

***The Relationship Between Carbohydrate, Protein, And Muscle Mass Intake  
And Agility Performance Of Teenage Pencak Silat Performance Members  
In Besuki District***

**Luthfi Ayu Diannisa**

*Clinical Nutrition Study Program*

*Health Department*

**ABSTRACT**

*Pencak silat is a martial art that requires agility as a key component of athletic performance. Agility can be influenced by various factors, including nutritional adequacy and body composition. Many adolescent athletes still experience deficiencies in carbohydrate and protein intake, which may affect their physical ability. Therefore, this study aimed to examine the relationship between carbohydrate intake, protein intake, and muscle mass with the agility performance of adolescent pencak silat members in Besuki District. This study employed a cross-sectional design involving 53 adolescent athletes selected through total sampling. Nutritional intake was assessed using a 2x24-hour food recall, muscle mass was measured using a Karada Scan, and agility was tested using the Shuttle Run. Data were analyzed with Spearman's Rho tests. The results showed that most athletes had very low carbohydrate intake (84.9%), low protein intake (47.2%), low muscle mass (67.9%), and agility very good (50.9%). No significant relationship was found between carbohydrate or protein intake and agility ( $p>0.05$ ). However, a significant relationship was observed between muscle mass and agility ( $p=0.000$ ;  $r=-0.491$ ). It can be concluded that the agility of adolescent pencak silat members is more strongly influenced by muscle mass than by carbohydrate or protein intake. These findings are expected to serve as a reference for athletes, coaches, and nutritionists in developing training strategies and balanced dietary patterns to improve performance.*

**Keywords:** Carbohydrates, Agility, Muscle Mass, Pencak Silat, Protein