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The Effectiveness of Night Snack Substitute to Homemade Cookies for Diabetes Mellitus Patient Seen From Fulfillment of Nutritional Aspect and Efficiency in PELNI Hospital, Jakarta, Indonesia

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INTRODUCTION

Diabetes mellitus describes a metabolic disorder characterized by chronic hyperglycemia with disturbances of carbohydrate,. fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both¹. In 2022, Nutrition Installation serves 2600 - 3450 patients with diagnosis of Diabetes Mellitus per month (20-25% of the total patients treated in hospital) with 55.2% being geriatric patients (≥60 years). The average energy needs of DM patients in PELNI hospitals are between 1500 - 1700 calories per day whereas 10-15% of the calories are in the form of snack, so the energy value derived from intermittent foods is about 150 - 255 calories. With the composition of diabetes mellitus patients which is geriatric as majority patients has becomes a challenge for PELNI Hospital to be able to meet the needs of appropriate nutritional requirements. One of the problems that arises is patient do not having enough intake of snacks, especially those given at night in 2022. To overcome this, PELNI Hospital innovates by substituting snack crackers with homemade cookies based on questionnaire results filled by patients with diabetes mellitus. These homemade cookies are hospital-self made and meet the requirement for nutritional value and energy value, while considering patient acceptance and costs.

AIM

To measure the effectiveness of substituting night snack types in diabetes patients using hospital-self made cookies from the increase in acceptance while maintaining nutritional value, energy value, and cost efficiency.

METHOD

By using a qualitative descriptive method, we measures the level of patient acceptance, the suitability of nutritional value, energy value and cost efficiency before implementation (January - May 2022) and after implementation (August - December 2022) by substituting night snacks for diabetes mellitus patients with hospital-self made cookies. The number of samples to identify problems by giving a night snack in the form of a cracker is 187 patients. The number of samples to determine the effectiveness of night snack substitute in the form of cookies was 189 patients

CONCLUSIONS

Substitute of night snacks from crackers to cookies can increase patient acceptance of diabetes mellitus meanwhile maintaining nutritional value, energy value, and cost efficiency

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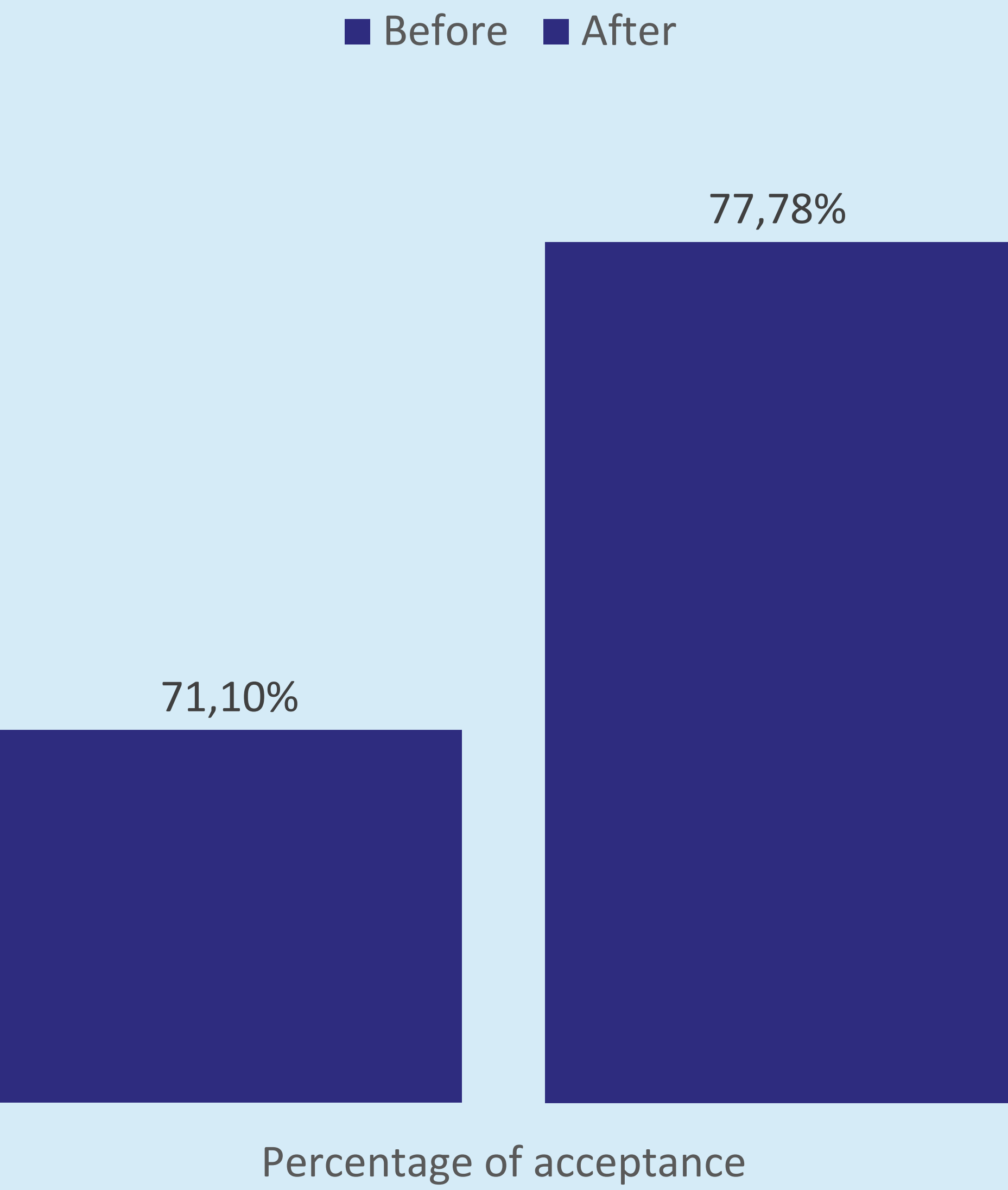
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RESULTS

From the measurements before implementation carried out on 187 patients, the percentage of night snack reception by 71.1% and after implementation in 189 patients increased to 77.78%. Nutritional values before implementation were 4 grams of protein, 6 grams of fat, 22 grams of carbohydrates and after implementation were 4.43 grams of protein, 4.66 grams of fat, 20.37 grams of carbohydrates, 0.31 grams of fiber. The previous energy value was 160 calories and 147.26 calories after implementation. With the required cost of IDR 3,877,125 per month decreased to IDR 2,682,603 per month.



Standard	Before	After
Percentage of acceptance	71,1%	77,78%
Nutritional values (fiber)	0	0,31
Energy value	160 cal	147,26 cal
Cost/month	Rp. 3.877.125,-	Rp. 2.682.603,-