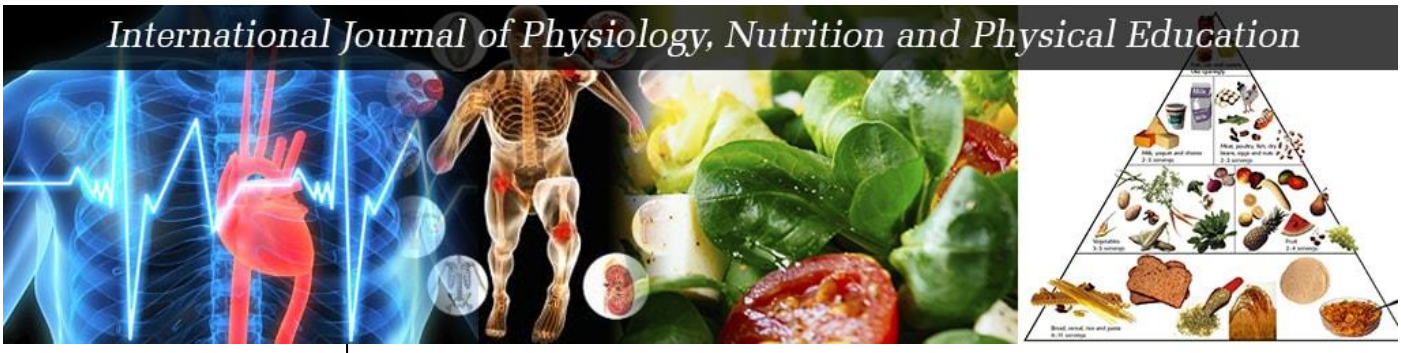

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Formation of homogeneous group in respect to height and weight category of the secondary school boys of Amravati region

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Abstract
The eventual aim of the schooling is the groundwork of personality development. Physical education is the integral part of complete educational process. There are individual differences observed amongst every person. The Major difficulty of the physical education teachers and coaches are the Homogeneity of the players in respect of their height and weight. Such factors must be considered as the formation of teams for variety of games. Classification of groups in respect of their height and weight might be fruitful for the development of various games and related activities. There were many authors who attempted to from such homogeneous groups throughout the globe. Such attempts were made by Hughes, Williams McCloy, Neilson, Trieb and Cozen etc. in the present study it was attempted to form the Homogeneous Group in Respect to Height and Weight Category of the Secondary School Boys of Amravati Region. For these study 524 healthy male students of Amravati region was selected, and carry out the testing of height and Weight. Scott Motor Ability test was applied for testing the performance. Performance Criterions were Basket ball throw, four second dash, standing broad jump, wall pass. After the statistical treatment the factor height and weight in secondary school age was found to at the lowest correlation with motor ability (r=.24) with the coefficient of determination was (R^2= 0.058) as compared to the factor as height and weight. Height was the highest coefficient of determination (R^2= 0.186) and correlation (r = 0.43) with weight occurring down to the order as (R^2= 0.150) and (r= 0.39).

Keywords: Formation, homogeneous, height, weight category

Introduction
The eventual aim of the schooling is the groundwork of personality development. Physical education is the integral part of complete educational process. There are individual differences observed amongst every person. The Major difficulty of the physical education teachers and coaches are the Homogeneity of the players in respect of their height and weight. Such factors must be considered as the formation of teams for variety of games. Classification of groups in respect of their height and weight might be fruitful for the development of various games and related activities. No doubt every individual has its own physique and body type. Such type of differences in the body structure is the great problems for the physical education teachers and coaches in the selection of squad for the training purpose. In fact the individual differences are responsible for their motor ability developments. In the present it was attempted to form the homogeneous groups on the basis of European schools. In the European schools they were crack the solutions by formulating the following equation

$$Classification\ Index = \frac{4 \times Age + Height + Weight}{3}$$

For Indian Schools

$$\textbf{Classification Index} = 1\frac{1}{2}\ HEIGHT + WEIGHT$$

This formula was used for the classification the Amravati Region Boys for the Amravati Region. the purpose of the study was to evolve and suggest a method for homogeneous groups

groups of secondary school boys of Amravati region based on statistical evaluation of the coefficient of determination of the biometric factors of age, height and weight individually. In the various combinations with respect to the motor ability and shifting the best correlate their formation. it was hypothesized that some of the attribute combination of height, and weight were age height and weight might yield a basis for new method of forming groups for boys in secondary school. the study was supposed to be significance as there was not any study who suggest the better and satisfactory combination of homogeneous groups method was available for the secondary boys of the Indians.

For the intention of homogeneous group formation an attempt was made through the past studies completed in the same field. Bovard and cozen study incidentally counterpart in which they divided the groups in middle weight, light weight and heavy weight. Further studies carry on the proved that these aren't fulfilling conditions for the homogeneous group formation. Reilly established the classification plan by the boys and girls known as age-grade-height weight plan. This study was attempted only for the students of 5th, 6th, 7^{tS} and 8th grade boys and girls. Further Hetherington and Stolz and modified the formulation. Another modification was made by Neilson and Cozen, McCloy and many more authors. Joseph in 1969 Suggest the new formulation of Homogeneous group formation which was widely accepted.

In the present study it was attempted to form the Homogeneous Group in Respect to Height and Weight Category of the Secondary School Boys of Amravati Region. For these study 524 healthy male students of Amravati region was selected, and carry out the testing of height and Weight. Scott Motor Ability test was applied for testing the performance. Age was recorded from the Admission register of the school. Height was measured by fixing flexible plasticized linen measuring tape. The height was recorded in centimeters nearest to 1mm. Weight was measured on school uniform with bared foot and recorded in kilograms. It was recorded near to 0.25 Kg. The age group of the subjects was ranges from 135 months to 246 months. The Height ranges from 103cm to 180cm. Weight ranges from 21KG to 66.5 KG. The reliability measures of height and weight was absolute criteria of reliability followed.

Performance Criteria was the Scoot Motor ability test. The scoring was made through two methods first one was composite score method and the other was the performance score individuals was adopted.

The statistical treatment to the available data was completed through six categories. Category1 Age height and weight of individually in respect to the performance was determined. Category2 body build indices based on indices was calculated with the following relations.

Weight= Height ratio (w/h) ratio; Quatelet's Index (w/h^2) Inverse Ponderal Index ($h\sqrt[3]{w}$) and Tuxford Index [(w/h)x (3.08-Age in months)/235]

Category 3 Body Build Index was calculated by multiplying age in relation to performance. Category 4 two factors combinations out of age, height, and weight was calculated other than the body build indices as single variable in relation to performance. Category 5 three factors combination involving age, height, and weight as single variable in relation to performance. Category 6 Contributions of age, height and weight was calculated with tri variant Regression and bi variant regression. The coefficient of the determination (R^2) of the independent variables under the linear regression model and the multiple regression model were obtained by the use of SPSS model.

Findings

The computed values of coefficient of determination (R^2) of age, height and weight, the regression coefficient values (b) which provide the information on the weightages of these factors in prediction, the coefficient of zero order correlation. The calculated values are mentioned in table no 1

Table 1: The calculated values are mentioned

Sr. No.	Variable	R^2	b	T value
1	Age	0.058	0.22	5.67
2	Height	0.186	0.77	10.93
3	Weight	0.150	0.76	9.58

$T_{tabulated}$ at 0.01 level of Significance = 1.59 < $T_{calculated}$ values.

Above table reveals that the coefficient of DeterminantsR^2 which was provides information on the percentage of contribution in the prediction of performance was observed to be greater in respect of Age, Height and Weight.

Conclusion

Among the factors of Age, Height and Weight in secondary school age is found to bear the lowest correlation which occurs next in order there is no significance difference between these factors hence it was concluded that performance and Age, Height and Weight category differs accordingly it varies with the facts of Age, Height and Weight. Thus it was concluded that the formation of homogeneous group might be fruitful in the section of any team event.

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