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Socialization of the Benefits of Brotowali for Health at the Bringkan Lestari Nursing Home in Gresik

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A B S T R A C T

Lestari Nursing Home is an active nursing home located in Bringkan village, Menganti sub-district, Gresik district. There are 40 elderly people who are permanent residents. Nursing homes often receive assistance in the form of food or basic necessities. Based on survey results, many elderly people do not know the benefits of the brotowali herbal plant. In fact, brotowali infusion and decoction have been used to treat high blood sugar. Due to the lack of knowledge among the elderly about the benefits of the brotowali herbal plant, the drafting team will hold outreach activities at the Lestari Nursing Home. The aim of this community service activity is to increase the knowledge of the elderly about the benefits of brotowali for health, and increase the awareness of the elderly to use brotowali herbal drinks for natural (herbal) health. The method used is counseling. The topic given was about the benefits of brotowali for health with a target of 20 elderly people. The results of the counseling showed an increase in knowledge of 84%. The elderly seemed enthusiastic in this outreach activity as seen from their activeness when the question and answer discussion session was opened by the resource person.

INTRODUCTION

Indonesia is a country that has the greatest biodiversity in the world. Of the total of around 40,000 types of medicinal plants known in the world, 30,000 are thought to be in Indonesia (Lestari & Lagiono, 2018). One of the many types of herbal plants found in Indonesia is Brotowali (*Tinospora crispa* L). Brotowali infusion and decoction have been used to treat high blood sugar in Indonesia (Noor & Ashcroft, 1998)(Styawan & Budiman, 2015). Brotowali (*Tinospora crispa* L) extract provides significant antihyperglycaemic effects. The extract may consist of compounds that initiate insulin secretion by modulating Ca^{2+} in Pancreatic β cells (Ahmad et al., 2016).

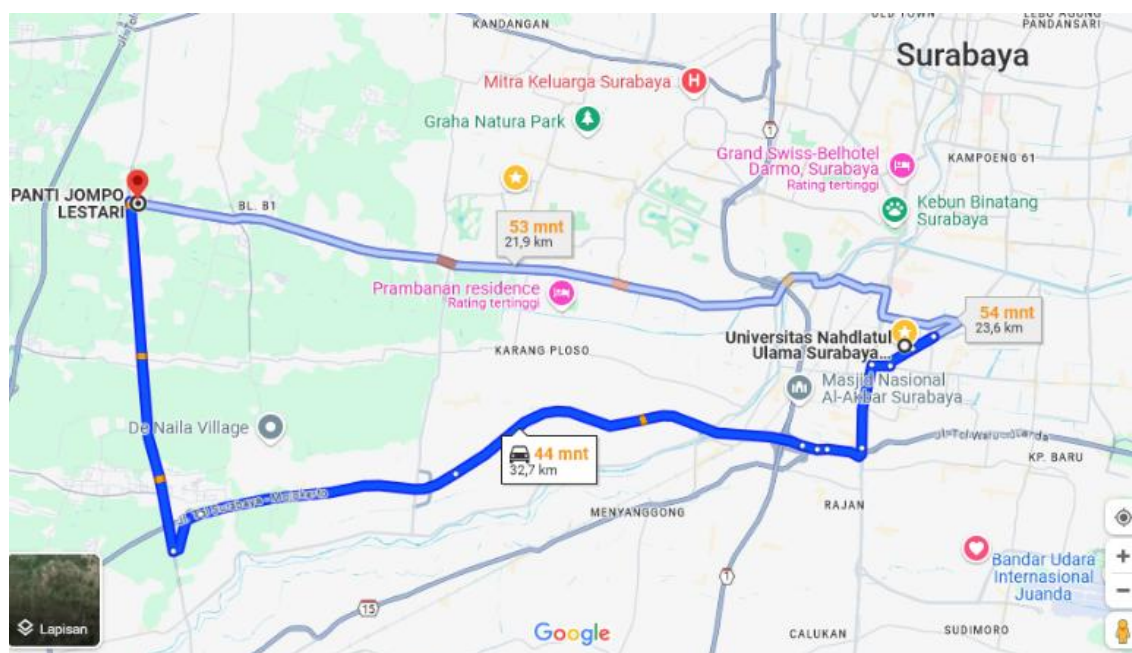
It is suspected that N-cis feruloyltyramine, N-trans feruloyltyramine and secoisolariciresinol isolated from brotowali dichlorethane extract have antioxidant activity. In addition, bergenin isolates from brotowali stems have been studied and have free radical scavenging activity. Based on DPPH, FRAP, and TBA tests, crude water extract from Brotowali stems (*Tinospora crispa* L) was found to show high antioxidant activity and its antioxidant potential was equivalent to previously existing antioxidants such as BHT and vitamin C (Ahmad et al., 2016) (Widyaningsih et al., 2009).

Based on DPPH, FRAP, and TBA tests, crude water extract from *T. crispa* stems was found to show high antioxidant activity and its antioxidant potential was equivalent to previously existing antioxidants such as BHT and vitamin C (Akim, 2008). Antioxidant tests carried out by (Froemming, 2011) showed that the methanol extract of *T. crispa* showed the highest antioxidant activity as determined by measuring the total flavonoid content, total phenolic content and DPPH5 free radical scavenger activity (Islam et al., 2014). Antioxidant activity can be attributed to the phenolic compounds present in *T. crispa* such as flavonoids which act as free radical scavengers. (Cavin et al., 1998) isolated vanillin, syringin, N-formylannonain, N-formylnornuciferin, borapetosides B, C, and F, N cisferuloyltyramine, N trans-feruloyltyramine, and secoisolariciresinol from dichloromethane extract of Brotowali (*Tinospora crispa* L). The antioxidant and free radical scavenging potential of N-cis-feruloyltyramine, N-trans feruloyltyramine, and secoisolariciresinol is higher than the synthetic antioxidant butylhydroxytoluene (BHT) (Cavin et al., 1998).

Antioxidant activity can be an important therapy in preventing oxidative stress which is involved in the development of several diseases including cardiovascular and neurological disorders (Ahmad et al., 2016). Lestari Nursing Home is an active nursing home located in Bringkang village, Menganti sub-district, Gresik district. In this sustainable nursing home, there are approximately 40 elderly people who are permanent residents. Lestari Nursing Home often receives assistance in the form of food or basic necessities from people who care about the elderly (elderly). However, the frequency of socialization activities in the form of health education there is still relatively small and the elderly in nursing homes also do not know the benefits of brotowali for health (Kresnady & Lentera, 2003). Based on this, the proposing team wants to hold community service activities in the form of socializing the benefits of brotowali for natural (herbal) health. Apart from that, with this community service activity it is hoped that it can fulfill the achievement of the Main Performance Indicators, namely IKU 2 students get experience outside campus and IKU 3 lecturers doing activities outside campus.

METHODS

Lestari Nursing Home is an active nursing home located in Bringkang village, Menganti sub-district, Gresik district. In this sustainable nursing home, there are approximately 40 elderly people who are permanent residents. Lestari Nursing Home often receives assistance in the form of food or basic necessities from people who care about the elderly (elderly).



The distance between Nahdlatul Ulama University Surabaya Campus B and Pantj Lestari Bringkan Gresik is 32.7 km with a travel time of approximately 1.5 hours by motor vehicle.

The method that will be applied in this community service activity is counseling with the following explanation:

Time and Place of Implementation

This community service activity program will be held at the Lestari Nursing Home. The program will be implemented for 1 day.

Target Participants

The target participants are the elderly at the Lestari Nursing Home

Implementation Stages

The most important program content in this community service is education about the benefits of brotowali.

1. Counseling

This outreach activity about the benefits of brotowali for health was given to all elderly people at the Lestari Nursing Home. Outreach activities will be carried out offline in the nursing home meeting room.

The resource person in this counseling came from a lecturer at the Faculty of Medicine, UNUSA.

The number of participants in this activity consisted of 40 participants. The next series of outreach activities are as follows:

- a. Caregivers and all elderly people are given information by the nursing home that counseling will be held about the benefits of brotowali for health at a predetermined time and place.

- b. Participants are the elderly at the Lestari Nursing Home with a total of 40 people and an attendance list is prepared.
 - c. Before the counseling begins, questionnaires or pre-test sheets must be distributed which must be filled in by all counseling participants and submitted to the committee.
 - d. The resource person provides an explanation of the educational material guided by a moderator.
 - e. After presenting the material, the moderator provides the opportunity for discussion and questions and answers in 2 sessions and each section has 3 questioners.
 - f. Before the event closes, the conclusion of the counseling material is read by the moderator
 - g. Distribution of door prizes in the morning for participants who actively ask questions.
 - h. Completing the post test via the questionnaire provided
 - i. Closing event
2. Drink Brotowali Herbal Together

This joint activity of drinking brotowali herbal medicine was carried out with the aim of introducing the taste and benefits of brotowali as well as increasing awareness among the elderly that brotowali is a herbal plant that has good health benefits, especially for the elderly.

RESULT AND DISCUSSION

Result

After holding socialization about the benefits of brotowali for health at the Lestari Bringkan Gresik Nursing Home, the elderly showed an increase in knowledge of the benefits of brotowali. This can be seen from the results of the evaluation carried out by filling in the questionnaire given after the counseling (post test). The results of filling out the pre-test and post-test questionnaires can show the participant's level of knowledge before and after being given the counseling material. All work done by the elderly is assessed on a percentage scale. The formula used to measure the percentage of answers obtained from the pre-test and post-test is; The number of correct questions is compared with the total number of questions, then multiplied by 100%. Next, these values are divided into three categories. According to Arikunto (2019), the criteria or categories for measuring knowledge are divided into three, namely GOOD if the score is in the range of 76 - 100%, ADEQUATE if the score is in the range of 56 - 75%, and LESS if the score is less than 55%.

To analyze the data collected from the pre-test and post-test scores of students participating in the counseling, Microsoft Excel data processing software and SPSS 21 statistical software were used. The following are the results of the analysis of the results of filling out the pretest and posttest questionnaires:

There were 20 elderly people who took part in this counseling. The elderly complete the pre-test and post-test questions accompanied and assisted by the proposing team. The results of the pre-test and post-test are as follows

1.1. Tables

Table 1. Pretest and Posttest Assessment Results for Counseling Participants

	Pre-test		Post-test	
	f	%	f	%
Baik	1	5%	11	55%
Cukup	2	10%	8	40%
Kurang	17	85%	1	5%
Total	20	100%	20	100%

Based on Table 1, it can be seen that the pre-test results show that only 1 respondent (5%) has a good assessment, 2 respondents (10%) have an adequate assessment and 17 respondents (85%) have a poor assessment of knowledge about the benefits of brotowali. . From the same table, it can also be seen that the post-test results show that 11 respondents (55%) had a good assessment, 8 respondents (40%) had a sufficient assessment and 1 respondent (5%) had a poor assessment. This shows that there was an increase in respondents' knowledge before and after the presentation of the counseling material.

Next, to find the significance of the data, the data is processed using statistical software. First, the data was tested for normality using the Shapiro-Wilk test. According to Razali & Wah in Quraisy (2020) stated that the Shapiro Wilk test is a test for sample sizes of less than 50 samples.

Table 2. Shapiro-Wilk Normality Test Results

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre test	.294	20	.002	.799	20	.001
Post test	.250	20	.000	.744	20	.000

After testing the normality of the pre-test and post-test data using the Shapiro-Wilk method, it was found that the p-value of the pre-test data was 0.001 and the p-value of the post-test was 0.000 so that the two groups of data could be declared not normally distributed. This can be seen from the

test results which show the significance value (p-value) is less than the significance level or $p < 0.05$.

Even though the data is not normally distributed, this is not a significant obstacle. Non-parametric methods can still provide valid information in comparing differences between groups of pre-test and post-test scores. In situations like this, it is important to consider the use of appropriate statistical methods for further analysis, so to analyze changes in pre-test and post-test scores the non-parametric Wilcoxon test will be used.

Table 3. Wilcoxon Test Results Pre-test and Post-test Values

	Hasil Post Tes-Hasil Pre tes
Z	-3.985 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

After carrying out the Wilcoxon test on the data, results were found that showed a significant influence between the variables tested. This can be concluded from the p-value obtained, namely 0.000. This value is smaller than the specified significance value, namely 0.05. So the p-value < 0.05 . (Ahmad et al., 2016)

The Wilcoxon test is a non-parametric statistical method used to compare differences before and after treatment or in paired conditions. In this data condition, because the p-value obtained is smaller than 0.05, it means that there is a significant difference between the variables tested before and after treatment. In other words, the treatment of the factor being observed has a real influence on the variable being measured. These results provide an indication that there is a significant difference between the two conditions or times tested. In this data, this difference can be interpreted as a positive change when the elderly have been given counseling compared to when the elderly have not been given counseling, namely an increase in the level of knowledge of the elderly about the benefits of brotowali for health.

These results provide valuable information to nursing home caregivers and community service teams about the success of outreach and training programs and the effectiveness of the methods used. In addition, these results can also be used as a strong basis for improving or modifying training programs in the future, with the aim of achieving better results.

Discussion

The outreach activity on the benefits of brotowali for health was attended by 20 elderly people at the Bringkan Gresik Nursing Home and had very significant good results. This can be seen from the enthusiasm of the elderly in taking part in counseling activities, the activeness of the elderly by asking

questions and active discussions with the resource persons, as well as the improved results from the pre-test and post-test that have been given. During interviews after the counseling activity, the elderly said that they were very happy with this service activity because the elderly could gain new insights and become entertainment for the elderly.

CONCLUSION

After holding outreach about the benefits of brotowali for the health of the elderly at the Lestari Bringkan Gresik Nursing Home, the results showed that there was an increase in knowledge of 84% among the elderly. With this increase, it is hoped that the elderly will be able to apply the knowledge they have gained by using the brotowali plant as a natural (herbal) treatment in their daily lives.

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