The Influence Of Implementing The Diverse, Nutritious, Balanced And Safe Program (DNBS) On The Members Of The Family Welfare Program Working Group 3 (Pokja 3) In Surakarta

Suswadi[1], Ninda Beny Asfuri[1], Aan Budi Santoso[1]

1.Universitas Tunas Pembangunan Surakarta, Surakarta
Corresponding Email: Suswadi_slo@yahoo.com

Abstract

This study aims 1) to determine the influence of the cognitive aspects of PKK Surakarta City women before treatment and after treatment regarding the DNBS program, 2) To determine the effect of the attitude aspects of PKK Surakarta City women before treatment and after treatment regarding the DNBS program , 3) To determine the effect of cognitive abilities on the results of the healthy food competition for PKK Surakarta City Women. This type of research is a quantitative study using a quasi-experimental design with one group pre-test and post-test design. The research subjects were PKK Surakarta women, totaling 30 people. Sampling was carried out using purposive sampling technique. Methods of data collection with pre-test or initial test, implementation of the treatment (treatment), and post-test or final test to collect final data. Data collection included data on the knowledge, attitude and psychomotor aspects of PKK Surakarta City women which were collected using tests for cognitive aspects, questionnaires for attitude aspects and competitions to see psychomotor aspects. The data collection instruments used were tests and questionnaires. The statistical analysis method used is simple regression analysis with the condition that the data distribution is normally distributed and the variables are homogeneous. Test the hypothesis using the t test. The results showed that 1) Based on the hypothesis test using the t-test showed that the sig. (2-tailed) <0.05 which means that there is a significant effect between the training provided on the cognitive abilities of the DNBS group (H1) is accepted, 2) Based on the hypothesis test using the t-test shows that the sig. (2-tailed) < 0.05. Test the hypothesis which states that there is a significant effect between the training provided on the attitude aspects of the DNBS group (H1) is accepted, 3)

Keywords: DNBS Program, Food Smart City, PKK Surakarta

Introduction

Improving the quality of food consumption to realize high-quality Human Resources can be pursued through the application of Diverse, Nutritious, Balanced, and Safe (DNBS) food consumption. DNBS food includes a variety of food items such as carbohydrate sources, proteins, vitamins, and minerals. When consumed in balanced amounts, they can meet recommended nutritional adequacy and are not contaminated with

harmful substances that can jeopardize health. The implementation of DNBS consumption needs continuous development, with a focus on locally processed foods of commercial value to promote their production.

Encouraging creativity and innovation in creating appealing menus with high nutritional value through the development of local food processing businesses is essential. This can lead to economic value generation. One way to enhance food consumption quality is by providing targeted education, particularly to mothers, enabling them to implement DNBS consumption. This involves displaying meals for their family members according to the Recommended Nutrient Intake (RNI) for various age groups, genders, body sizes, and activity levels. This approach aims to achieve optimal health, prevent stunting in children, and promote prosperous and healthy families.

According to Minister of Health Regulation No. 28 of 2019 on the Healthy Lifestyle Movement, the regulation outlines the government's efforts to increase public awareness about the importance of healthy and balanced eating habits. This movement includes promoting diverse, nutritious, balanced, and safe food practices. Tunas Pembangunan University (UTP) Surakarta, in collaboration with the III Working Group of the Family Welfare Movement (Pokja III Tim Penggerak PKK) of Surakarta City, supports the government's endeavor to establish a smart food city and promote DNBS food practices. This is achieved through workshops for mothers of the PKK in Surakarta City about DNBS food consumption. Additionally, a cooking competition is organized, focusing on creating diverse, nutritious, balanced, and safe menus as well as local snacks for lunch.

The competition involves participants from each sub-district, with each team consisting of two members. The panel of judges is composed of representatives from the City Health Department, SMK N 7 Surakarta, Chef Brianwicaksono, UTP Surakarta, and the PKK of Surakarta City.

There are specific criteria for the competition, including the Display Menu for Lunch and Lunch Snacks categories using easily available local ingredients for families. The complete DNBS lunch package is to be designed, selecting from two food clusters: cereal cluster, including corn and sorghum, or tuber cluster, including cassava and taro. Competition requirements for following DNBS principles include evaluation criteria: 1) 80% for menu display, covering balanced portion (20%), diversity of food items (10%), creative recipe development and applicability to daily life (25%), taste (25%), food presentation and safety 20%); 2) 10% for a 2-day menu recipe, comprising 60% for the menu recipes, 20% for local food profiles, and 20% for DNBS menu costs; and 3) 10% for business prospects.

Method

The research methodology employed is a quantitative research with a quasi-experimental design utilizing a one-group pre-test and post-test arrangement. The research design involves an independent variable (X) of the DNBS program and a dependent variable (Y) of the "smart food city" concept.

The study population consists of members of the PKK (Family Welfare Movement) in Surakarta City. The research sample includes 30 participants from the PKK members in Surakarta City, selected using purposive random sampling. Data collection involves a pre-test, implementation of the treatment (intervention), and a post-test to gather final data. The data collection encompasses information about the knowledge, attitudes, and psychomotor skills of the PKK members in Surakarta City. Cognitive aspects are

assessed using a test, attitudes are evaluated through a questionnaire, and psychomotor skills are observed through competitions.

Data collection instruments comprise tests, questionnaires, and Likert scales. The research employs a simple regression analysis method, assuming that the data distribution is normal and variables are homogenous for the hypothesis testing. The hypothesis testing is carried out using the t-test.
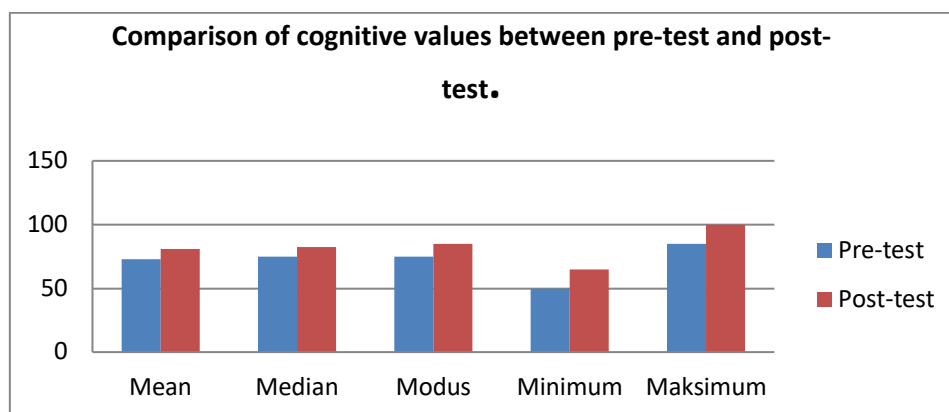
RESULT AND DISCUSSION

Figure 1. Comparison of cognitive values between pretest and posttest.

Tabel 1. Independent Samples Test (uji t)

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Kognitif	Equal variances assumed	.002	-7.33333	2.29359
	Equal variances not assumed	.002	-7.33333	2.29359

The data presented in Figure 1 above illustrates that the cognitive abilities of the PKK Mothers in the DNBS program were lower before undergoing training, counseling, and workshops (pre-treatment) compared to their abilities after the treatment. The hypothesis test indicating a significant influence of the provided training on the cognitive abilities of the DNBS group (H1) is accepted. This is demonstrated by the t-test analysis shown in Table 1. Based on the hypothesis test utilizing the t-test presented in the aforementioned table, the p-value (2-tailed) is < 0.05, which means that the null hypothesis (Ho) is rejected in favor of H1. In other words, there is a significant difference in cognitive abilities between before and after the treatment.
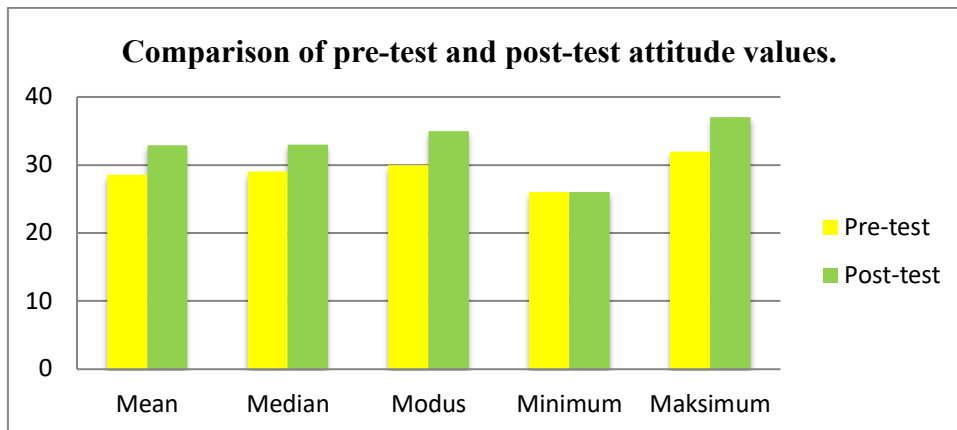
Figure 2. Comparison of pre-test and post-test attitude scores.

Table 2. Independent Samples Test (uji t)

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Sikap	Equal variances assumed	.000	-4.32258	.57476
	Equal variances not assumed	.000	-4.32258	.57476

The data in Figure 2 illustrates that the attitude of the mothers in the DNBS program prior to undergoing training, counseling, and workshops was lower than their attitude after the treatment. The hypothesis test asserting a significant influence of the provided training on the attitude aspect of the DNBS mothers (H1) is accepted. This is evidenced by the t-test analysis presented in Table 2. Based on the hypothesis test employing the t-test in the aforementioned table, it is evident that the p-value (2-tailed) < 0.05, signifying that the null hypothesis (Ho) is rejected in favor of accepting H1. In other words, there exists a significant difference in attitude capability between the period before and after the treatment.

Table 3. ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22838.082	2	11419.041	1.532	.256[a]
Residual	89451.651	12	7454.304		
Total	112289.733	14			

a. Predictors: (Constant), attitude, Kognitif

b. Dependent Variable: Race Results

The results of the simple regression analysis conducted using SPSS 17 for Windows indicate a significance value (sig.) of 0.256, which is greater than 0.05. This implies that there is no significant influence between cognitive ability and attitude towards the outcomes of the healthy food competition.

Cognitive ability is associated with cognitive processes, understanding, and other cognitive skills. On the other hand, the healthy food competition likely involves knowledge, strategies, specific skills, and understanding of the food domain and related challenges. Consequently, even though cognitive ability might be a relevant factor in various aspects of life, it might not directly impact the outcomes of the healthy food competition on its own.

The factors that exert a greater influence on the results of the food competition include:

1. Specific Knowledge and Understanding: Food competitions may evaluate participants' knowledge and understanding of specific topics relevant to food, such as nutrition, food safety, food production, or innovations in the food industry. This knowledge and understanding play a crucial role in achieving favorable outcomes in the competition.

2. Practical Skills: Food competitions often involve practical aspects, such as food preparation, food quality testing, menu design, or addressing challenges in food production. The ability to apply practical knowledge and skills in real-life situations is a significant factor in achieving favorable outcomes in food competitions.

3. Innovation and Creativity: Food competitions may encourage participants to present innovative and creative ideas in solving problems or challenges faced in the food industry. The ability to think creatively and innovatively can contribute to success in the competition.

4. Teamwork: Some food competitions involve teamwork with multiple members. The ability to collaborate, communicate effectively, and contribute within a team can also influence competition outcomes.

5. Experience and Training: Participants with prior experience in the food industry or relevant skill training may have an advantage in the competition. Adequate training and previous experience can enhance participants' skills and confidence.

6. External Factors: External factors such as the level of competition, evaluation criteria, and competition environment conditions can also impact outcomes in food competitions.

It's important to bear in mind that a food competition might encompass various elements, including knowledge, skills, innovation, and creativity. Cognitive abilities can contribute to several of these aspects, but by themselves, they don't always determine the outcome of the food competition. It's crucial for participants to possess relevant knowledge and skills, as well as to practice diligently in preparing themselves for the food competition.

Conclusion

Based on the results of data analysis and discussion, several conclusions can be drawn as follows :

1. The cognitive abilities of the PKK Mothers in Surakarta City within the DNBS group, after undergoing training, counseling, and workshops (treatment), are higher than their abilities prior to the treatment. This indicates an improvement in cognitive capabilities. Hypothesis testing through a t-test reveals that the two-tailed significance value (sig.) is less than 0.05, signifying a significant influence of the provided training on the cognitive abilities of the DNBS group (H1 accepted).

2. The attitude aspect within the DNBS group, after undergoing training, counseling, and workshops (treatment), shows higher scores compared to the attitudes before the treatment. This suggests an enhancement in attitude. Based on the t-test hypothesis testing, the two-tailed significance value (sig.) is less than 0.05. The hypothesis stating a significant impact of the provided training on the attitude aspect of the DNBS group (H1) is accepted.

3. The influence of cognitive abilities on healthy food competition results: The results of multiple regression analysis using SPSS 17 for Windows reveal a significance value (sig.) of 0.256, which is greater than 0.05. This implies that there is no significant influence between cognitive abilities and attitudes with regard to healthy food competition results.

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