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Relationship between boys and girls in kinesthetic intelligence of Tricity School, students

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Abstract

The purpose of this study was to find out the relationship between boys and girls of kinesthetic intelligence of school students. The kind of sense organs found within the muscles and joints are called proprioceptors. The function of proprioceptors is conduct sensory reports to the central nervous system from muscles, tendons, ligaments and joints. These sense organs are concerned with kinesthetic senses that, in general, unconsciously tell us where our body part in relation to our environment. Kinesthetic sense is measure of kinesthetic intelligence. Kinesthetic intelligence is always assessed in terms of kinesthetic sense. In other words kinesthetic sense is one of the mean to asses to kinesthetic intelligence. The methodology of the study consists of selection of subjects, testing procedure and the technique employed for analysis of data. To fulfill the purpose of the study total sixty (N=60) boys and girls were selected randomly. The subjects were the school students of Tricity. Total 60 subject boys (32) and girls (28) of Infant Jesus School, Mohali, Jainendra Public school, Panchkula and Tribune Model School, Chandigarh. As Kinesthetic is the sense of position, location and orientation so, it was measured by kinesthetic obstacles test. The Independent t-test was used for the kinesthetic intelligence comparison of both boys and girls. The result shows that there is a significance difference between boys and girls.

Keywords: Proprioceptors, Kinesthetic intelligence, kinesthetic sense.

Introduction

Kinesthetic intelligence is the ability to control body movements and handle objects skillfully. These learners express themselves through movement. They have a good sense of balance and eye-hand co-ordination. Through interacting with the space around them, they are able to remember and process information. They learn best through a hands-on approach, actively exploring the physical world around them. In relation with kinesthetic sense, kinesthetic sense is the root of kinesthetic intelligence. Kinesthetic sense, an ability to be aware of muscular movement and position by providing information through receptors about muscles, tendons, joints and other body parts. Kinesthesia refers to sensory input that occurs within body. Postural and movement information are communicated via sensory systems by tension and compression of muscles in the body. Even when the body remains stationary, the Kinesthetic Sense can monitor its position. Human possess three specialized types of neurons responsive to touch and stretching that help keep track of body movement and position. The first class called Pacinian Corpuscles, lies in the deep subcutaneous fatty tissue and responds to pressure. The second class of neurons responds the internal organs and third class is associated with muscles, tendons and joints. Proprioceptor, the kinesthetic sense, provides the parietal cortex of the brain with information on the relative position of the parts of the body.

In this context, Rockwood (2003), did a study on effect learning from instruction that contained meaningful physical actions directly related to occupational therapy vocabulary words was compared to teaching by explanation and demonstration in 63 college graduate students from educational psychology classes. Results showed that both groups learned the OT terminology equally well and retained on equivalent amount over time, but those in the kinesthetic-pr axis action- based learning group enjoyed, the lesson more, and appeared more attentive and enthusiastically engaged, than those in the stationery group appear. The researcher has gone through various studies which conducted on kinesthetic intelligence as interested to investigator to take up the present study.

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It was genuine effort on the part of the investigator to compare between boys and girls group of tricity, (Chandigarh, Panchkula and Mohali) in relation to possession of kinesthetic intelligence. Therefore, the purpose objective of this study was to find out relationship between boys and girls students in kinesthetic intelligence.

Method and procedure

The methodology of the study consists of selection of subjects, testing procedure and the technique employed for analysis of data. To fulfill the purpose of the study total sixty (N=60) boys and girls were selected randomly. The subjects were the school students of Tricity. Total 60 subject boys (32) and girls (28) of Infant Jesus School, Mohali, Jainendra Public school, Panchkula and Tribune Model School, Chandigarh. The students referred by class teacher on the basis of active class participation. Details are presented in table.1.0 on gender basis and table 1.1 on district basis.

Table 1: Gender basis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Boys	32	53.3	53.3	53.3
	Girls	28	46.7	46.7	100.0
	Total	60	100.0	100.0	

Table 1.1: District basis

City		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chandigarh	16	26.7	26.7	26.7
	Mohali	21	35.0	35.0	61.7
	Panchkula	23	38.3	38.3	100.0
	Total	60	100.0	100.0	

Procedure of Data Collection: In order to measure the kinesthetic intelligence of the subjects the kinesthetic obstacles test was administered (Johnson Barry L. & Nelson Jackson k, 1988). Purpose: The purpose of this test was to measure the ability of subject to predict the position during movement without the use of eyes. Kinesthetic sense is measure of kinesthetic intelligence. Kinesthetic intelligence is always assessed in terms of kinesthetic sense. In other words kinesthetic sense is one of the mean to asses to kinesthetic intelligence.

Kinesthetic obstacle test

Objective: to measure ability to predict position during movement without the use of the eyes.

Age and Sex: Age 10 above and satisfactory for both boys and girls.

Reliability and Validity: .30 for female, .53 for male and without the use of eyes, there is obvious face validity.

Equipment and materials: 12 chairs (or similar objects), material for blindfolds, chalk markers or a tape marker and tape measures. Shown in fig 1.

Directions: Arrange 12 chairs in accordance with the floor pattern. Each performer is allowed one practice trial walk through the course without a blindfold and one walk through the course blindfolded for a score.

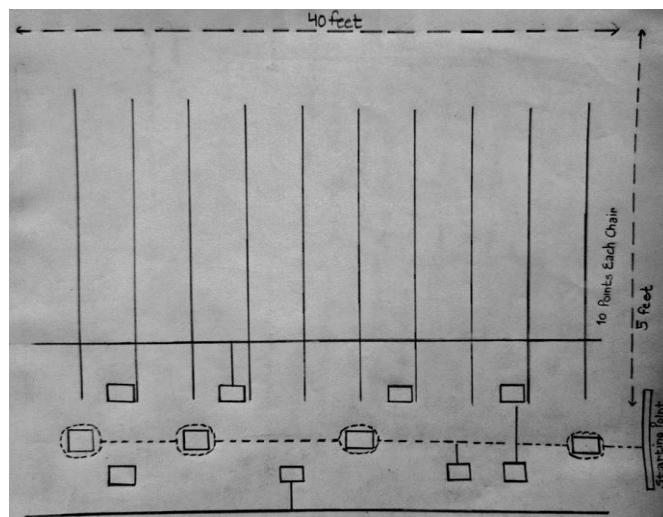


Fig 1: Equipment and materials

Scoring

The performer scores 10 points for each station he successfully clears without touching. There are 10 stations for a maximum score of 100 points

Penalty

(a) There is 10 point penalty for touching any part of the body against any part of a chair. When such a penalty occurs, the performer is directed to the center line and one step ahead of the station where the penalty occurred.

(b) There is 5 point penalty for each occurrence of getting outside of the line or pattern of the chairs, upon such occurrences, the performer is directed back into the center of the pattern at the nearest point which he went astray.

Additional points

(a) The dotted line merely shows the ideal walking path and need not be drawn on the floor.

(b) The two outside lines are boundary lines and should be indicated on the floor,

(c) Further experimentation with scoring systems is needed, since the reliability of the test was found to be quite low.

So, the final score were recorded to present the kinesthetic perception of the subjects. Statistical technique: Statistical analysis was done with SPSS (Statistical Package for the Social Sciences, 20.0, USA). Mean and standard deviation was calculated as a descriptive statistics and independent t-test was used to find out the mean difference between the groups. The level of significance was set at 0.05. The assumptions for applying independent t-test were also taken into consideration (Homogeneity of Variance, Independent sample).

Result and discussion

Table 1.2: Mean difference between males and females

Gender	N	Mean	SD	Mean Difference	t	df	P
Male	32	60.63	20.46	-4.375	0.918	58	0.363 ^{NS}
Female	28	65.00	15.75				

NS- Non-Significant

Mean intelligence was found higher in females (M-65.00) as compared to males (60.63). Higher SD among males (20.46) than females (15.75) suggested more variation related to

kinesthetic intelligence in males. Mean difference between males and females was -4.375 and was statistically non-significant ($t = -0.918$; $p = 0.363$ ($p > 0.05$)). Shown in table 1.2

Table 1.3: Mean difference between males and females district basis

City	Gender	N	Mean	SD	Mean Difference	t	Df	p
Chandigarh	Male	6	70.00	18.97	-2.000	-0.258	14	0.800 ^{NS}
	Female	10	72.00	12.29				
Mohali	Male	12	53.33	17.75	-10.000	-1.337	19	0.197 ^{NS}
	Female	9	63.33	15.81				
Panchkula	Male	14	62.86	22.33	3.968	0.449	21	0.658 ^{NS}
	Female	9	58.89	17.63				

In Chandigarh, mean kinesthetic intelligence was more in females (M- 72.00) than males (M- 70.00). Mean difference between males and females was -2.000 ($t = -0.258$, $p = 0.800$ ($p > 0.05$)) and statistically non-significant. In Mohali, mean intelligence was higher in females (M- 63.33). Mean difference between males and females was non-significant ($t = -1.337$, $p = 0.197$ ($p > 0.05$)). While considering Panchkula, the mean kinesthetic intelligence was a little higher in males (62.86 ± 22.33) as compared to females (58.89 ± 17.63). Mean difference between males and females was non-significant ($p = 0.658$ ($p > 0.05$)). The mean difference between male and female kinesthetic intelligence was maximum in Mohali (10.000) whereas both male and female from Chandigarh surpassed their counterparts in terms of kinesthetic intelligence. Shown in table 1.3.

It was observed from the findings of collected data that there was significant difference between the kinesthetic intelligence of Boys and girls. It means the kinesthetic of girls better than the boys. The reason could be attributed to the fact that the subject student's girls are more observance and stagnant in term of speed during the test. While the subject student's boys were not much observance and their more concern is speed i.e. they want to finish it fast rather than accurately.

Results of this study are also compatible with some research findings, which acknowledge that kinesthetic perception can be improved through practice (Johnson and Nelson, 1998) where the academic priority group also has to work conscientiously to achieve a high grade that requires mainly mental work not any vigorous motor action. By keeping this view in mind it can be said that another reason could be to developed kinesthetic perception ability is regular participation in training session for improving their motor abilities as well as performance. This approach of practice helps them greatly in understanding and memorizing the nature of skill as the result student's physical as well as mental capacity was developed. This test is non-visual kinesthetic ability to predict position during movement which makes individual to drive an automobile and able to steer or use the foot pedals while looking at the road ahead. (Andre & Rojers, 2006) indicated that player looking towards the opponent and dribbling the ball without a single glance on the movement it all possible through the better relationship between non -visual ability to predict position and motor skills.

Conclusion

The result proved that through keen observance and focus on main task different during any test physical testing the kinesthetic intelligence can be developed whether there were body differences. That is why the kinesthetic intelligence of a sports man is always superior to an academician we can also say that physical activities improve the quantity of kinesthetic

intelligence and Kinesthetic learning (also known as tactile learning) is a style of learning that is solely devoted by physical activity, rather than listening to a lecture or watching a demonstration

(https://en.wikipedia.org/wiki/Kinesthetic_learning).

References

- Linden KW, Linden JD. *Modern Mental Measurement: A Historical Perspective*, Boston: Houghton Mifflin, 1968.
- Johnson, Barry L. *Practical Measurements for Evaluation in Physical Education*. : Burgess Pub. Co., 1969.
- Pick JP, Pitcher TM, Hay DA. Motor Coordination and Kinesthesia in boys with attention deficit hyperactivity disorder. School of Psychology, Curtin University of Technology, Perth, Western Australia. j.pick@psychologycurton.edu.au. *Dev. Med Child Neural*. 1999; 41(3):159-165
- Reddy Ravi Shankar Y, Mariya. Effect of age on cervicocephatee kinesthetic sensibility. *International Journal of Current Research and Review*. 2011; 3(6):42-48.
- Sadri RN. Promotion of sports: A Special Necessity Competition Success Review, 1993, 24-27.
- Fox L. Edward. *Physiological Basis of Physical Education and Athletics* (4th edition) publisher Wm. C. Brown Publisher.
- Kinesthetic learning. Retrieved on from the OLPC, 2015. Wiki: https://en.wikipedia.org/wiki/Kinesthetic_learning.