Asian Journal of Social Science and Management Technology
ISSN: 2313-7410
Volume 1 Issue 3, December 2019
Available at www.ajssmt.com

A Study on Coordinative Ability and Kinesthetics Perception In Relation To Psychological and Behavioural Problems among Kodagu Students

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ABSTRACT:
Objective: The main purpose of the study was to compare on kinesthetic perception and coordinating ability in relation to emotional and behavioural problems among kodagu students.
Study Area: The subject was selected from rural areas of Purulia district under the state of West Bengal. Subjects: Total 60 (sixty) male kodagu students (20 under 12yrs, 20 under 14yrs and 20 under 16yrs) were selected randomly for the purpose of the present study. The age of the subjects were ranged between 12-16 years.
Variables: Coordinative ability, kinesthetic perception, emotional and behavioural problems were considered as the variables for the present study and measured by 'Eye hand coordination test' (Ball transfer), 'Distance perception jump' test and Adult Self Report (ASR) checklist. Statistics: Mean, SD and one way analysis of variance (ANOVA) were employed as statistical measures for formulation of result. Findings: The result of the present study showes that there are significant differences found in respect of coordinative ability and kinesthetic perception among kodagu students. And also no significant negative relationship is found between coordinative ability and kinesthetic perception with emotional and behavioural problems. Implementation: If emotional and behavioural problems increasing contributing factors are minimized then psycho motor ability may be developed and healthful kodagu culture may be created. Conclusion: Significant increments are observed on coordinative ability and kinesthetic perception in respect of chronological growth of students. The increasing growth of the emotional and behavioural problems of kodagu students negatively correlates (not significantly) the psycho motor ability to develop.
Keywords: **kodagu students, kinesthetic perception, coordinative ability, emotional and behavioural problems**

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1. INTRODUCTION

In tribal societies, the inhabitants are found to continue their traditional lifestyles. But, the urbanization throughout the world already has changed the natural environment and affected spontaneous involvement in traditional tribal lifestyles too (Roy M). And they are suffering from several psychological problems which are different from general caste people.

The majority of the community epidemiological surveys of childhood psychiatric disorders estimate the rate of clinical maladjustment among children. In infancy and childhood, interaction with the environment and the experiences arising there from enable the individual to program his mental software in order to do able to solve complicated problem, make decisions, think rationally, judge correctly, form concepts, assimilate ideas, innovate and create things. Much of the class-room academics e.g. study of history, geography, philosophy, mathematics, language, science etc. fall under cognitive learning (Kamlesh 2002) [24].

The kinesthetics sense, unlike the other five senses which require external impulses, is dependent upon internal stimulation. For effective coordination of a motor act to take place there must be constant sensory stimuli set up by the act itself which "feedback" the result of movement and produce

correction in the nervous system. The "feedback" of sensory information about movement and body position is called proprioception. Receptors for proprioception which are widely distributed throughout the body and also may be classified as vestibular and kinesthetics sense. Both are important and perform essential roles in the accomplishment of skillfull performance. (James C. Bryant, May, 1969) [25].

Emotional and behavioural problem in student and adolescence is an important public health issues. However, there is currently limited epidemiological evidence in terms of its prevalence or stability over time in India, and limited evidence about the role of parenting programmes in supporting parents and student experiencing such problems.

2. METHOD AND MATERIALS

Subjects were randomly selected from large numbers of population of Purulia district under the state of West Bengal. Total 60 male samples were selected on three equal groups. Groups were divided according to age i.e. under 12 years (G1=20), under 14 years (G2=20) and under 16 years (G3=20) group.

Variables were regarded under psycho motor component and psychological problems i.e. kinesthetic perception, coordinating ability and emotional and behavioural problems.

Kinesthetic perception was assessed by "Distance perception jump" test. It measured the ability to perceive distance by concentrating on the effort involved in a jumping. The jumping distance to the nearest 1/4 inch from the target line to the farthest heel was measured and recorded in inches.

Coordinating ability was measured through the "Eye hand coordination test (Ball transfer)". This test, as evident from its name, is used to test the coordination between eyes and hands. This test measures simultaneously agility and speed. The subjects were given two trails after a slow practice trial. Best ball transferring time was recorded from left box to right box (up to 10 balls) and time was recorded in nearest seconds. Emotional and behavioural problems were measured by the Adult Self Report (ASR), a 126-item checklist, developed by Achenbach & Rescorla (2003) [26]. The ASR gives scores on eight syndrome scales, namely- anxious/depressed, withdrawn, somatic problems, thought problems, attention problems, aggressive behaviour, rule-breaking behaviour and

intrusive behaviours. Test-retest reliability of the syndrome scales ranges from .83 to .94 and the internal consistency reliability co-efficient ranges from .51 to .97. For the present study, Telugu version of the Adult Self Report was used (Gopal, 2010) [27]. Statistical techniques of mean, standard deviation, standard error, correlation of coefficient and further one way analysis of variance (ANOVA) were done on the four variables among the three different age groups and the LSD (equivalent to no adjustment) post-hoc test was done on those dimensions in which "F" ratios were found to be significant, in order to verify whether the difference really exist or not for which the level of significance was set at 0.05 level of confidence.

3. RESULT AND DISCUSSIONS

The result of the study has been presented in tabular and numerical form as given here under.

The above table 2 reveals that significant differences exist between the means scores of under 12 & under 16 years (MD=3.177) and insignificant differences are found between under 12 & under 14 years (MD=1.5) and under 14 & under 16 years (MD=1.677) kodagu students in respect of coordinating ability where the critical difference is 2.296.

Significant mean differences are found between mean scores of under 12 & under 14 years (MD=1.202), of under 12 & under 16 years (MD=1.853) and insignificant differences are found between of under 14 & under 16 years (MD=0.652) in respect of kinesthetic perception where the critical difference is 1.14.

Table 3: One way analysis of variance (ANOVA) has done on emotional and behavioural problems among different age groups of kodagu students

The result indicates that significant differences are found in respect of thought problem (5.505), attention problem (3.43), rule breaking behaviour (4.88) and aggressive behaviour (6.291). Insignificant differences are found in respect of

anxious/ depressed (0.218), withdrawn/ depressed (0.036), somatic complaints (0.6) and intrusive behaviour (0.048) among kodagu students. Since the table value 3.15 is set at 0.05 level of confidence.

Table 4: Analysis of critical differences of emotional and behavioural problems among (under 12yrs, under 14yrs and under 16yrs) kodagu school students

From the above table-4 it is observed that significant mean differences exist between the means scores of under 12 & under 16 years in respect of thought problems (MD=2.785), attention problems (2.953), rule breaking behaviour (2.205), and aggressive behaviour (5.046). Insignificant mean

differences exist between the means scores of under 12 & under 14 years in case of thought problems (MD=1.625), rule breaking behaviour (0.475), and aggressive behaviour (1.851).

It is seen from table- 5 that 'r' 'value of anxious/depressed, withdrawn/depressed, somatic complaints, thought problems attention problems rule breaking behaviour, intrusive behaviour with coordinative ability and kinesthetic perception insignificantly and negatively correlate among under 12yrs, under 14yrs and under 16yrs age groups.

4. DISCUSSION OF FINDINGS

The result of the present study shows that significant differences are found in kinesthetic perception and coordinating ability among under growing age groups of kodagu students. Because the age is gradually acquired higher physical fitness and their neuro-physiological demands are more. In the age of sixteen years the neuro physiological factors develop and continue still puberty. Coordinating ability is increased may be due to effect of aging on the myelination of neurons. The factors affecting the psycho motor ability are experiences, fitness, and tolerance to fatigue, illness, distraction, mood, poor vision and poor hearing. Kinesthetic perception and coordinating ability are basically psychomotor ability which is controlled by psychic sensory and neuromuscular coordination. Psycho motor factors are related by golgi tendon organs which are propioceptors encapsulated in tendon fibers and are located near junction of the muscle and tendon fibers.

The result indicates that significant differences are found in emotional and behavioural problems among under growing age groups of kodagu students. This may be because of the maturity in respect to age, their involvement in physical and cultural activities as it is a way to anticipate the happenings which is because of every child is eager to participate in physical and sporting activities. Research now tells us that a definite relationship exists between cognitive function and childhood emotional or behavioural disorders. Aggressive behaviour is learned by observing parents, siblings, friends, and characters on television and in the movies. School phobia may be accompanied by physical illness associated with tension and extreme emotion. Goins (2012) [28] reported that cognitive ability negatively correlates to the emotional and behavioural problems. W.H.O defines adolescence as the period of life between the ages of 10-to 19 years when the adolescent struggles to develop his individuality while still conforming to societal norms.

Our results show that negative correlations are found between emotional problems with two psycho motor components. Because psycho motor ability is controlled by neuro physiological and psychological factors and its demands are increased. Emotional and behavioural problem is a psychological problem and it is increased to the certain level accordingly chronological age upto still puberty. For this with the increasing growth emotional and behavioral problems negatively correlate the psycho motor ability to develop. In another study on school-going adolescents of Delhi, 50% of the students were found to have problems of emotional maladjustment. Baba H (2015) [2, 29] experienced that student academic success is a significant relationship between emotional and kinesthetic intelligence. Elsley S (2008) [7, 30] motor ability was positively related to a child's emotion comprehension. Findings also supported the study conducted by Sarkar (2013) [19, 31].

5. GUIDANCE FOR IMPLEMENTATION

Implementation is associated that if emotional and behavioural problems increasing contributing factors are minimized then kinesthetic perception and coordinating ability may be developed and healthful kodagu culture may be created.

6. CONCLUSIONS

Significant increments are observed on coordinative ability and kinesthetic perception in respect of chronological growth of students.

The increasing growth of the emotional and behavioural problems of kodagu students negatively correlates (not significantly) the psycho motor ability to develop.

7. REFERENCES

1. Ahmad et al. Prevalence of psychosocial problems among school going male adolescents". Indian J Community Med. 2007; 32:219-21.
2. Baba H. The effect of kinesthetic intelligence emotional intelligence and interior-exterior control to their academic achievement. The online journal of recreation and sports. 2015, 4-1.
3. Barrow HM, McGee RM. A Practical Measurement for Evaluation in Physical Education. Lea & Febiger, Philadelphia, 1979.
4. Clarke HH. Application of Measurement to Health and Physical Education (5th Edition), New Jersey: Prentice- Hall Inc, 1976.
5. Cohen et al. An epidemiological study of disorders in late childhood and adolescence- age and gender specific prevalence. J Child Psychol Psychiat. 1993; 34(6):851- 867. [PubMed]
6. Egger et al. Common emotional and behavioral disorders in preschool student": Presentation, nosology, and epidemiology. Journal of Child Psychology and Psychiatry. 2006; 47:313-337.
7. Elsley S. Motor Coordination and Social–Emotional Behaviour in Preschool-aged Children International Journal of Disability Development and Education Impact Factor. 2008; 55(2):143-151.
8. DOI: 10.1080/10349120802033592
9. Heward et al. Emotional and Behavioral Disorders in Children: Characteristics - Pearson Allyn Bacon Prentice Hall, Updated. 2010
10. Johnson Barry L, Nelson Jack K. Practical Measurements for Evaluation in Physical Education, New Delhi: Surjeet Publication, Third Edition, Third Reprint, 2012.
11. Kansal Devinder K. Text Book of Applied Measurement, Evaluation & Sports Selection", New Delhi: DVS Publications, 1996.
12. Kaplan et al. Physical abuse risks for adolescents of psychiatric disorders. American Journal of Psychiatry. 1998; 155(7):954-59. [PubMed]
13. Norton K, Olds T. A Text Book of Body Measurement for Spots and Health Education Anthropometrica (1ST edition), New Delhi: CBS publishers & Distributors, 2006.
14. Ramesh Kumar PA. Cross Sectional Analysis of coordinative Abilities of Students from Ten to Sixteen
15. Years of Age, Unpublished MPE. Thesis, LNIPE, Gwalior, 1993.
16. Pathak R, et al. Behavioural and emotional problems in school going adolescents" The Gerontological Society of America, Australas Med J. 2011; 4(1):15-21.
17. Prof. Verma J. Prakash. A Text Book on Sports Statistics, sports publication. 1986.
18. Rambha Pathak. Behavioural and Emotional Problems in School Going Adolescents", Australian Medical Journal. 2011; 4(1):15-21. Published online 2011 Jan 31. doi: 10.4066/AMJ.2011.464, PMCID: PMC3448127
19. Rathore et al. Comparative Study of Kinesthetic Perception of Male and Female Basketball Players Indian Journal of Sports Studies. 2001; 6(2):20-23.
20. Roy M et al. Physical Fitness Status of Rava Indo- Mongoloid Tribal Youths in Comparison to General Youths of India, Journal of sports and recreation. 2014, 3(9). ISSN No 2277-8160.
21. Saugata Sarkar. A Study on Relationship between Creative Motor Response and Kinesthetic Perception of Student, International journal of innovative research& development. 2013, 2:9.
22. Singh Hardyal. Science of sports training DVS Publication, New Delhi, Reprent, 1997.
23. Srinath et al. Epidemiological study of child & adolescent psychiatric disorders in urban & rural areas of Bangalore, Indian J. Med Res. 2005; 122:67-79. [PubMed]
24. Wang et al. A research report on behaviour problems of 2432 school student in urban areas of Beijing. China". Mental Health. 1988; 2:114-15.
25. Wiles NJ, et al. Physical activity and emotional problems amongst adolescents: a longitudinal study. Soc Psychiatry Psychiatr Epidemiol. 2008; 43(10):765-72.
26. Kamlesh et al. Long-term positive associations between music lessons and IQ. Journal of Educational Psychology: 2002, 457-468.
27. James C, Bryant. Early childhood computer experience and cognitive and motor development. Pediatrics, 1969.

28. Rescorla et al. What proportion of youth are physically active? Measurement issues, levels and recent time trends. Br J Sports Med. 2003; 45:859-865.
29. Gopal et al. Physical activity of Canadian children and youth: accelometer results from the 2007–2009 Health Measures Survey. Healt Rep. 2010; 22:15-22.
30. Goins et al. Levels of physical activity and sedentary time among 10- to 12-year-old boys and girls across 5 European countries using accelerometers: An observational study within the Energy-project. Int J Behav Nutr Phys Act, 2012.
31. Baba H, et al. Associations between physical activity, fitness, and academic achievement. J Pediatr. 2015; 155:914-918.
32. Elsley S, et al. Physical activity, emotional and behavioural problems, maternal education and self- reported educational performance of adolescents. Health Educ Res. 2008; 25:368-379.
33. Sarkar, et al. Physical activity, sedentary behavior, and academic performance in Finnish children. Med Sci Sports Exerc. 2013; 45:2098–2104.