

## ABSTRACT

Khoirina Lathifah. 2024. The Effect of Sorghum Substitution on the Glycemic Index of Daily Mixed Food and the Level of Hunger and Fullness in Type 2 Diabetes Mellitus Patients at the Mulyorejo Health Center, Malang City.

Supervisor: **Sutomo Rum Teguh Kaswari, M.Kes and Dwipajati ., M.Gz**

**Background:** Diabetes mellitus is a disease caused by the body being unable to release or use insulin adequately so that glucose levels (simple sugars) in the blood are high. DM sufferers need to be given some treatment so that it does not get worse and also to prevent complications that can cause health problems. Two factors that affect the increase in blood sugar levels are the amount and type of carbohydrates. Sorghum is one of the foods that has a low GI of 41 which can be consumed as a substitute for rice that can be consumed by diabetes mellitus sufferers because it can also delay the increase in blood sugar levels. Foods with low GI can increase the feeling of fullness and delay hunger.

**Method:** The type of research is quasi-experimental and the research design used is cross-over. The number of samples used is 16 outpatients who are divided into 2 groups, namely group A and group B, each consisting of 8 people. The statistical analysis test used is the dependent t-test and independent t-test with a confidence level of 95%

**Results:** From the results of the study, there is an effect on the glycemic index of mixed food per day in groups A and B. This means that sorghum substitution has an effect on the glycemic index of mixed food per day. The results of the difference test for group A p-value = 0.0001 and group B p-value = 0.000. The results of the inter-group test did not show any effect of giving sorghum substitution to group A with a p-value of 0.604 in group B there was an effect of giving with a p-value = 0.001. The provision of sorghum substitution also has an effect on the level of hunger satiety in patients with diabetes mellitus with the results of statistical tests in group B with p-value = 0.000, while in group A there was no effect of sorghum substitution on the level of hunger satiety.

**Conclusion:** The results of the study showed that there was an effect of sorghum substitution on the glycemic index of mixed food per day and the level of hunger satiety in patients with type 2 diabetes mellitus at the Mulyorejo Health Center, Malang City.

**Keywords:** Diabetes Mellitus, Glycemic Index, Hunger Level, Sorghum

