Research Paper PHYSICAL EDUCATION

Comparison of Faulty Head Forward Posture Between Normal and Blind Children Aged Ten Thirteen and Fifteen

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ABSTRACT

The purpose of the study was to compare normal and blind children aged 10, 13, and 15 in body faulty Forward head posture. To fulfill the study ninety boys from Alagappa University Model Higher Secondary Scholl and seventeen school boys from T.E.L.C Blind School, Thirupattur were used. For the purpose of comparison both the groups were classified into various age categories. These various age categories were 10, 13 and 15. Comparison of normal and blind children on dependent variable was made between same age categories. Static group comparison was employed. The computed t-ratio was compared with the tabulate t-ratio at 0.05 alpha. It was found that at the age of 15 when compared to normal population the blind students are prone to Forward head posture deformity, whereas no significant differences were observed in 10 and 13 years of age category on Forward head posture between blind and normal children.

KEYWORDS Blind, Normal, Posture, Forward head posture

INTRODUCTION

A healthy posture is when all the joints are stacked up in optimal alignment, said Lisa Corrigan. Optimal alignment allows for normal curves of the spine:

- The cervical spine (neck) has an anterior (frontward) curve.
- The thoracic (chest) has posterior (toward the back of the body) curve.
- The lumbar (lower back) spine has anterior curve.

The ear should line up over the shoulder, which lines up over the hip; when one stand, those points should align over the ankle. When a body is in alignment, gravity is distributed evenly and with the least amount of strain on the body. (http://www.therapeuticassociates.com/locations /oregon/central-oregon/bend/)

SPINAL CURVATURE

This type of deformity is related to spine. This deformity is caused by carrying excessive weight beyond capacity. In another way we can say that weak muscles cause the formation of spine curvature. The normal lumbar spine is characterized by a moderate anterior hyperextension curve, when viewed laterally. Although there is absolute standard for the determination of the degree or extent of the anterior convexity of the normal lumbar curve, there are three types of spinal deformities:

- Kyphosis
- Lordosis
- Scoliosis
- Head Forward

HEAD FORWARD POSTURE

Forward head posture (FHP) is the anterior positioning of the cervical spine. This posture is sometimes called "Scholar's Neck", "Wearsie Neck", or "Reading Neck." It is a posture problem that is caused by several factors including sleeping with the head elevated too high, extended use of computers and cell phones, lack of developed back muscle strength and lack of nutrients such as calcium. (Edmondston et al., 2008).,) Possible negative effects include tingling and numbness in the arms, and a burning pain between the shoulder blades (Medical Systems, 2005)

Previous studies have shown that head posture is dependent on vision. The head posture of blind persons therefore can be expected to differ from that of normal subjects Fjellvang, & Solow, 1986) Vision is one of the most important factors involved in the control of head posture. The different head posture in the blind group was produced by forward-downward tilting of the head and neck in combination with an unchanged craniocervical angulation.

In the blind group, the difference in head posture affected the mandibular position so that the craniofacial and dentoalveolar morphology showed a difference: an increase in the mandibular angle and in vertical jaw relationships and at the same time a decrease in inclination of the mandibular incisors (Doğan, Ertürk, 1990).

Body awareness and spatial understanding is naturally more for the normal people when compared with blind people. Hence the purpose of the study was to find out the postural deformities of normal students and blind aged 10, 13 and 15 year old students.

METHODOLOGY

To fulfill the purpose of the study ninety boys from Alagappa University Model Higher Secondary Scholl and seventeen school boys from T.E.L.C Blind School, Thirupattur were used.

For the purpose of comparison both the groups were classified into various age categories. These various age categories were 10, 13 and 15. Comparison of normal and blind children on Forward head posture was made between same age categories. Static group comparison design was employed. The computed t-ratio was compared with the tabulated t-ratio at 0.05 alpha

TOOLS

The angle of each child's head position was measured from four positions (two of the patient sitting and two of the patient standing) with an imaginary diagonal line from the spinous process of the seventh cervical vertebra to the tragus of the ear and a horizontal line perpendicular to a plumb line suspended from the ceiling.

FINDINGS

The obtained percentage of occurrence of Forward head posture between normal and blind children of 10, 13 and 15 are presented in table 1. The obtained ' t' ratio are presented in table 2.

The obtained 't' ratio to test the difference between the percentage of occurrence of Forward head posture among normal and blind boys aged 15 showed that there was significant difference at 0.05 alpha as the obtained 't' ratio (27.3) was more than the tabulated value (2.04 at 0.05 alpha, with de-

grees of freedom 39). There was no significant difference between normal and blind group children in the age group of 10 and 13 in Forward head posture.

Table 1
PERCENTAGE OF OCCURRENCE OF FAULTY HEAD FORWARD POSTURE BETWEEN NORMAL AND BLIND CHILDREN OF 10, 13 AND 15 YEARS OLD ON PLUMB LINE TEST

Age	Subject No. Normal	Subject No. Blind	% of occurrence in normal	% of occurrence in blind
10	30	3	10	33.33
13	30	11	3.33	nil
15	303	3	1.33	33.33

Table 2
PERCENTAGES OF OCCURRENCE OF FAULTY HEAD FORWARD POSTURE AND 't' RATIO BETWEEN NORMAL AND BLIND CHILDREN OF 10, 13 AND 15 YEARS OLD ON PLUMB LINE TEST

Age	Number of subjects	Groups	% of occurrence	t-ratio
10	30	Normal	10	0.84
	3	Blind	33.33	
13	30	Normal	3.33	1.02
	11	Blind	nil	
15	30	Normal	1.33	27.3*
	3	Blind	33.33	

CONCLUSION

It was concluded at the age of 15 when compared to normal population the blind students are prone to Forward head posture deformity, whereas no significant differences were observed in ten and fifteen years of age category on Forward head posture between blind and normal children. The observations made in the blind students were only 3 in the age group of 10 and 15, whereas in 13 age year old category 11 observations were made. If more number of blind population were observed the result may be different. Hence less number of observations on blind population should be considered as a limitation while interpreting the results.

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