THE EFFECT OF PURPLE SWEET POTATO DIET ON RANDOM BLOOD GLUCOSE LEVELS IN TYPE II DIABETES MELLITUS PATIENTS AT DONOMULYO PUBLIC HEALTH CENTER, MALANG REGENCY

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ABSTRACT

Introduction: Type II Diabetes Mellitus is a chronic metabolic disorder marked by hyperglycemia caused by impaired insulin secretion and resistance. Non-pharmacological approaches, such as dietary modification, are essential in supporting glycemic control. Purple sweet potato (Ipomoea batatas L.) contains anthocyanins and dietary fiber that may slow glucose absorption, enhance insulin sensitivity, and help regulate blood glucose levels. This study aimed to determine the effect of a purple sweet potato diet on random blood glucose levels among Type II Diabetes Mellitus patients at the Donomulyo Public Health Center in 2025. **Methods:** This quasi-experimental study used a pre–post test with control group design. A total of 36 respondents met the inclusion criteria. The intervention group received a prescribed purple sweet potato diet, while the control group received no dietary modification. Fasting Blood Glucose (FBG) and 2-Hour Postprandial Glucose (G2PP) levels were measured using a digital glucometer. The Independent t-test was applied with a significance level of $\alpha = 0.05$. **Results:** The mean pre-test FBG levels were 168.00 mg/dL in the intervention group and 153.00 mg/dL in the control group. After the intervention, the mean G2PP level in the intervention group decreased to 159.71 mg/dL, while the control group increased to 232.00 mg/dL. Statistical results showed no significant difference in FBG ($p = 0.139$), but a highly significant difference in G2PP ($p = 0.000$). **Conclusion:** The purple sweet potato diet was proven to significantly reduce random blood glucose levels, particularly G2PP, and can be considered a viable non-pharmacological alternative for glycemic control in Type II DM patients.

Keywords: *Diabetes Mellitus, Blood Glucose, Diet, Purple Sweet Potato*