



RESEARCH ARTICLE

ANALYSES OF ANTHROPOMETRIC AND PHYSIOLOGICAL VARIABLES AMONG MENTALLY CHALLENGED PLAYERS

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ABSTRACT

Purpose: The purpose of this study was to analyses of anthropometric and physiological variables among mentally challenged players. **Subjects:** Eighty mentally challenged children selected from eight states (Andra Pradesh n=10, Tamil Nadu n=10, Goa n=10, Kerala n=10, Karnataka n=10, Maharashtra n=10, orisa n=10 and Pondicherry n=10) who participated in National Badminton Coaching Camp and the camp was organized in Kanteewara Stadium, Bangalore, India during the academic year 2011. The age of the subject ranged from 8-25 years as per the records.

Variables: Four anthropometric (Age, Height, Weight and Chest measurement) and Three Physiological (Pulse Rate, Systolic and Diastolic Blood Pressure) variables were taken. The instruments were Steadio meter, weighing machine, Inch tap and Spigmomanometer to use and all measurements were taken on the subject's.

Statistics: Descriptive statistics (Mean & Standard deviation) and analysis of variance ANOVA were used analyze and to find out the significant difference, if any between the (states) group for selected variables. To test the significance the level of confidence was fixed at .05.

Result: There was a significant difference between various states mentally challenged players on age and height. There was no significant difference between various state mentally challenged players on Weight, Chest measurement, Pulse Rate, Systolic and Diastolic Blood Pressure.

Key words: Mentally challenged, anthropometry, age, height, weight, chest measurement, pulse, blood pressure.

INTRODUCTION

Human society has a long history of treating people with mental illness and the mentally challenged as inferior. As a result, they have often been institutionalized, sterilized and prevented from their basic rights (Brockley, 2005). Human interpersonal relationships involve effectively processing our own and others' states of mind (including desires, goals and beliefs) (Ochsner, 2005). The more salient events might entail various processes such as emotion regulation (Lieberman 2007; Ochsner and Gross, 2005) and self-reflection (Lane et al. 1997; for review Lieberman (2007)) and even increased arousal. Although a role for face-selective FG in social behavior is likely (Haxby *et al.*, 2000) our and other mentalization studies demonstrate its activation even when no face stimuli were presented, suggesting its general involvement in social behavior-related semantic memory processes, of which facial perception represents only one aspect (Schultz *et al.*, 2003).

ANTHROPOMETRY

Anthropometric techniques are used to measure the absolute and relative variability in size and shape of the human body. Depending on the objective, anthropometric instrumentation

may include weighing scale, anthropometer, skinfold calipers, body volume tanks, and bioelectrical impedance analyzers. Similarly, radiographic instruments and x-ray scanners such as dual-energy-ray absorption meters and ultrasound densitometers are used for quantifying cortical bone density, bone mass, subcutaneous fat density, and lean body mass (Spencer 1997). According to James Tanner, formerly Professor of Child Health at the University of London, 'anthropometry was born not of medicine or science, but of the arts, impregnated by the spirit of Pythagorean philosophy (Tanner 1981). Hence the aim of the study is to analysis the physiological and anthropometric variables among mentally challenged players.

MATERIALS AND METHODS

Purpose: The purpose of this study was to analyses of anthropometric and physiological variables among mentally challenged players.

Subjects: Eighty mentally challenged children selected from eight states (Andra Pradesh n=10, Tamil Nadu n=10, Goa n=10, Kerala n=10, Karnataka n=10, Maharashtra n=10, orisa n=10 and Pondicherry n=10) who participated in National

Table 1. Descriptive Statistics of Anthropometric and Physiological Variables

States	Age	Height	Weight	Chest	Pulse	Systolic	Diastolic
Andra Pradesh	25.8±7.02	1.56±9.04	49.8±12.12	82.3±8.8	75±8.55	1.13±4.83	72±9.18
Tamil Nadu	15.8±1.61	1.68±7.68	50.6±7.63	78±6.2	73.4±3.78	1.09±5.67	72±9.18
Goa	15.6±4.06	1.51±9.95	43.1±14.83	77.61±1.16	82.41±0.41	1.11±9.94	74±5.16
Kerala	20.7±5.14	1.61±8.4	47.7±10.6	80.9±7.48	81.2±9.94	1.11±8.75	73±6.74
Karnataka	22.2±9.95	1.61±11.7	48.18.78	82±8.36	82±9.52	1.07±17.6	69±7.37
Maharashtra	16.9±4.86	1.48±9.02	43.6±16.50	77.5±12.9	82.3±8.45	1.02±7.8	67±8.23
Orisa	16±4.21	1.51±12.66	44.7±6.11	80.6±7.7	77.6±8.31	1.12±9.18	73±9.4
Pondicherry	20±7.94	1.61±8.91	50.5±11.64	82±8.79	74.4±5.14	1.09±7.37	73±8.23

Table 2. ANOVA for selected Anthropometric and Physiological Variables

Variables	SOV(States)	Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	954.550	7	136.364	3.655*	.002
	Within Groups	2686.200	72	37.308		
	Total	3640.750	79			
Height	Between Groups	3411.488	7	487.355	5.059*	.000
	Within Groups	6936.500	72	96.340		
	Total	10347.988	79			
Weight	Between Groups	662.587	7	94.655	.714	.660
	Within Groups	9544.900	72	132.568		
	Total	10207.488	79			
Chest	Between Groups	303.688	7	43.384	.516	.819
	Within Groups	6048.300	72	84.004		
	Total	6351.988	79			
Pulse	Between Groups	1002.200	7	143.171	2.124	.052
	Within Groups	4853.600	72	67.411		
	Total	5855.800	79			
Systolic	Between Groups	855.000	7	122.143	1.313	.257
	Within Groups	6700.000	72	93.056		
	Total	7555.000	79			
Diastolic	Between Groups	398.750	7	56.964	.875	.531
	Within Groups	4690.000	72	65.139		
	Total	5088.750	79			

Table value at .05 level with df (7, 72) is 3.29.

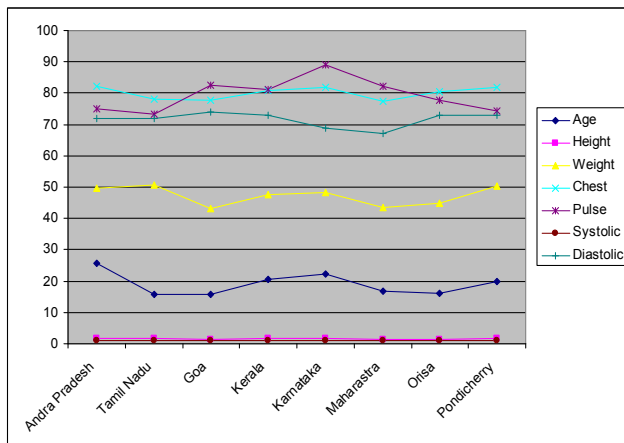


Fig. 1. Shows That Comparison of Mean Values of Different States Mentally Challenged Players in Anthropometric and Physiological Variables

Badminton Coaching Camp and the camp was organized in Kanteewara Stadium, Bangalore, India during the academic year 2011. The age of the subject ranged from 8-25 years as per the records.

Variables: Four anthropometric (Age, Height, Weight and Chest measurement) and Three Physiological (Pulse Rate, Systolic and Diastolic Blood Pressure) variables were taken. The instruments were Steadio meter, weighing machine, Inch

tap and Spigmomometer to use and all measurements were taken on the subject's.

Statistics: Descriptive statistics (Mean & Standard deviation) and analysis of variance ANOVA were used analyze and to find out the significant difference, if any between the (states) group for selected variables. To test the significance the level of confidence was fixed at .05.

RESULTS

Table 1 and 2 shows the descriptive statistics Age, Height, Weight, Chest measurement, Pulse Rate, Systolic and Diastolic Blood Pressure measurements of mentally challenged players. Results of the ANOVA revealed that there was a significant difference between various states mentally challenged players on age and height. There was no significant difference between various state mentally challenged players on Weight, Chest measurement, Pulse Rate, Systolic and Diastolic Blood Pressure.

CONCLUSION

From the analysis of data the following conclusions was drawn

1. There was a significant difference was occurred among different state mentally challenged players on age and height.
2. There was no significant difference between various state mentally challenged players on Weight, Chest

measurement, Pulse Rate, Systolic and Diastolic Blood Pressure.

IMPLICATION

Hence it would be recommended that mentally challenged children will be selected by considering the anthropometric and physiological variables apart from their recreation and habit training.

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