

**Effects of application Bamboo grove continue to
tea level of patients diabetic type 2, Chiang Rak Noi
Sub-district, Bang Pa-in District,
Phra Nakhon Si Ayutthaya Province.**

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Abstract

This research was Research and Development one group pre-posttest design to study the effect of the application of bergamot, bamboo trough to tea level of patient's diabetic type 2. The sample was a type 2 diabetic patient. Treatment by continuous medication amount 30 people purposive sampling inclusion criteria is a diabetic who evaluates the foot and has 2 or more numbness levels and participated in the research until the end of the study. Research tools Bergamot, bamboo trough foot tea evaluation device Monofilament. Data collection tools foot tea evaluation form and questionnaire. Check the quality of the tool by 3 experts. Content validity with IOC at 0.83 and reliability at 0.63. Statistics used in data analysis by frequency, percentage, mean, standard deviation

The effect of the application of bergamot, bamboo trough to tea level of patient's diabetic type 2. Found before the application of bergamot, bamboo trough patient's diabetic type 2 most have foot numbness at level 4 15 people 50.00 percent and after the application of bergamot, bamboo trough patient's diabetic type 2 most have foot numbness at level 2 14 people 46.70 percent and the sample group is satisfied on the application of bergamot, bamboo at a very satisfactory level) $\bar{x} = (35.80, S.D. = 5.74)$

Suggestions from research results the results of the application of bergamot, bamboo trough, reduce the symptoms of foot numbness in type 2 diabetics. Should encourage the community to use bergamot, bamboo trough to use in type 2 diabetic patients continuously and covers everyone can help reduce foot numbness affecting the reduction of pediatric complications in patients with type 2 diabetes effectively with a sustainable quality of life

Keywords: Diabetic Disease, Bergamot, bamboo trough, Foot numbness

Introduction

Diabetes is a major health problem. Common in susceptible persons 35 years and a major public health problem prevalence of diabetes is likely to increase steadily. Diabetes is a chronic, incurable disease. Diabetes can cause complications for many things. Both acute and chronic acute conditions such as high blood sugar. And infections, chronic diseases such as kidney failure, gangrene of the feet. Cardiovascular and brain and complications that need your attention, no less than other complication is foot ulcers, foot ulcers, which are a major health problem of diabetes. The need to frequently treated and for a long time. The incidence of foot ulceration is increasing. In particular, patients with diabetes who have poor glycemic control. Often pose problems to the nervous system senses the end. This causes numbness in the feet are not feeling the pressure. Or will it feel to it at times when it is wound up at the feet makes no sense that the pain until the wound has spread. Diabetes causes that lead to foot ulcers care is difficult and requires attention. (Bureau of Non-Communicable Diseases Department of Communicable Disease Control Ministry of Public Health, 2018)

Ayutthaya Subdivided into 16 sub-districts, 210 villages, 1,449 problematic situation of chronic non-communicable diseases in 2559 had a population of 808 360 patients were male and 389 474 female and 418,886 people, representing 48.20 percent of the total population, 51.80. The Chronic Disease Statistics report in 2559 found that diabetes (incidence rate was 900.99, 821.31, 731.60 Rate / lakh population) and high blood pressure. (Incidence rate was 2877.90, 1698.99, 1797.89 60 / lakh population) trend of chronic non-communicable diseases during years 2557 to 2559 found that the incidence rate of patients with diabetes and high blood pressure tends to rise. (Health Center Ayutthaya, 2016)

If a diabetic patient self-care is inappropriate to result in adverse blood to the organs is less. The tea is hand toe Feeling slow Perception of heat and cold have less guests so simple lesions and ulcers. Slow healing and chronic wounds. The channel brings germs into the body. In addition, patients control blood sugar levels are not. White blood cells that act to eliminate pathogens decreased cause infection and spread quickly, which found that 50 percent of diabetic patients with foot ulcers are infected. (Piyawan Khanan, 2013). And the incidence of newly diagnosed diabetes patients to doctors who need to be treated by medications is increasing every year. According to the Bureau of Chronic Disease Epidemiology Surveillance on 2550 714 892 to report diabetics as well as diabetics isolated cases with no complications old diabetic without complications income 467 373 102 602 Number of new user profile. Diabetic complications, both old and new revenues 144 917 percent, 65.38, 14.36 and 20.27, respectively, among patients with complications, 144 917 cases (20.27 per cent) were for complications. Lodge arterial Most 54 062

patients (of 37.31), try to include other complications 33 981 patients (of 23.45), complications of kidney 18 949 patients (of 13.08), several complications like 13 533 patients (of 9.34) conditions. Ocular complications 13 507 patients (9.32 percent), neurological complications 8952 patients (6.18 percent) and complications that required amputation 1,933 patients (1.33 percent). (Bureau of Epidemiology, 2007)

The research was to develop a bamboo trough lime to bring health care to reduce foot, feet numbness in patients with type 2 diabetes in Ban Bung Bon. Tambon Chiang Rak Noi Bang Pa-in Ayutthaya the application materials can be found in the community. Lime and herbs to bring out in people with diabetes and foot health, foot numbness reduced. The main cause of complications sidewalk. The researchers expect the results of this study can be applied to innovative healthcare pavement to reduce complications in patients with diabetes.

Research objectives

1. In order to develop bergamot, bamboo grove on foot numbness level in type 2 diabetes patients

2. To assess the effect of the application of bergamot, bamboo grove on foot numbness in type 2 diabetic patients.

- 2.1 To compare the level of foot numbness before and after applying bergamot, bamboo trough to foot numbness in patients with type 2 diabetes.

Hypothesis

After applying bergamot, bamboo grove, type 2 diabetes patients, Ban Bueng Bon Community, Village No. 5, Chiang Rak Noi Subdistrict Bang Pra in District Phra Nakhon Si Ayutthaya Have lower level of foot numbness than before applying bergamot, bamboo strips

Research and Methodology

This research is a research and development (Research and Development) to develop bamboo bergamot to the level of foot numbness in patients with type 2 diabetes in a single group, measured before and after applying bamboo bergamot with the conceptual framework of the research.

Research framework

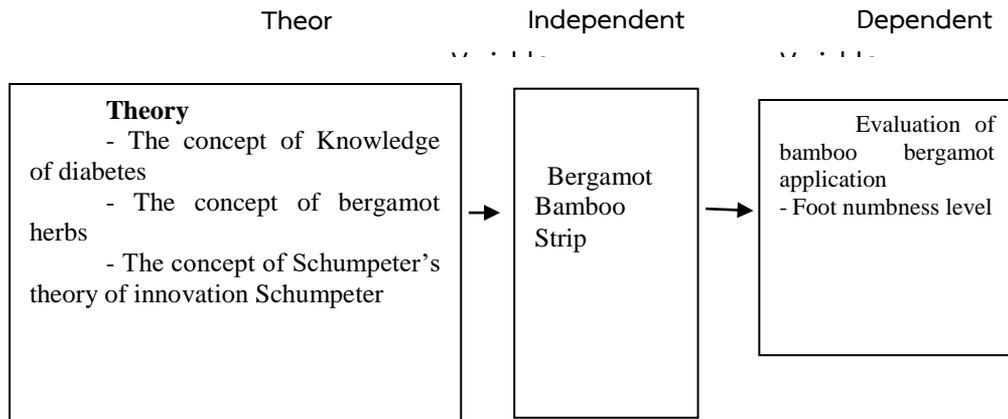


Figure 1 Conceptual framework for

Research plan

This research is a research and development (Research and Development) to develop bergamot, bamboo shoots on foot numbness in patients with type 2 diabetes.



Figure 2 shows the research plan of the research

Symbol used in the experiment

O1 = replace Foot condition evaluation before application of bergamot, bamboo trough

X1 = replace Development of bergamot, bergamot, bergamot, bamboo tracks

X2 = replace test

O2 = replace Assessment of the application of bergamot, bamboo grove on foot numbness in type 2 diabetic patients.

Population

The population in this study who had been diagnosed by a physician as type 2 diabetes and treated by medication continued with names in a register office. In Ban Bung Bon Tambon Chiang Rak Noi Bang Pa Ayutthaya total of 30 people

Selection sample

The subjects were type 2 diabetic patients. The purposive sampling was chosen to assess the level of 1-3 numbness before joining the program 30 people

Research tools.

The instrument used in this study consists of two kinds of Type 1 instruments in experimental type 2 data collection tools by using assessment numbness in the feet include bergamot, bamboo rails Monofilament is the sole monitoring device. Evaluation of numbness in the foot by using monofilament touch the underside. A bent-shaped "C" for about 1-1.5 seconds, press 2 times to leave the flexibility of the monofilament into a patient's eyes are examined at the position on the track. Asked the patient whether or not feel. The test points 3 times to 2 times placebo 1 (test 12 times per foot 1 side), if not treated at once. Unusual device uses up to 100 times per day (Diabetes Association of Thailand) are scoring below Level 4 means there are four points of interpretation of the 3 represents a 3-point level 2 represents a 2-point level. 1 represents a 1 point

The instrument used for data collection has 3 parts: Part 1, Part 2 general information questionnaire and assessment of diabetic foot.

Inspection of equipment quality

Assess the appropriateness of the bergamot trough spawned by 3 qualified people, collecting data validity of the content (Content Validity) and the appropriateness of the language. The luminaries of 3 IOC was 0.83 and the confidence of the whole issue (Reliability) 0.68 Data were analyzed using descriptive statistics including frequency (Frequency) Percentage (Percentage) Average (Mean). And standard deviation (standard deviation)

Data collection methods

The research was conducted by collecting data manually. The researchers were led to examine the staph engine. The objectives of the research were willing to participate in a research note. And understand the process of implementation. The benefits expected to be received. The research advocacy groups to participate in research. It takes less than 15 minutes to answer the questionnaire and were checked for completeness. Questionnaire was not completely eliminated. The queries that have staph analyzed.

Research result**Development results of bergamot, bamboo grove**

1. Choose bamboo 3 sizes large, medium, small size 3 to 2. Bamboo cutting by large 51 cm long bamboo rods 2 medium length 33 cm 2 pieces of small bamboo length 33 cm long, 9. 3. Cut the bamboo forest the size of the holes 3, 4, and abrasive cleaners. Remove all bamboo attributed a bamboo trough lime that can be rotated. And shoot nails to fasten the 4 corners of the kaffir lime rail tracks bamboo 5. Brought bamboo to assessment by experts 6. 3 will try to take the place of lime 5-10 of bamboo chute. Symptoms according to a person with a chair, place your feet on the side rails on bamboo, bergamot. Then use the other foot stepped on the side of the groove bamboo, bergamot and lime foot sliding back and forth on rails bamboo. Switch up - down to the foot massage.



Figure 2 Patterns, bergamot, bamboo rails

Table 1 Show average analysis results and standard deviation Quality, suitability of bergamot, bamboo grove by experts

Content	(N=5)		
	\bar{x}	S.D.	quality level
1. Consistency with innovation	3.67	0.57	moderate
2. Difficulty suitable for users	4.33	0.57	Much
3. Safe for users	4.33	1.15	Much
4. Proper formatting	3.00	1.00	moderate
5. The right size of innovation	2.67	0.57	little
6. Save cost	5.00	0.00	most
Total average	3.83	0.64	Much

From table 1 Mean analysis results And standard deviation Regarding the quality, suitability of the bergamot, bamboo trough, the experts found that the quality of the bergamot tools for the bamboo trough Is suitable at a high level ($\bar{x}=3.83$, S.D.=0.64).

Table 2 Show number analysis results and percentage of the assessment of foot numbness in type 2 diabetic patients before and after the application of bergamot, bamboo trough (N=30)

Foot numbness level	before		after	
	number	percent	number	percent
Level 4 (4 point numbness)	15	50.00	3	10.00
Level 3 (Foot numbness 3 points)	10	33.30	8	26.70
Level 2 (Foot numbness, 2 points)	4	13.30	14	46.70
Level 1 (Foot numbness 1 point)	1	3.33	5	16.70
Total	30	100.00	30	100.00

From table 2 The analysis of And the results of this assessment numbness in the feet of patients with type 2 diabetes before and after the application of lime trough spawned the first application of lime trough spawned patients with type 2 diabetes, most with numbness in the feet 4 number. 15 people, representing 50.00 percent after the application of bamboo, bergamot rail type 2 diabetes patients, most numbness in the feet 2 of 14 people, representing 46.70 per cent.

Discussions

Mean analysis results And standard deviation Regarding the quality, suitability of the bergamot, bamboo trough, the experts found that the quality of the bergamot tools for the bamboo trough Is suitable at a high level ($\bar{x}=3.83$, S.D. = 0.64) The development of bamboo, bergamot rail this time, the researchers used existing materials consist of local bamboo. And bergamot, which was planted in each household to cook them so they do not have the budget to buy consumables costs. Can replace a device used to reduce numbness in the feet, with prices so high that people cannot afford a proper evaluation by a qualified person has the right at a high level in all aspects. Innovations include a line with innovative new development. Are suitable for consumer use. Safe for work Appropriate measures of innovation and cost savings, which, according to the hypothesis. Explain that doing something creative. This has to think of new things. Up in order to develop the existing ones. The goal is to increase profits for the organization. Creating a competitive advantage with innovative strategies. (Schumpeter, 1934) Consistent with the study of Chintana Klon Udon (2016) to study the development of rotating pipe. Stimulate soles to reduce numbness in the feet,

it was found that the development of the innovative "revolving tube to stimulate the feet" is at a high level.

The result of the application of lime trough spawned a level of numbness in the feet of patients with type 2 diabetes in point comparison of numbness in the foot before and after application of lime trough spawned a level of numbness in the feet of patients with type 2 diabetes found. Before applying lime trough spawned type 2 diabetes patients, most numbness in the feet 4 of 15 accounted for 50.00 percent after the application Lama screws. Bamboo trough type 2 diabetes patients, most numbness in the feet 2 of 14 people, representing 46.70 per cent of patients with type 2 diabetes have foot numbness, lower than the previous trough spawned application of lime. According to the hypothesis. Explains bergamot contains hot. Contains bergamot essential oils on the skin contain beta - pinene (B-pinene),. Limonene (Iimonene) is the main substance to evaporate off the scent. Essential oils can be dissolved into the drug absorbed into the skin on the body. Also Pharmacopoeia Thailand said. The skin of citrus aromatic compounds are heated and bergamot essential oils of the skin helps to relax. The blood circulation better-tuned actress Cnts Therapy (2542), the principle is important. When the body gets the nutrients essential oil will affect the system in the body that regulate the nervous system. Hormonal systems in the body, the foot pedal lime packed in bamboo tray, press down, right-left switch with diabetes. The heat melts the oil seep into the toe. It stimulates the nervous system and circulation around the toes more and the aroma of essential oils of bergamot skin helps to relax. Better blood circulation, reduce numbness in the feet caused by diabetic nerve numbness on the other. Which is consistent with the study of Thaksinara krairat (2011) studying the effect of kaffir lime egg panel for treating foot numbness in diabetic patients, Waang Nang Subdistrict and Tha Song Khon Subdistrict, Mueang District, Maha Sarakham Province Elderly with toe numbness. The duration of the experiment was 6 weeks. The conclusion of the study was that stepping on the kaffir lime panel can reduce the numbness of the toes of the elderly. And also consistent with the study of Patthaya Watcharapol (2012) to study the effect of acupressure with essential oil from bergamot and roller on the loss of sensation and numbness of diabetic patients. Trial 4 Weeks found that samples with numbness with a score of 4 - 6 points, numbness of the toes disappear for the numbness of the toes with a score of 7-8 points, there was a better sense of feeling but a slight numbness.

Research result

The result of the application of lime trough spawned a level of numbness in the feet of patients with type 2 diabetes in point comparison of numbness in the foot before and after application of lime trough spawned a level of numbness in the feet of patients with type 2 diabetes found. Before applying lime trough spawned type 2 diabetes patients, most numbness

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Suggestions from research findings: The results of the application of bamboo bergamot to reduce foot numbness in patients with type 2 diabetes have encouraged the community to use bergamot to use in patients with type 2 diabetes continuously and cover all People will help reduce numbness in the feet, which will effectively reduce the occurrence of sidewalk complications in patients with type 2 diabetes. Sustainable good quality of life

Acknowledgment

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