Community Knowledge in Utilizing Herbal Plants for Overcoming Dental Pain

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ABSTRACT

Background: Dental pain can be treated with analgesic medication. Patients who visit the dentist are generally prescribed analgesic drugs. Therefore, analgesics become therapy when patients experience pain. However, herbal plants are currently also widely used by the community to treat dental pain. This is because herbal plants have proven to be quite effective in treating various diseases.

Purpose: To know how the level of knowledge of the community in utilizing herbal plants to treat dental pain.

Methods: This type of research is descriptive with a cross sectional research design. This research was conducted from August to September 2022. The study population was the community in South Tangerang who filled out the questionnaire. Determination of the number of subjects is determined by the total sample, with snowball method.

Conclusion: This research reveals that not all community are aware of the various types of herbal plants that can be used to treat dental pain.

KEYWORDS: Dental pain, analgesic, herbal plants.

ARTICLE DETAILS

INTRODUCTION

The drugs that are often consumed by the public to treat dental pain are analgesic. This type of drug can be purchased freely by the public. If analgesic drugs are consumed in excess of the prescribed dose, it will often cause side effects such as hypersensitivity reactions, stomach, intestinal, kidney and liver disorders. [1]

Our ancestors have passed down herbs to treat various diseases, including dental pain. Therefore, traditional (herbal) medicine is not something new to the people of Indonesia. Public awareness to return to nature has made people want to try various herbal concoctions to overcome various pains. Traditional medicines have proven to be quite effective in overcoming various diseases. Herbal medicines tend to be safer because they do not have adverse side effects on the body. [2]

Indonesia is rich in various types of traditional plants that can be utilized as herbal medicinal plants. Therefore, herbal medicine should begin to be developed so that people can optimally utilize it as an alternative medicine. [2]

The most common complaint in a doctor's practice is pain. [3] The sensory and emotional experience associated with tissue damage is the definition of pain. [4] Pain is a protective mechanism for the body against tissue damage, but pain can cause a decrease in a person's quality of life. [5] Dental pain can disrupt daily activities such as eating, sleeping and working. [3] Pain is often referred to as an alarm to protect the body from tissue damage. [1] Each person has a different pain tolerance threshold. [6]

Odontogenic pain refers to pain that originates in the teeth or supporting structures such as the mucosa, gingiva or periodontal membrane. [7] Dental pain is commonly caused by inflammation of the dental pulp (pulpitis). [7,8] Sixty percent of school-aged children worldwide have experienced dental pain. [7]

Prescribing analgesic drugs is often given by doctors to patients to manage pain. The ideal pain relievers are non-steroidal anti-inflammatory drugs such as ibuprofen or paracetamol. [6,8] Analgesic drugs are drugs used to reduce or eliminate pain or painkillers. Compounds in therapeutic doses that alleviate or suppress pain without causing loss of consciousness of the individual are called analgesics. Commonly used analgesics are non-steroidal anti-inflammatory drugs (NSAIDs), opioids, and antidepressants.

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NSAIDs are drugs that are often used in medical therapy because they have analgesic and anti-inflammatory effects at the same time, so the pain will disappear by taking the drug. [4] Analgesics are used to help relieve pain, often used in headaches or toothaches. [9]Painkillers or analgesics are often used by the public without a doctor's prescription because some analgesics can be bought freely. This can cause side effects from analgesic drugs that exceed the recommended dose for use. Excessive doses can cause hypersensitivity reactions, stomach and intestinal disorders, and kidney and liver damage. Therefore, analgesic drugs must be used rationally and in accordance with a doctor's prescription, to avoid side effects that harm the body. [1,4]

A plant can have medicinal properties due to the presence of phytochemicals or secondary metabolites in the plant. Flavonoids are one of the secondary metabolite compounds known to have activity as analgesics and anti-inflammation. [6] Some plants that have analgesic effects include: bandotan, African leaf, moringa, lavender, aloe vera, melinjo, black pepper, sea pandanus, peppermint, spearmint, bitter melon, and thyme. [10]

MATERIAL AND METHODS

This research was conducted from August to September 2022. The study population was the community in South Tangerang who filled out the questionnaire. Determination of the number of subjects is determined by the total sample, with snowball method. This type of research is descriptive with a cross sectional research design.

This study used the informed consent sheet and questionnaire in the form of google form. The first data analysis is data entry, then descriptive analysis is carried out which is presented in tabular form.

RESULT

The results in this study can be seen in the following tables:

Table 1. Frequency Distribution of Respondents Based on Gender

Gender	Frequency	Percentage
Female	41	66,1
Male	21	33,9
Total amount	**62**	**100**

The results of the study in table 1 show data obtained from 62 research respondents who have participated, consisting of 66.1% (41 respondents) are female and as many as 33.9% (21 respondents) are male.

Table 2. Frequency Distribution of Respondents Based on Knowledge of Herbal Plants

Have knowledge or know information about herbal plants	Frequency	Percentage
Yes	31	50
No	31	50
Total amount	**62**	**100**

The results of the study in table 2 show data obtained from 62 research respondents who have participated, consisting of 50% (31 respondents), both those who have knowledge of herbal plants and those who do not have knowledge of herbal plants.

Table 3. Frequency Distribution of Respondents Based on Knowledge of Herbal Plants that Have Efficacy in Overcoming Dental Pain

Knowing herbal plants that have properties in overcoming tooth pain	Frequency	Percentage
Yes	19	30,6
No	43	69,4
Total amount	**62**	**100**

The results of the study in table 3 show data obtained from 62 research respondents who have participated, consisting of 30.6% (19 respondents) who have knowledge about herbal plants that have properties in overcoming dental pain and as many as 69.4% (43 respondents) who do not have knowledge about herbal plants that have properties in overcoming dental pain.

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Table 4. Frequency Distribution of Respondents Based on When to Start Knowing that Herbal Plants Have Efficacy in Overcoming Dental Pain

When did you start to know that herbs have properties in dealing with tooth pain	Frequency	Percentage
Newly found out (1 year ago)	8	12,9
It has been a long time (5 years ago or more)	16	25,8
Do not know at all	38	61,3
Total amount	**62**	**100**

The results of the study in table 4 show data obtained from 62 research respondents who have participated, consisting of 12.9% (8 respondents) who only knew about 1 year ago, that herbal plants have properties in overcoming dental pain. Respondents who have known for a long time about 5 years or more have known that herbal plants have properties in overcoming dental pain as much as 25.8% (16 respondents), while those who do not know at all are 61.3% (38 respondents).

Table 5. Frequency Distribution of Respondents Based on Types of Herbs Known to be Efficacious for Overcoming Dental Pain

Types of herbs known to be effective for dental pain	Frequency	Percentage
Garlic	1	1,6
Betel water with salt	1	1,6
Betel leaf and cloves	1	1,6
Gargle with salt	1	1,6
Ginger	6	9,7
Cloves	17	27,4
Do not know at all	35	56,5
Total amount	**62**	**100**

The results of the study in table 5 show data obtained from 62 research respondents who have participated, consisting of 1.6% (1 respondent) who know the efficacy of several herbal plants in overcoming dental pain, in the form of garlic, betel water with salt, betel leaves and cloves, and mouthwash with salt. Respondents who knew that ginger is an herbal plant that has properties in overcoming dental pain were 9.7% (6 respondents). Respondents who knew that cloves are herbal plants that have properties in overcoming dental pain were 27.4% (17 respondents), while those who did not know at all were 56.5% (35 respondents).

Table 6. Frequency Distribution of Respondents Who Have Used Herbal Plants when Experiencing Dental Pain

Ever used herbs when experiencing tooth pain	Frequency	Percentage
Yes	10	16,1
No	52	83,9
Total amount	**62**	**100**

The results of the study in table 6 show data obtained from 62 research respondents who have participated, consisting of 16.1% (10 respondents) who have used herbal plants when experiencing dental pain and as many as 83.9% (52 respondents) who have never used herbal plants when experiencing dental pain.

Table 7. Frequency Distribution of Respondents Based on Herbal Plants that Have Been Utilized when Experiencing Dental Pain

Herbs that have been used when experiencing dental pain	Frequency	Percentage
Betel leaf	1	1,6
Betel leaf and cloves	1	1,6
Ginger	3	4,8
Cloves	6	9,7
Never use herbal plants	51	82,3
Total amount	**62**	**100**

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The results of the study in table 7 show data obtained from 62 research respondents who have participated, consisting of 1.6% (1 respondent) who have used several herbal plants when dealing with dental pain, in the form of betel leaves and cloves. Respondents who have used herbal plants in the form of ginger when dealing with dental pain are 4.8% (3 respondents). Respondents who have used herbal plants in the form of cloves are 9.7% (6 respondents), while those who have never used herbal plants at all are 82.3% (51 respondents).

Table 8. Frequency Distribution of Respondents who Plant Herbal Plants because they Know the Efficacy of the Herbal Plants

Planting herbal plants because I know the benefits of these herbal plants	Frequency	Percentage
Yes	12	19,4
No	12	19,4
Did not plant herbs	38	61,3
Total amount	**62**	**100**

The results of the study in table 8 show data obtained from 62 research respondents who have participated, consisting of 19.4% (12 respondents) both those who plant herbal plants because they know the benefits of these herbal plants, and those who plant herbal plants because they do not know the benefits of these plants. Respondents who did not plant herbal plants in their yard were 61.3% (38 respondents).

Table 9. Frequency Distribution of Respondents Based on Reasons for Utilizing Herbal Plants to Manage Dental Pain

Reasons to use herbs for dental pain	Frequency	Percentage
Never experienced tooth pain	1	1,6
Avoiding chemical drugs	1	1,6
Cheap	1	1,6
Supplies for kitchen spices	1	1,6
More trust in natural ingredients	9	14,5
Never utilized herbal plants	49	79
Total amount	**62**	**100**

The research results in table 9 show data obtained from 62 research respondents who have participated, consisting of 1.6% (1 respondent) who have never experienced dental pain, avoid chemical drugs, low prices, and supplies for kitchen spices. Respondents who used herbal plants because they trusted natural ingredients more were 14.5% (9 respondents), while those who never used herbal plants at all were 79% (49 respondents).

Table 10. Frequency Distribution of Respondents Based on Consultation with Dentists when Using Herbal Plants to Manage Dental Pain

Consultation with a dentist when using herbs for dental pain	Frequency	Percentage
Yes	5	8,1
No	12	19,4
Never utilized herbal plants	45	72,6
Total amount	**62**	**100**

The results of the study in table 10 show data obtained from 62 research respondents who have participated, consisting of 8.1% (5 respondents) who consulted a dentist beforehand when using herbal plants to treat dental pain. Respondents who did not consult a dentist beforehand when using herbal plants were 19.4% (12 respondents), while respondents who never used herbal plants were 72.6% (45 respondents).

DISCUSSION

Many herbal plants can be used to treat dental pain. Information about people's knowledge about herbal plants in overcoming dental pain was obtained through a questionnaire containing questions covering knowledge about herbal plants. Based on the results of the study, it appears that most respondents involved in this study were female, as many as 66.1%. Public knowledge of herbal plants appears to be the same, namely 50% of respondents know about information about herbal plants and 50% do not know it. The results of this study are not in line with the research of Pratiwi et al in 2018 which showed the results of the questionnaire that 91% of people who knew about traditional medicine. [11]

Public knowledge of herbal plants that have properties in overcoming dental pain is still low. This can

be seen through the questionnaire results, namely only 30.6% of respondents who know about it. People who have used herbal plants when experiencing dental pain are also still low, which is only 16.1%. This percentage is still relatively low, which means that not many people have utilized herbal plants in the field of dentistry.

The type of herbal plant that is most widely used to treat dental pain is clove, as much as 9.7%. This is in line with Poernomo's research in 2018 which states that cloves have been used as a natural analgesic in patients with toothache since ancient times. Cloves are one of the natural products that are easily available at affordable prices. The active compounds contained in cloves, which have health benefits, include essential oils, eugenol, oleanolic acid, galotanic acid, phenylin, cariophyllin, and resins. The main content of clove oil that provides benefits to healing dental infections or pain is eugenol (78-98%). Eugenol is produced from oil glands located on the surface of the clove flower body. [12]Only 24.2% of people planted herbs in their yard. The number of people who intentionally planted herbal plants because they knew the benefits of these plants was 19.4%. The same percentage is for people who plant herbal plants without knowing the efficacy of these plants. Meanwhile, 61.3% of respondents did not have herbal plants in their yard. This is not in line with a 2016 study which stated that the community in East Kupang Subdistrict has a very good level of soil fertility, so that many people in the vicinity plant herbal plants in their yard.[13]The main reason for respondents who used herbal plants to treat dental pain was because they trusted natural ingredients more, which was 14.5%. This is in line with Sambara's research, which states that the lifestyle of people today tends to go back to nature, which is the current trend. People are again utilizing natural materials, including as a treatment using efficacious herbal plants.[13]Respondents who utilize herbal plants by consulting a dentist first are only 8.1%. Meanwhile, 19.4% chose not to consult a dentist when utilizing herbal plants. This is in line with research conducted by Sambara, which shows that many people around East Kupang have knowledge in the use of herbal plants without consulting medical personnel. Therefore, many local people utilize herbal plants by roasting, because it is believed to be more efficacious in overcoming various diseases. This is a hereditary legacy from the ancestors. [13]Respondents who never used herbal plants at all were 72.6%. This percentage is still quite high, so it can be said that herbal plants are still less attractive to people in South Tangerang.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the research that has been conducted, it can be concluded that the level of public knowledge in utilizing herbal plants to treat dental pain is still low. This is evident from the very low percentage for the category of people who have used herbal plants when experiencing dental pain, which is only 16.1%. It seems that people prefer to utilize analgesic drugs in dealing with dental pain.It is hoped that medical workers will begin to introduce the properties possessed by herbal plants, so that they can be utilized by the community and used as an alternative or companion therapy in dealing with dental pain. This is to reduce the occurrence of unwanted side effects from prolonged use of analgesic drugs.

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