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Relationship of self esteem with forward head posture and round shoulder

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Abstract

The purpose of this study was determination of relationship between self-esteem (SE) with the forward head posture (FHP) and round shoulder (RS) in female students of Tehran University. In this regard 66 Subjects were randomly selected from female dormitory of Tehran University with age 26.62±2.04. Ayznek self esteem questionnaire was used to assessing self esteem subjects scores, goniometer instrument used for measuring FHP and scapular index used for RS. , spearman correlation coefficient was used to determine the relationship between variables with SPSS-16. Findings showed that there was a negative medium relationship between RS and SE (r=0.35), but there was no any significant relationship between FHP and SE. These results showed that in female student, ST is decreasing when RS index increase and vice versa. This finding emphasize on relationship between psychological factors and posture. This research propos to assessing effect of RS correction on SE score in future studies.

Keywords: Self esteem, forward head posture, round shoulder, goniometer, scapular index

1. Introduction

One of the characteristics of normal personality is self-esteem (Zare et al; 2007). All individuals regardless of age, gender, cultural background and type of work need self-esteem, Self-esteem is the degree of approval and, confirmation feeling of ourselves Or kind of judgments about our value. Self esteem is a favorite of many psychological researchers (Brmas et al; 2005). Available research findings have shown that spinal posture is associated with some specific mental features (Dekel et al; 1996), so that the role of posture in the development of social behavior has been widely accepted (Kleinsmith et al; 2006). Emotions and mental state effect on muscle movements and body posture (Ghorbani et al; 2000), also it seems that psychological aspects can be gradually affect the body posture (Dekel et al; 1996), for example, change of mood, emotion and feelings of a person can

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show changes in body posture (Kleinsmith et al; 2006). Some studies investigate the relationship of self-esteem to appearance status and BMI. Kim et al; 2003 showed negative correlation between BMI and self-esteem in Korean women, Brinol (2009) showed that the posture effects on self confidence and also Bailey (1997) emphasized on the relationship of a good posture with self confidence and self esteem. However, limited researches exist that investigate the relationship between posture and psychological factors. previous research more determine the relationship between spinal posture with psychological factors, which Among them, in three studies association between psychological factors and spinal posture have showed (Norris et al; 1992; Bumgratner et al; 1990; Bumgratner et al; 1997) and in three other studies no relation was found (Samadi et al; 2008, Balzini et al; 2003, Asghari et al; 2006), Including that is the study of Samadi et al; 2008, which the results showed that Kyphosis in students is not alone indicate anxiety and depression However, no study has been done about the relationship between body posture especially forward head posture and rounded shoulder with self-esteem . So the aim of this study was to determine the relationship between self-esteem with body posture of and shoulders rounded and forward head posture.

2. .Material and Methods

This study had a descriptive design and was done by correlation method. Number of samples in this study, were 66 participants with mean age 26.62± 2.04 that randomly selected among the female students, residing in the Tehran University dormitory. All subjects completed consent form before participating in the research process.

2.1. Instruments

Research tools include Ayzenk self esteem questionnaire, with 30 questions. Reliability of test was estimated between 0.83 to 0.92 by Cronbach's alpha. And to measure the angle of the forward head posture Goniometer was used with reliability of 0.87. Goniometer had a long movable arm that end of it was an arrow which moved on conveyor or scaled plan. Conveyor fixed on another long arm and was designed somehow to position parallel to horizontal line during the measurements process and moving of long movable arm.

To Measure the round shoulder, tape was used to measure scapular index (as an index to assess the posture of shoulder). Scapular index calculated through dividing the distance between the sternal notch and acromion process to the distance of posterior edge of the acromion process and spinous process of adjacent thoracic vertebrae .(Borstad et al; 2006)

2.2. Measuring
2.2.1. Forward Head posture measurement

First, individuals were asked to stand while the body is located in upright and normal posture. Then the seventh cervical vertebrae was found and marked by finding its bony landmark through asking person to flex and extend her head 3 tims and then find seventh spinous process of vertebra. Person then was asked to stand while looking ahead, Experimenter then placed on right side of individual and Gvnyamtr was placed in such a way that the central line of the transparent movable arm passes through Tragus of the right ear and seventh cervical vertebra. After that the angle of arrow on the conveyor was recorded. Angle of forward head posture was calculated based on the angle between the line connecting the Tragus of ear and seven cervical vertebrae to the horizontal.

2.2.2. Round shoulder measurement

Person was asked to standing normally with hands hanging beside the body. Then coracoid process, sternal notch, posterior edge of acromion process and adjacent thoracic vertebral spine were fined and marked. Distance between the coracoid process and sternal notch, and also posterior edge of acromion process and adjacent thoracic vertebral spine measure with tape and scapular index was estimated according to the following formula.

$$\text{scapular index} = \frac{\text{distance between acromion process and sternal notch}}{\text{distance between acromion process and spine}}$$

2.2.3. Self esteem measurement

All participants answered to all 30 question of self-esteem Aysenk questionnaire, they should answered, each question by yes, no or median. Self-esteem scale of persons was measured by Aysenk scoring index between zero to 30.

2.3. Statistical analysis

After collecting information about scores of self-esteem, forward head posture angles and round shoulder index, Spearman correlation test was used to determine the correlation between the variables of self-esteem with the forward head posture angles and round shoulder index. The data analysis done by spss-16 and 0.05 consider as a significant level.

3. Finding

This study was performed on 66 samples with the characteristics presented in Table (1). Results showed a significant relationship between self-esteem and round shoulder ($p \leq 0.05$). So that a moderate correlation was observed between these two variables, Table (2). Also no significant relationship was observed between self-esteem and forward head posture ($p \geq 0.05$).

Table 1. Anthropometric characteristics of participants in the study and numerical value of self-esteem score, forward head posture angles and round shoulder

variable	Mean±SD
age	26.62±2.04
height	161.7±5.85
weight	53.29±6.38
Self esteem	23.31±3.65
forward head posture	49.81±4.7
round shoulder	70.±4.8

Table 2. r and p -value of spearman correlation test between self esteem and round shoulder

	round shoulder
Self esteem	**r=0.35** **P=0.00**

3. Discussion

This study investigated the relationship between two indexes of forward head posture and round shoulder with self-esteem in students. In this study, no significant correlation was observed between self-esteem and forward head posture, while self-esteem showed moderate negative correlation with rounded shoulder, it meaning that whatever self esteem is lower, rounded shoulder posture will be more, so this finding confirm the relationship between psychological function and body posture. our result related to rounded shoulder is consistent with *Brinol* et al; (2009), Bailey et al; (1997), Norris et al; (1992), *Bumgratner* et al; (1990) and Noonan et al; (1997) findings. Because in these studies some relationship was observed between psychological factors and body posture, but it's not consistent with Samadi et al; (2009), *Balzini* et al; (2003) and Asghari et al; (2006) findings.

Since that educational period is an exciting and challenging period for students, and because students face more stressful factors in this period and the necessity of proper adjustment is needed, they should have high psychological health and self confidence (Zare et al; 2007) Thus, any factor that somehow affect this psychological ability like eslf esteem of individuals should be considered.
Having an ideal body posture can affect self concepts and also self esteem to some extent which could have effect on personal life and social interactions. Regarding this, attention to body posture, spatially spinal alignment is essential, in this regard roll of corrective exercises bout for having a good posture and also normal psychological statues is emphasized.

5. Conclusion

This study confirm the relation of self esteem and body posture but, As there is limited researches that investigate the relationship between body posture and psychological futures like self esteem, so certain comment in this regard is postponed to doing more research.

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