

## ABSTRACT

Relationship Between Body Mass Index (BMI) And Power Burst Of Limbs Muscles  
Fast Running On son student of class X SMA Negeri 1 Batuan academic year  
2014/2015. Mohammad Agus

Keywords: BMI, Explosive Power, Limb Muscle, And Running Quickly Speed

in the sprints and the goal is the result of the velocity of muscle contraction is fast and strong (full power) through a smooth movement (smooth) and efficient (efficient). Where in performing a quick run leg muscle is a muscle that is most responsible for getting the maximum speed a runner. To get the maximum running speed, long legs and explosive power (power) leg muscle is a requirement that must be owned by a runner. SMA Negeri 1 Batuan is a school that was founded in 2010 and could be said to be minimal achievement. Until now SMA Negeri 1 Batuan still not been made the object of research in sport, the results can be used as a basis for selecting athletes who will be trained to follow the athletes race. Thus the researchers here want to know the capabilities of students of SMA Negeri 1 Batuan in athletic sports performance, to the researchers here wanted to examine student son class X SMA Negeri 1 Batuan in athletics, especially in the branch run.

The use of the method in a research study must be precise and lead to research purposes in accordance with the desired objectives and can be justified scientifically. found "Research Methodology" as we know it today gives lines very carefully and propose the conditions were very hard. The sample in this study were male students of class X-IPA 1 SMA Negeri 1 Batuan academic year 2014/2015 of 183 as many as 20 people.

Results of the research value of the correlation coefficient  $r$  count individually between variables  $X_1$  and  $Y$  is equal to 0.658, while  $r$  table at 0.398. In accordance with the testing criteria that turns the value of  $r$  count larger than  $r$  table ( $0.658 > 0.398$ ), it can be concluded the correlation coefficient between the variables  $X_1$  and  $Y$  are significant, meaning that there is a significant correlation between the two variables tersebut. Nilai  $r$  count of individual correlation coefficient between  $X_2$  and  $Y$  is equal to 0,782, while  $r$  table at 0.398. In accordance with the testing criteria that turns the value of  $r$  count larger than  $r$  table ( $0.782 > 0.398$ ), it can be concluded the correlation coefficient between  $X_2$  and  $Y$  are significant, meaning that there is a significant correlation between the two variables. For the calculation of the coefficient of determination of IMT to Run 50 Meter obtained  $R^2$  of 0.271. So that the independent variable (IMT) to contribute to the running 50 meters at 7.34% and the rest influenced by other factors such as physical activity, genetics, age, sex etc. For the calculation of the coefficient of determination of Power on 50 Meter Running obtained  $R^2$  of 0.756. So that the independent variable (Power) to contribute to the running 50 meters at 57.15% and the rest influenced by other factors such as physical activity, genetics, age, sex etc.