

ABSTRACT

Faiqotun Nisa'. 2026. The Effect of Balanced Diet Education Using Booklet Media on Knowledge, Attitudes, and Nutrient Intake among Pre-Diabetic and Diabetes Mellitus Adolescents at SMA Negeri 1 Lawang. Scientific Paper. Politeknik Kesehatan Kemenkes Malang. Supervisor: Dr. Annasari Mustafa, SKM., M.Sc., RD.

The number of diabetes mellitus cases in Indonesia has reached 19.5 million, with the number of type 2 diabetes mellitus patients in Malang Regency in 2024 recorded at 74,028 individuals. The prevalence of diabetes mellitus among 10th grade students at SMA Negeri 1 Lawang in December 2023 was 5.13%. Factors contributing to the increasing cases of type 2 diabetes mellitus include unhealthy lifestyles and poor dietary patterns. Therefore, meal planning that emphasizes balanced nutrition containing carbohydrates, protein, and fat according to nutritional needs is required. **The purpose** of this study was to determine the effect of balanced diet education using booklet media on knowledge, attitudes, and nutrient intake among adolescents with pre-diabetes and diabetes mellitus at SMA Negeri 1 Lawang. This study used an experimental method with a one-group pretest–posttest design. The research subjects were 10th grade female students at SMA Negeri 1 Lawang who had pre-diabetes and diabetes mellitus. Data were processed using SPSS software and analyzed using the Wilcoxon test with a significance level of $\alpha < 0.05$. **The results** showed that the analysis of the effect of assistance on knowledge obtained a p-value of 0.895. The analysis of the effect on attitudes obtained a p-value of 0.955. The analysis of the effect on energy intake obtained a p-value of 0.008. The analysis of the effect on carbohydrate intake obtained a p-value of 0.002. The analysis of the effect on fiber intake obtained a p-value of 0.055, and the analysis of the effect on changes in blood glucose levels obtained a p-value of 0.001. **The conclusion** of this study indicates that balanced diet education had no significant effect on changes in knowledge levels, attitudes, and fiber intake. However, balanced diet education had a significant effect on changes in energy intake, carbohydrate intake, and blood glucose levels.

Keywords: pre-diabetes, diabetes mellitus, knowledge, attitudes, energy intake, carbohydrate intake, fiber intake, random blood glucose levels, education, balanced diet, and assistance.