

Comparative Study of Somato Type and Mental Health of Adolescent Boys from Pune

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Abstract

‘Sound mind in a sound body’ is a popular slogan which explains body and mind relationship. Sheldon states that all individuals can be classified into three body types viz. endomorph, mesomorph and ectomorph. To measure somato type and mental health of adolescent boys and to find out the degree of relation between somato type and mental health, with these objectives researcher used descriptive method with survey as data collection tool. Total 579 adolescent boys from Pune city colleges were selected by cluster random sampling method. Standardized tools for somato typing as Heath – Carter modified test and mental health inventory developed by Agase and Helode were used. Parametric statistics was applied. This research study found no significant difference in mental health scores of all three somato types. Also there found no significant correlation between somato types and mental health.

KEYWORDS – somato type, mental health

Introduction

A person having good physical fitness always has a good physique as well as good mental health. A healthy body is a blessing while a weak one is a curse. ‘Sound mind in a sound body’ is a popular slogan which explains body and mind relationship. Sound mind is psychologically well and mentally healthy; whereas sound body deals organically deficient and physically fit. The history of mankind witnessed the supremacy of the mind over the body. Sheldon states that all individuals can be classified into three body types viz. endomorph, mesomorph and ectomorph. It is proved by research that there occurs a very close relationship between the body physique and physical fitness. Each of the above three categories (body types) has their respective traits associated with physical fitness factors. Today’s human life has become very stressful so mental health has become a vital subject for scientific investigation of anthropometry, psychology and exercises. Review of literature indicates no clear idea about body types i.e. somato types and mental health. It makes clear that there is a multiplicity of opinion about assessing one’s somato type and its valid relationship with mental health. Literature also indicated that researches on psychological benefits of physical activities for persons who have relatively good mental health are less clear. It has been investigated in the study with pre-adolescent boys. In order to give guideline of some particular training, the investigation in the direction of somato type and mental health has significant relevance. To carry out this study, the following topic has been selected.

Relevance: Physical fitness has attained impressive level of importance in the people from the developed countries. Today’s life of human being has become very stressful. Physical fitness and body type is also affected because of it. Mental and physical health therefore has become a vital topic of scientific investigation in all major branches of life sciences. Research studies on somato type and psychological benefits

of physical activities for persons who have relatively good physique and mental health are less clear. There has been an established relationship between health related physical fitness and mental health. Sonawane's dissertation as cited in (Deshpande, 2007)

Statement of the problem: There are many opinions about the relationship between body type, physical fitness and mental health. Body type and mental health is an interesting area for research. So the researcher studies this topic – 'Comparative research of somato type and mental health of Pune city pre-adolescent boys'.

Objectives:

1. To measure somato type and mental health of pre adolescent boys
2. To find out the degree of relation between somato type and mental health

Hypothesis:

H₀: There is no significant relationship between somato type and mental health

Significance of the study: Many studies including Salokun (1994), Reilly and Herkikan (1981), Frank and Sillas (1950) as cited in (Deshpande, 2007) prove that somato type seems to be an important dimension for an individual's health and fitness. So this study may benefit to the professions of physical education and society. The finding can be used for talent identification.

Reviews of Literature: Somato type concerns to physical fitness as well as performance in sports but the researcher could not find any reviews which could focus on the relationship between somato type and mental health.

Methodology

This study was quantitative one. The research design used for this study was descriptive research, involving describing the current conditions. The common tool of descriptive research used was survey. William's work as cited in (Deshpande, 2007). 579 (N) subjects were selected on the basis of cluster random sampling. The population was adolescent college boys aging 16 to 20 years in the Pune city area. The Pune city area was divided into four regions as north, south, east and west. 7 colleges were selected randomly from each region. So total 28 colleges were listed as the first strata of the sample. The investigator then collected the name list of sample students in each college. From this list 22 to 24 boys were pooled as subjects by using the random sampling technique. Standardized tests were administered to measure the items of each dimension for the collection of data.

Somato type: Heath-Carter's (Carter & Heath, 1990) modified technique was used to classify the subjects into somato type and body weight, standing body height, width of humerus and femur, circumference of calf, skin fold reading of triceps and supra iliac.

Mental health inventory, as developed by Agase and Helode (Agase, 1988) as cited in (Deshpande, 2007) was used for assessing positive mental health of the samples in the study, This tool considered self-acceptance, ego strength and philosophies of human nature as the important components of positive mental health.

Statistical tools used for Descriptive statistics including mean, standard deviation and inferential statistics as ANOVA, Pearson's product moment correlation matrix.

Data collection and Result analysis

Mean difference in Mental Health

Table no. I describes that Meso morphs 26 (S D = 3.13) excelled than Endo morphs 26 (S D = 3.06) and Endo morphs performed better than Ecto morphs 23 (S D = 2.56).

Table no. I

Comparison on mental health

Somato type	N	Mean	S D	S E M
Endo	267	26	3.06	0.19
Meso	108	26	3.13	0.30
Ecto	204	23	2.56	0.18

Summary of ANOVA

Researcher wants to find mean difference is significant or not. As the F (64.21) value for mental health scores exceeds the critical F value at 0.01 level, therefore was resulted significant. Thus there exist true mean differences in mental health of three somato type groups.

Table no. II

Summary of ANOVA for mental health

	sum of squares	df	M D	F
Between groups	1086.90	2	543.45	64.21
Within groups	4875.09	576	8.46	
Total	5961.99	578	-	

significant = 0.000

Scheffe's' Post hoc test

F Scheffe's' declared that mean difference between endo – Ecto and Meso – Ecto was significant but endo – Meso was not significant.

Table no. III

Mean difference analysis by Scheffe's' Post hoc test for mental health

Somato (I)	Somato (J)	M D (I – J)	SEM	Sig
Endo	Meso	-0.68	.33	0.123
	Ecto	2.63*	.27	0.000
Meso	Endo	0.68	.33	0.123
	Ecto	3.31*	.35	0.000
Ecto	Endo	-2.63*	.27	0.000
	Meso	-3.31*	.35	0.000

* The mean difference is significant at 0.005 level

Correlations between mental health and somato types

In this study, statistical analysis shows that mental health has totally no significant correlation with somato type which were Endo morph (r=0.029), Meso morph (r= -0.037) and Ecto morph (r=0.015). Hence null hypothesis (H₀) is accepted.

Table no. IV

Correlation of mental health with somato types

Somato type	N	Pearson correlation r	sign (2 tailed)
Endo	267	0.029	0.486
Meso	108	-0.037	0.379
Ecto	204	0.015	0.715

*correlation is significant at the 0.05 level

Conclusion and discussion

This research study found no significant difference in mental health scores of all three somato types. Also, in this study, researcher found no significant correlation between somato types and mental health.

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