



## Application for Regulating the Number of Calories in Eating Per Day

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### ABSTRACTS

This study aims to socialize the importance of maintaining and regulating the number of body calories in daily food intake according to the body's needs. The method used is conventional in the form of socialization with the help of PowerPoint media and videos to explain the subjects taken. And in this study, the authors distributed 20 pretest questions before the socialization was carried out and 20 post-test questions after the socialization were carried out. The subject of this research is 20 members of the Family Welfare Empowerment (PKK). The results of this study indicate that most members of the South Kembangan PKK are interested in going on a diet by maintaining the body's calorie intake in one day and are interested in using application assistance to regulate the body's calorie needs in one day. PKK members usually consist of mothers who are over 30 years old and also have the desire to be able to maintain and also have ideal body weight and are good for body health, especially at the age that enters the elderly category. This study concludes that most members of the South Kembangan PKK are interested in dieting by maintaining the body's daily calorie intake to achieve their ideal body weight. It's just that some other members feel there is no need to maintain their body's calorie intake.

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## 1. INTRODUCTION

In this modern era, everything changes faster, including our diet which usually tends to ignore nutritional content, nutritional balance, and total calories consumed. The low level of public knowledge about a balanced diet makes it difficult for them to regulate the portion of food consumed daily to meet the nutrients needed by their bodies (Lukman & Rahmanto, 2020). In addition to regulating diet, regular exercise is also a major requirement for maintaining health. Food intake should always be sufficient to supply the body's metabolic needs and not enough to cause obesity (overweight) because different foods contain different parts of protein – carbohydrates and fats. The balance of the body's metabolism can be met with the materials needed. Along with the times, innovations have emerged, such as the creation of several applications to help android-based diet programs, such as applications that can calculate the number of calories needed by the body, where this application is available only to calculate the number of calories needed by the body. calories needed by the body by determining the food menu in a day without providing a solution for the number of calories that need to be burned in the body (Suryani & Ardian, 2020; Lestari & Masrurroh, 2020; Bisma *et al.*, 2021). The second is an android-based ideal weight calculator application.

Setiadi *et al.* (2021) reported that it can help calculate the ideal weight even though it only refers to the Brocca formula. The third application that can identify calorie needs regarding the identification of a person's nutritional needs uses. But, there are deficiencies in computer-based applications. The fifth Android-based application is to Help Diet Programs to help their sports activity-based diet program (Azizah *et al.*, 2017). However, there is a lack of exercise activity options that can be entered into the app to determine the number of calories burned. Therefore, the use of applications to help regulate the number of calories in daily food intake is the goal of this study. This research was conducted with an approach through online and face-to-face discussions using PowerPoint and video simulation using zoom meetings with 20 members of Family Welfare Empowerment (PKK) in South Kembangan Village, Jakarta, Indonesia by giving Pre-test and Post-Test. After the pretesting was done, it was continued with the delivery of material through power points and video tutorials to help calculate the right number of calories for the body in a day. The novelties of this study are (i) Explanation of the importance of the number of calories in the body in a day; (ii) knowing the mother's interest in maintaining body calories (iii) knowing how to calculate body calories to achieve the ideal body weight using the help of the application.

## 2. METHODS

This research was conducted with an approach through online and face-to-face discussions at a media zoom meeting with 20 persons who are members of Family Welfare Development (PKK) in the city of Jakarta, Indonesia. To find out the PKK members' initial understanding of the material presented, the researchers gave 20 pretest questions to PKK members. In the presentation session, the researcher explained briefly about the body's calorie needs and how to manage calories in a day using PowerPoint media and video tutorials on using a calorie counter application. As shown in **Figure 1**. The use of PowerPoint helps to explain the body's calorie needs and how to adjust the amount of calorie intake to suit the body's needs. As well as an explanation of the application that can make it easier to calculate and regulate the body's calorie needs in a day. For the socialization, objectives to be achieved, and practical activities to be successful, we showed a video tutorial on the use of a calorie counter application (as shown in **Figure 2**).

After the socialization session ended, the researcher gave 20 posttest questions to PKK members, where the questions were the same as the pretest. The goal is that researchers can

measure how much knowledge PKK members have after the socialization session was carried out. The pretest and post-test questions are shown in **Table 1**.



Figure 1. Socialization session with PowerPoint media.

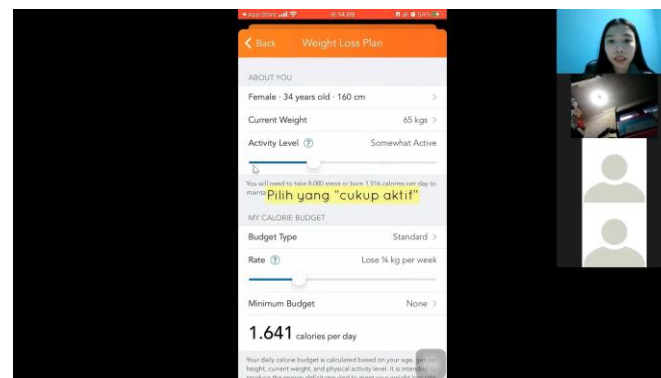


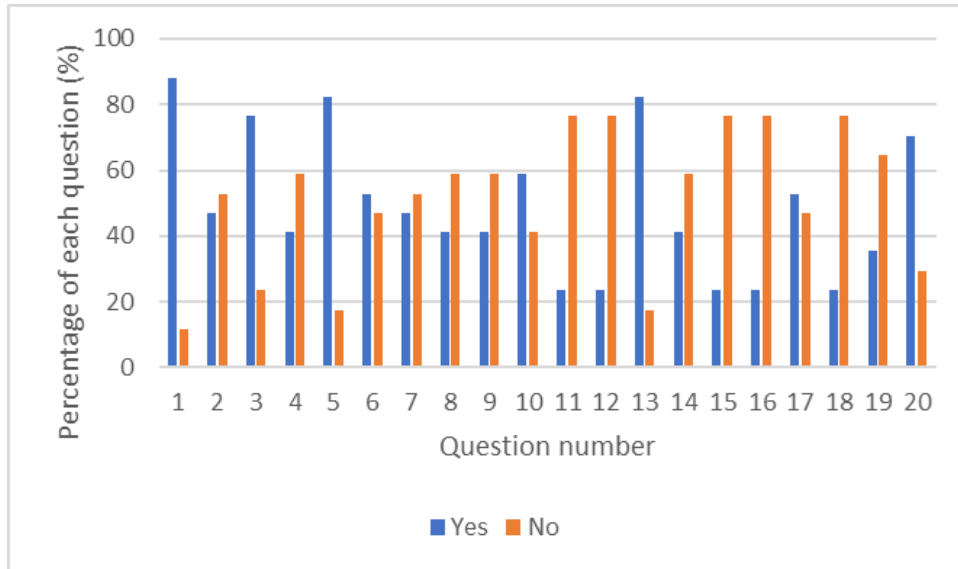
Figure 2. Video tutorial session using the body's calorie counter application.

Table 1. Pretest and posttest questions.

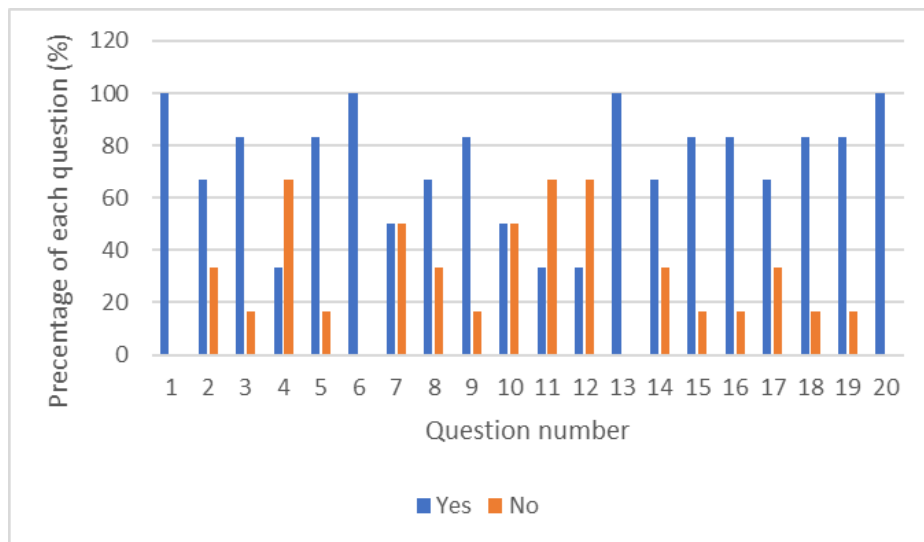
No	Pretest and Posttest Questions	Answer Choice
1.	Do you know the meaning of diet?	Yes / No
2.	Are you interested in doing a diet program?	Yes / No
3.	Do you know the importance of maintaining the body's calorie intake?	Yes / No
4.	Are you interested in going on a diet by reducing the amount of food intake?	Yes / No
5.	Do you know your ideal body weight?	Yes / No
6.	Do you want to go on a diet to maintain health?	Yes / No
7.	Do you want to go on a diet to lose weight?	Yes / No
8.	Do you already know your body's calorie needs?	Yes / No
9.	Do you understand how to calculate the calories your body needs in a day?	Yes / No
10.	Are you interested in doing a diet by reducing the amount of carbohydrate intake?	Yes / No
11.	Are you interested in doing a diet with only vegetables & fruit?	Yes / No
12.	Are you interested in doing a diet by avoiding eating meat?	Yes / No
13.	In your opinion, is it important to have a diet that keeps protein, fat, and carbohydrates in balance?	Yes / No
14.	Do you know how to adjust the amount of food intake to match the calories your body needs in one day?	Yes / No
15.	Do you know an application that can help in calculating the amount of calorie intake for the body in one day?	Yes / No
16.	Have you ever used a diet app?	Yes / No
17.	Do you think this application can make it easier for you to calculate calorie needs?	Yes / No
18.	Have you ever used an application to compose a diet menu?	Yes / No
19.	Does the application make it easier for you to do a diet program?	Yes / No
20.	Do you know the meaning of diet?	Yes / No

### 3. RESULTS AND DISCUSSION

The results of the pretest questions given to 20 PKK members in Jakarta, Indonesia are shown in **Figure 3**. Where each member has different knowledge regarding body calories and is interested in maintaining his body's calorie intake in a day. **Figure 3** shows the average pretest answers obtained before doing this. This data shows that the pretest given to PKK members regarding the use of applications to help regulate the number of calories in daily food intake according to the body's needs is quite good. After the socialization was carried out, it can be seen in **Figure 4**. that there was an increase of 23.7% in knowledge and also the interest of PKK members in the importance of maintaining the body's calorie intake.



**Figure 3.** The results of the answers to the pre-test questions.



**Figure 4.** The results of the answers to the post-test questions.

Details of the percentage scores for each pretest and posttest can be seen in **Table 2**. **Table 2** describes the results of the pre-test and post-test of the 20 PKK members who were sampled in this study. Based on the data table, shows the level of understanding of PKK members about the importance of the body's daily calories and the use of applications in helping to calculate the body's calorie needs.

**Table 2.** Results of Pre-test and Post-test

Question No	Pretest Score	Posttest score	Increase in value
1.	88.2	100	11.8
2.	47.1	66.7	19.6
3.	76.5	83.3	6.8
4.	41.2	33.3	-7.9
5.	82.4	83.3	0.9
6.	52.9	100	47.1
7.	47.1	50	2.9
8.	41.2	66.7	25.5
9.	41.2	83.3	42.1
10.	58.8	50	-8.8
11.	23.5	33.3	9.8
12.	23.5	33.3	9.8
13.	82.4	100	17.6
14.	41.2	66.7	25.5
15.	23.5	83.3	59.8
16.	23.5	83.3	59.8
17.	52.9	66.7	13.8
18.	23.5	83.3	59.8
19.	35.3	83.3	48
20.	70.6	100	29.4
<b>Overall class preset score (%)</b>		<b>Overall class posttest score (%)</b>	<b>Increase in value (%)</b>
48.8%		72.5%	23.7%

The results of the research from the proposed pretest and post-test questions as shown in the diagram above for the "Yes" option the value has increased. As for the discussion:

For questions 1 and 2, the results increased because they explained the definition of diet. For question 3, the results increased because in the socialization session it was explained about the importance of food intake to maintain calories, while questions 4 and 10 have decreased. This is because some people find it difficult to reduce their daily food intake to maintain and control calorie intake. For question 5 the results increased because the socialization session explained how to calculate the ideal body weight and practiced it directly to find out the ideal body weight of PKK members.

Furthermore, questions 6 and 7 showed an increase because the researchers explained the benefits of the importance of maintaining the body's calorie intake for health. for questions 8 and 9, the results increased because the researchers explained how the body's calorie count in one day. For questions 11 and 12, it increased by 9.8%, and number 13 increased by 17.6% because PKK members can understand the importance of dieting while still paying attention to the intake of protein, carbohydrates, fats, and vitamins. For questions no. 14, no. 15, no. 16 and no. 18 the results increased because the researchers provided recommendations for applications that could assist in calculating and maintaining calorie intake so that dieting could be done more easily. for questions 17, 19, and 20, the results showed an increase of 13.8, 48, and 29.4% because after the socialization session and showing video tutorials, PKK members could easily use the application to help calculate the number of calories and make it easier they are on a diet program to maintain their body's calorie intake.

The results of this study indicate that most PKK members in Jakarta, Indonesia aged around 30 years and over are interested in going on a diet by maintaining the body's calorie intake in one day and are interested in using applications to regulate the body's calorie needs in one day.

#### 4. CONCLUSION

The socialization which was held by discussing the use of applications to help regulate the number of calories in daily food intake according to the body's needs to 20 PKK members through a zoom meeting showed good results. It has been evaluated through pretest & post-test questions distributed via google forms giving mixed results. The results of this study indicate that some PKK members are interested in maintaining their body's calorie intake to achieve ideal body weight and some are not too interested in maintaining their body's calorie intake. This factor is supported because the title of socialization raised is a problem that often arises in the community, especially among women. Besides that, the media used is quite interesting, so the method used affects the success of the socialization process.

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#### 6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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