

## Relationship of Social Interaction and Physical Self-Concept with Leisure Time Physical Activity among Iranian Students

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### ABSTRACT

Since physical activity level is a bridge between individuals' psychological self-concept and the outside physical world, and self-concept can affect social Interactions, the aim of this study was to investigate the relationship between the social Interaction and physical self-concept, and leisure-time physical activity level among males and female students in University of Tehran, Iran. A total of 380 male and female students participated in this descriptive-survey study. They were selected randomly. Data collection tools were three questionnaires including Physical self-descriptive questionnaire of March et al(1994) to measure physical self-concept, IPAQ questionnaire of Craig et al (2003) to assess physical activity level, and a researcher-made questionnaire to measure social Interactions. First, individuals who were supposed to participate in the current study were selected. Then, the questionnaires were distributed among them, and the collected data were analyzed in SPSS using Kendall Tau-c correlation coefficient. The results showed that there was a significant relationship between social Interaction and leisure-time activity among female and male students, and also between physical self-concept and leisure-time activity level. it was concluded that the relationship between social interaction and leisure-time activity was stronger among males compared to females, but the relationship between self-concept and leisure-time activity level was stronger among females, where as the relationship between leisure-time physical activity and social interaction was more among males, and the relationship between physical self-concept and leisure-time physical activity was the same both among females and males.

**KEYWORDS:** Physical self-concept, social Interaction, physical activity.

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### INTRPDUCION

Self-concept is considered to be the individuals' awareness of their own personal characteristics and limitations, and it can be a way to regard an individual's characteristics similar to characteristics of others or different from them. In fact, self-concept is a collection of beliefs about oneself without having a clear judgment or performing any comparison with other ones (Gallahue and Ozmun, 1998). Self-concept is comprised of different aspects including social, emotional, physical, and scientific or academic aspects. According to Marsh (1996), the overall self-concept has a multi-dimensional structure which can be divided into academic and non-academic levels. The first level is related to academic fields such as mathematics, English, history and Science, and the latter is categorized into social, emotional and physical levels. From among all these dimensions, physical self-concept is one of the most important components of non-academic self-concept which is defined as oneself belief about their selves and their capabilities. In other words, physical self-concept or physical image is to have awareness and perception of two following parts:

- Physical appearance or shape
- Physical abilities

Physical self-concept or physical image has been investigated in various researches under different titles including physical perception and body concept. Physical self-concept is defined as individuals' attitudes towards their selves (Cooliger, 1996). Physical self-concept is one of the essential factors of development of healthy personality among individuals. Having a strong will and self-confidence, creativity, innovation, and intellectual and mental health is directly related to the level of individuals' physical self-concepts. Individuals should have positive attitudes towards themselves and their environments to benefit from their maximum intellectual capacities and potential abilities. They should replace positive self-concept with negative one to overcome the obstacles of their lives, and improve divergent thinking (Gohari, 1998). In addition, many factors are involved in physical self-concept or affect it. For example, Baily and Wesly (1999) concluded that there is a positive relationship between physical self-concept and

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high physical activity, and Goni and Zulaika (2000) observed that there is a significant relationship between physical activity level and physical self-concept. Physical activity is related to the science of psychology from various aspects. Nowadays, experts believe that motion exercises and sport are so valuable for most of both male and female individuals, and can change humans' attitudes towards everything (Sadeghian, 2012).

Socialization is one of the most important factors of growth, and one of the most fundamental aspects of the personality development. The process of socialization is contrary to self-centralization process where individuals prefer group values over individual values, and inter-personalize them. Social development is associated with a balanced collection of social skills and adaptive behaviors which enable humans to have mutual relationships with others, have favorable reactions, and avoid from behaviors which have negative outcomes. Having some skills such as cooperation, responsibility, empathy, self-control, and self-sufficiency are considered to be social components (Cartledge and Milburn, 1994). The increasing numbers of people who have difficulty in communicating with others or individuals who fear of social conflicts justify the necessity of studying social development and related factors. Although there is a close relationship between physical and mental health, and social skills development, investigating the status of physical self-concept, and its relationship with social Interactions and physical activity level is of special importance (Amirnejad et al, 2008). It can be stated that the overall body shape is composed of the parts of body composition. It means the amount of body fat, muscle mass amount, height, weight, and components of physical fitness compose body. So, one of our communicational areas with others, and our impression of ourselves stem from body composition and physical fitness (Auweele et al, 1999). Body is a common aspect between the individual and the world, and body performance is a bridge between individuals' mental self-concept and the outside physical world. Hence, physical self-concept is an important part of body system, and individuals' feelings about their bodies contribute to their public feelings. Also self-concept perception is an important factor for measuring the public self-esteem. Physical self-concept as one of the prominent fields of its multi-dimensional model includes perceptions of physical competence, physical appearance and health dimensions, and public perception of physical self-concept (i.e. feeling of proud, satisfaction, happiness, and physical self-confidence). There is a high correlation between the appearance and self-esteem. It seems that physical self-concept differs from other fields in terms of quality, because it is constantly observed and evaluated (Lindwall and Hassmén, 2004). Considering the importance of all the constituent aspects of human being, it is necessary to pay attention to both physical and mental aspects. The insight and perspective of humans towards themselves is affected by social and physical capabilities and dimensions. Sense of inner success in life affairs (e.g. occupational, educational, social affairs) can be achieved in other fields where the humans test their social and physical capabilities. Therefore, such a point of view can make the importance of investigating physical self-concept clear, because the phenomenon of mental image of body and its abilities can lead to social and psychological success as well as physical success (Ghorbani Marzooni and Bahram, 2009). So, this study intends to address the question that whether social Interactions and physical self-concept are related to leisure-time physical activity level among male and female students or not.

## MATERIALS AND METHODS

### Previous works:

Due to the role of physical self-concept in different aspects of life, several researches have been conducted in this field since now. For instance, Annesi et al (2008) studied the relationship between physical self-concept and change in physical activity level. They assessed changes over 12 weeks in measures of self-appraisal (general self, physical appearance, physical self-concept, exercise barriers self-efficacy) and mood (tension, vigor), and their relations with voluntary physical activity changes. The treatment group included 146 African American preadolescents with the control group comprised of 123 African American preadolescents. According to their result, the intervention group reported significantly more positive self-appraisals, reduced tension, and enhanced vigor. In another study, Sit et al (2009) examined the relationship between physical activity and physical self-concept among 66 Hong Kong Chinese adults with an acquired physical disability as well as other personal variables such as gender and time of onset of disability. They found out that the relationships between physical activity and self-perceptions were weak. The time of onset of disability, rather than activity level and gender, was more related to self-perceptions. The differences between the sexes on the effect of activity on self-esteem and body image were investigated by Griffin and Kirby (2007). Self-esteem was measured using the 10-item Rosenberg Self-Esteem Scale and body image was assessed by the 23-item Body Cathexis Scale. Participants were three different groups of physical exercise, computer course, and no intervention control. It was found that body image perception of individuals in the physical exercise group improved after 6 weeks in males but not in females. Also, for males only, the self-esteem of individuals on the computer course significantly improved. Gill (2007) explored the effect of controllability on causal attributions,

efficacy, and performance in an exercise setting, using a design that accounts for explanatory styles on 150 female undergraduate students. Self-efficacy, causal attributions, and performance on a hand grip and a wall squat task were assessed during a testing session. Results showed that non-contingent feedback can produce a maladaptive pattern of attributions. Non-contingent negative feedback had relationship with both decreased self-efficacy and less effort. Although strength and level of self-efficacy on a subsequent task were positively affected by positive feedback, but there was a decrement in performance.

### Methodology:

The aim of this descriptive survey is to investigate the relationship between social Interaction and physical self-concept, and leisure-time physical activity level among male and female students. The statistical population of this study was consisted of female and male students of different fields of study in University of Tehran, and a sample of 380 was selected from among of this population using random sampling technique (200 male and 180 female). Data collection tools were three questionnaires including two standard questionnaires of physical self-concept and physical activity level and a researcher-made questionnaire as follows:

- **Physical self-concept questionnaire (Marsh et al, 1994):** used for measuring physical self-concept is a 70-item questionnaire which measures 9 specific components of physical self-concept (i.e. health, coordination, physical activity, body fat, sports competence, appearance, strength, flexibility, and endurance), and 2 main components of the overall physical self-confidence and self-esteem. Each item is a simple declarative sentence in the form of a 6-point Likert scale. This 6-point Likert scale ranges from 1= completely true to 6=completely false. The questions of 6, 17, 39, 40, 31, 45, 56, 67, 12, 23, 1, 33, 68, and 70 options are such a way that 6 =completely false and 1=completely true. So, minimum score is 56 and maximum score is 336.
- **The questionnaire of IPAC (Craig et al , 2003) :** was used to measure physical activity level. According to Craig et al (2003), this questionnaire is an appropriate tool for measuring the physical activity among individuals aged between 18 and 65.
- **The researcher-made questionnaire of social Interactions:** comprises 20 items, and its validity is equal to 0.85.

the questionnaires were distributed among participants, data were collected, and the relationship between the variables including social interaction, physical self-concept, and physical activity level was tested in SPSS using Kendall tau-c correlation coefficient.

## RESULTS AND DISCUSSION

### Descriptive analysis:

In this section, descriptive statistics of the studied variables are presented in tables 1 and 2.

**Table 1.** Frequency distribution of leisure-time physical activity variable for male students

Measure	N	Percent	Valid percent (%)	Mode
Very low	24	12	12	3
Low	46	23	23	
Average	43	21.5	21.5	
High	35	17.5	17.5	
Very high	52	26	26	
Total	200	100	100	

**Table 2.** Frequency distribution of leisure-time physical activity variable for female students

Measure	N	Percent	Valid percent (%)	Mode
Very low	48	26.7	26.7	3
Low	37	20.6	20.6	
Average	43	23.9	23.9	
High	34	18.9	18.9	
Very high	18	10	10	
Total	180	100	100	

### Testing hypotheses:

Hypotheses 1 and 2 are a kind of correlational hypotheses. In such type of hypothesis, an increase or decrease in a variable leads other variables to increase or decrease regularly. So, correlation coefficients are appropriate tests for the structure of correlational hypotheses. Due to the variables' ordinal level of measurement and their abnormalities, it would be better to use nonparametric tests. In this regard, Kendall tau-c correlation test is one of the best tests used for measuring correlation coefficient

*Hypothesis 1: there is a significant relationship between social Interaction and leisure-time activity level among male and female students.*

**Table 3.**Kendall tau-c correlation test results of H1

No.	Variable	Kendall's tau-c	p-value	N
1	The relationship between social Interaction and leisure-time activity among males	0.678	0.000	200
2	The relationship between social Interaction and leisure-time activity among females	0.506	0.000	180
3	The relationship between social Interaction and leisure-time activity(total)	0.576	0.000	380

According to table 3, the relationship between social interaction and leisure-time activity level among female and male students is measured based on the opinions of 380 students. As it can be observed, it can be said that there is a significant relationship between the above-mentioned variables at 99% confidence level considering the Kendall's tau-c value and p-value (p-value <0.01). In other words, the null hypothesis is rejected and hypothesis 1 is confirmed. So, there is significant relationship between social Interaction and leisure-time activity level. This relationship is stronger among males than females.

*Hypothesis 2: there is a significant relationship between physical self-concept and leisure-time activity level among female and male students.*

**Table 4.**Kendall tau-c correlation test results of H2

No.	Variable	Kendall's tau-c	p-value	N
1	The relationship between physical self-concept and leisure-time activity among males	0.431	0.000	200
2	The relationship between physical self-concept and leisure-time activity among females	0.716	0.000	180
3	The relationship between physical self-concept and leisure-time activity(total)	0.609	0.000	380

Based on table 4, the relationship between social Interaction level and leisure-time activity level among females and males can be assessed considering the opinions of 380 students. It can be concluded that the relationship between the aforementioned variables is at 99% confidence level considering the Kendall's tau-c value and p-value (p-value <0.01). In other words, the null hypothesis is rejected, and the hypothesis 2 is proved. So, there is a significant relationship between social Interaction and leisure-time activity level among male and female students. This relationship is stronger among females than males.

*Hypothesis 3: there is a significant relationship between leisure-time physical activity level, physical self-concept, and social Interaction level among male and female students.*

Independent t-test was used to test this hypothesis.

**Table 5.**Independent t-test results of H3

Variable	Levene's test		T test		
	F	p-value	t	df	p-value
Leisure-time physical activity	0.242	.613	2.840	379	.034
Social Interaction	0.179	.745	3.368	379	.021
Physical self-concept	3.000	.084	1.616	379	.108

Based on table 5, it can be said that there is a significant difference between leisure-time physical activity and social Interaction level among female and male students at 99% confidence level. It means that the null hypothesis is rejected, and the hypothesis 3 is confirmed. But the fact that the variables are stronger whether among females or males can be found considering their scores mean (Table 6).

**Table 6.** Descriptive statistics

Group		Mean	SD
Leisure-time physical activity	Male	3.2810	0.71216
	female	2.9500	1.02346
Social Interaction	Male	3.6410	0.43890
	female	3.2134	0.99432
Physical self-concept	Male	3.8631	0.98630
	female	3.8417	0.89761

According to the calculated means, it can be concluded that the levels of leisure-time activity and social Interaction are higher among males but physical self-concept is the same among females and males.

## CONCLUSION

In this paper we tried to investigate the relationship between social Interaction and physical self-concept, and leisure-time physical activity level among male and female students in University of Tehran, Iran. Participants were 380 subjects. In order to examine the relationship between research variables first we used 3 questionnaires, and then after collecting data, they were tested based on three hypotheses. Findings showed that there was a significant relationship between social Interaction level and leisure-time activity level among both female and male students. It was concluded that the higher the leisure-time activity level got, the stronger the social Interaction became. Also we found that there is a significant relationship between physical self-concept and leisure-time activity level among female and male students. This indicated that as the physical self-concept became more positive, the leisure-time activity level increased. Also we concluded that there is a significant relationship between leisure-time physical activity level, physical self-concept, and social Interaction level among male and female students. It should be taken into consideration that leisure-time physical activity and social Interaction levels were higher among male students while physical self-concept had a same level among both males and females.

The following suggestions can be offered according to the obtained results from the present study.

- Since physical activity has an effect on physical fitness and having a satisfactory appearance can influence social Interactions, it seems that considering the relationship between physical fitness, self-concept, and social Interaction can present a more comprehensive picture of these physical and psychological variables.
- In this study, the participants were selected from among of normal individuals, and the relationship among these variables was assessed among normal individuals. In the future researches, the relationship between these variables can be examined among individuals with mental disorders to properly understand their problems and take step towards solving these problems.
- Conducting this study among elderly people can show the relationship between self-concept and decreasing physical activity level due to aging.

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