This probably because students in single gender university are typically higher in GSE and academic achievement for some reason which are already mentioned above therefore, they compensate the lack of self esteem and confidence by environment which is provided for them in female university.

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