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Effectiveness Of Using A Combination Of Ginger And Honey Herbal Medicine To Reduce Productive Cough In Young Adults

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ABSTRACT

A productive cough is a common respiratory complaint among young adults and can disrupt daily activities. Herbal remedies such as ginger and honey have long been trusted as an alternative therapy for cough relief due to their anti-inflammatory, antimicrobial, and expectorant effects. This study aimed to determine the effectiveness of a combination of ginger and honey in reducing productive cough in young adults.

This study uses a quasi experimental design with a one-way approach. group Pretest - posttest. The research sample consisted of 30 young adult respondents with productive cough, selected using purposive sampling technique. Cough severity was measured using a cough scale questionnaire before and after the intervention. Data analysis used the Wilcoxon test. Signed Rank Test.

The results of the study showed a significant decrease in the level of productive cough after administering a combination of ginger and honey with a *p value = 0.000 (<0.05)*. The conclusion of this study is that the combination of ginger and honey is effective in reducing productive cough in young adults.

Keywords: Ginger, Honey, Productive Cough, Herbal Medicine

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1. Introduction

A productive cough is the body's defense mechanism for expelling mucus or secretions from the respiratory tract. In young adults, a productive cough is often caused by upper respiratory infections, weather changes, air pollution, or smoking. While not always dangerous, a prolonged productive cough can disrupt an individual's comfort, sleep quality, and productivity.

Treatment for productive coughs generally involves pharmacological medications such as expectorants and mucolytics. However, long-term use of chemical medications can cause certain side effects. Therefore, people are turning to herbal remedies as a safer and more readily available alternative.

Ginger (*Zingiber officinale*) contains gingerol and shogaol, which have anti-inflammatory and expectorant properties, helping to soothe throat irritation and thin mucus. Honey has antibacterial properties and can coat the throat mucosa, reducing coughing. The combination of ginger and honey is believed to have a synergistic effect in relieving productive coughs.

Although the use of ginger and honey is quite popular, scientific research examining the effectiveness of this combination on productive coughs is limited. Therefore, this study was conducted to determine the effectiveness of a herbal remedy combining ginger and honey in reducing productive coughs in young adults.

2. Research Methods

a. Research Design

This study uses a quasi -experimental design with a one-way approach. group pretest – posttest This design aims to determine the difference in productive cough levels in young adults before and after being given an intervention in the form of a combination of ginger and honey.

b. Location and Time of Research

The study was conducted in region X in July–August 2025. The location was selected based on the high number of productive cough complaints in young adults and the respondents' easy access to herbal interventions.

c. Population and Sample

The population in this study was all young adults who experienced productive cough in the study area.

The number of samples was 30 respondents, which were determined using purposive sampling techniques, namely selecting samples based on certain criteria according to research objectives.

Inclusion Criteria

1) Young adults aged 18–35 years
2) Having a productive cough for at least 3 days

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3) Not currently taking pharmacological cough medication
4) No history of chronic respiratory disease
5) Willing to be a respondent by signing the informed consent consent

Exclusion Criteria

1) Allergy to ginger or honey
2) Have a history of asthma, pulmonary TB, or COPD
3) Currently taking antibiotics or expectorant medication
4) Health condition worsened during the study

d. Research Variables

- Independent variable: Administration of herbal medicine in the form of a combination of ginger and honey
- Dependent variable: Productive cough rate in young adults

e. Operational Definition of Variables

Variables	Operational Definition	Measuring instrument	Scale
Combination of ginger and honey	Warm ginger drink (±2 grams of ginger) with honey (±1 tablespoon)	Intervention SOP	Nominal
Productive cough	Severity of cough with phlegm	Cough scale questionnaire	Ordinal

f. Research Instruments

The research instrument was a productive cough scale questionnaire which included:

- Cough frequency
- Cough intensity
- Amount of phlegm
- Activity and sleep disorders

The instrument has been tested for content validity by health experts and has good reliability.

g. Research Procedures

1) Researchers take care of research permits
2) Respondents were given an explanation and signed an informed consent form. Consent
3) Measurement of the level of productive cough before intervention (pretest)
4) Giving warm ginger drink with honey 2 times a day (morning and evening) for 5 consecutive days
5) Respondents were asked not to consume other cough medicines during the intervention.

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6) Measurement of the level of productive cough after intervention (posttest)

h. Data collection technique

Data is collected through:

- Structured interview
- Completing the cough scale questionnaire
- Respondent observations regarding cough complaints

i. Data Analysis Techniques

Data analysis is carried out through:

- Univariate analysis to see the distribution of respondent characteristics and cough levels
- Bivariate analysis using the Wilcoxon test Signed Rank Test because the data is ordinal and paired

The significance level was set at $\alpha = 0.05$.

j. Research Ethics

This research was conducted by paying attention to the principles of research ethics, including:

- Informed consent consent
- Confidentiality of respondent identity
- The respondent's right to withdraw at any time without consequences

3. Research Results And Discussion

a. Results

1) Respondent Characteristics

This study involved 30 young adults with a productive cough. Respondent characteristics included age, gender, and duration of cough.

Table 1. Respondent Characteristics (n = 30)

Characteristics	Category	f	%
Age	18–25 years	12	40.0
	26–35 years	18	60.0
Gender	Man	17	56.7
	Woman	13	43.3
Duration of Cough	3–5 days	19	63.3
	>5 days	11	36.7

Interpretation:

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Most respondents were aged 26–35 years, male, and had experienced a cough for 3–5 days.

2) Productive Cough Level Before Intervention (Pretest)

Initial measurement results showed that respondents' productive cough levels were still in the moderate to severe category.

Table 2.
Productive Cough Level Before Ginger and Honey Administration

Cough Category	f	%
Light	5	16.7
Currently	14	46.7
Heavy	11	36.6
Total	**30**	**100**

Interpretation:

Most respondents were in the moderate and severe cough category before being given herbal intervention.

3) Productive Cough Level After Intervention (Posttest)

After administering a combination of ginger and honey for 5 days, there was a decrease in the level of productive cough.

Table 3.
Productive Cough Level After Ginger and Honey Administration

Cough Category	f	%
Light	20	66.7
Currently	8	26.6
Heavy	2	6.7
Total	**30**	**100**

Interpretation:

The majority of respondents experienced a decrease in cough levels to the mild category after the intervention.

4) Comparison of Productive Cough Levels Before and After Intervention

To determine the difference in the level of productive cough before and after the intervention, a Wilcoxon test was performed. Signed Rank Test.

Table 4.

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Results of the Wilcoxon Test for Productive Cough Level

Variables	Z	p- value	Information
Cough pretest – posttest	-4,732	0,000	Significant

Interpretation:

The p value = *0.000 (< 0.05)* indicates a significant difference in the level of productive cough before and after administering the combination of ginger and honey.

5) Mean Productive Cough Score

Table 5. Average Productive Cough Score

Measurement	Mean	Elementary School	Difference
Pretest	7.6	1.42	–
Posttest	3.1	1.28	-4.5

Interpretation:

There was a decrease in the average cough score of 4.5 points, which indicates a clinical improvement in the cough condition.

b. Discussion

The study results showed that administering a combination of ginger and honey significantly reduced the rate of productive cough in young adults. This reduction was evident both in the change in cough category and in the average cough score after the intervention.

Ginger contains active compounds such as gingerol and shogaol, which have anti-inflammatory and expectorant effects. These compounds play a role in reducing inflammation of the respiratory tract and helping to thin and expel phlegm. Meanwhile, honey has antibacterial, antioxidant, and demulcent properties that can coat the throat mucosa, thereby reducing irritation and the cough reflex.

The combination of ginger and honey provides a synergistic effect in relieving productive coughs. A warm ginger drink also helps increase blood flow in the respiratory tract and relaxes throat muscles. This aligns with complementary therapy theory, which states that herbal remedies can be used as a supplement to primary therapy for mild to moderate respiratory disorders.

The results of this study align with previous research that found ginger and honey to be effective in reducing cough symptoms and improving patient comfort. Furthermore, the use of readily available and relatively safe natural ingredients makes the combination of ginger and honey a recommended alternative therapy.

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This study has limitations, including the lack of a control group and the relatively short duration of the intervention. Therefore, the results require further examination with a more robust research design.

4. Conclusion And Suggestions

a. Conclusion

Based on the results of research on the effectiveness of using a combination of ginger and honey herbal medicine to reduce productive coughs in young adults, the following conclusions can be drawn:

1) Before being given the ginger and honey combination intervention, most respondents were in the moderate to severe productive cough category, which indicates that the cough complaint was still quite disruptive to the respondents' activities and comfort.
2) After being given an intervention in the form of a combination of ginger and honey for five consecutive days, there was a significant decrease in the level of productive cough, where most respondents were in the mild cough category.
3) The results of statistical analysis using the Wilcoxon test Signed Rank The test showed a *p value = 0.000 (< 0.05)*, which means there was a significant difference in the level of productive cough before and after giving the combination of ginger and honey.
4) The combination of ginger and honey has been proven effective as a complementary herbal therapy in reducing productive cough in young adults clinically and statistically.

Thus, it can be concluded that the use of herbal medicine combining ginger and honey is effective in reducing productive coughs in young adults.

b. Suggestion

Based on the research results and conclusions above, the researcher provides the following suggestions:

1) For the Community
   - The combination of ginger and honey can be used as a natural complementary therapy to help relieve mild to moderate productive coughs.
   - Use of ginger and honey should be done regularly and according to the dosage to get optimal results.
2) For Health Workers
   - Health workers are expected to provide education to the public regarding the use of safe and evidence-based herbal medicines as a supporting treatment for productive coughs.
   - The combination of ginger and honey can be recommended as an adjunctive therapy in patients with uncomplicated productive cough.
3) For Educational Institutions

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- The results of this study can be used as a reference for learning related to complementary therapy and herbal medicine in the fields of health and nursing.

4) For Further Researchers
   - Further research is recommended to use an experimental design with a control group to strengthen the validity of the research results.
   - Research with a larger sample size and longer intervention duration is needed to determine the long-term effectiveness of the ginger and honey combination.
   - It is recommended to add other variables such as consumption patterns, compliance levels, and environmental factors that can influence productive cough.

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