International Journal of Medicine Research
ISSN: 2455-7404; Impact Factor: RJIF 5.42
www.medicinesjournal.com
Volume 2; Issue 2; March 2017; Page No. 24-26

A comparative study to assess the effect of steam inhalation v/s Tulsi leaves inhalation on the sign and symptoms of cold and cough among adult group in selected areas of Pune city

[1] Meghana Kamble, [2] Smita Londhe, [3] Pooja Rapelli, [4] Priti Thakur, [5] Dr. Suresh Ray

[1-4] P.B.B.Sc. Nursing Sudents, Bharati Vidyapeeth Deemed University, College of Nursing, Pune, Maharashtra, India
[5] Associate Professor, Bharati Vidyapeeth College of Nursing, Pune, Maharashtra, India

Abstract
Introduction: Infections of the respiratory tract are perhaps the most common human aliment. They are a source of discomfort and disability result in loss of time for most adults and also the substantial cause of morbidity in adults. Respiratory diseases are very often found especially in adult. It is one of leading cause of morbidity and mortality in adult. Out of India's total population 440 million are constituted by children and about 27 million are born each. But approximately 2 million of them do not live up to the age of 5 years. Inhaling steam is one of the major treatments for respiratory complications and is recommended for dealing with common cold, flu, bronchitis, sinusitis, asthma, and allergies. Dry air passages are moistened, and mucus is loosened and eliminated easier by coughing or by blowing the nose. The moist air also alleviates difficulty breathing, throat irritation and inflammation. Hence, a comparative study to assess the effect of steam inhalation v/s Tulsi leaves inhalation on the sign and symptoms of cold and cough among adult group in selected areas of Pune city was undertaken. The objectives of the study were, to assess the sigh and symptoms of cold and cough before after intervention & to determine the effectiveness of steam inhalation v/s tulsi leaves inhalation on symptoms of cold and cough among adult group.
Material & Methods: The study was approved by institutional research committee. The quantitative research approach with pre-test and post-test design was adopted for the study. The study was conducted in selected slums of Pune city. The data was collected from 60 individuals suffering from cough and cold. Informed Consent was taken prior to data collection. The data was analyzed by using descriptive data (Mean, SD) & inferential statistics (Paired & unpaired "t" test).
Results: Finding of the present study depicts significant change the status of cough & cold after the administration of tulsi leaves and steam Inhalation. There was a significant difference observed between the two groups as t calculated value (6.10) was more than t table value (2.01). The post mean (5.4, 7.86) and SD (1.68, 4.26) of the 02 groups clearly indicates that administration of tulsi leaves were more effective in reducing the sign & symptoms of cold.
Conclusion: This concludes that, instead of plain steam inhalation, if the clients suffering from cough and cold takes steam with the extract of Tulsi leaves would recover fast.

Keywords: steam inhalation, tulsi leaves, cough & cold & respiratory tract

Introduction

The widely accepted definition of health by WHO "health is state of complete physical, mental, social well-being and not merely absence of any disease or infirmity". In recent era there is increasing stress, competition, habits, working condition and changing life styles specifically leads to physical and mental stress which gives rise to diseases. These diseases leads to symptoms like rise in blood pressure, respiration and pulse rate and may more symptoms. So it is very necessary to control and prevent the complications arising from the disease. There is no reason to believe that a safe, soothing home-made remedy is less effective than a safe commercial remedy. Home remedies are usually in expensive and promote self-reliance. Most of the home remedies are harmless. The natural remedies can be a parent's best choice when it comes to treating adult's elements and upsets. In fact herbs can be particularly safe and effective for adults because herbals tend to be much gentler than pharmaceutical alternatives.

Material & methods

Quantitative experimental approach pre - test post - test experimental group design had been adopted for the present study. A total of 60 samples were selected by using non probability purposive sampling technique according to the inclusion criteria of the sample i.e. having sign and symptoms of cold and cough, willing to participate in the study, residing in selected area of Pune city, between the ages group of 25-50 years are selected for data collection. Validity & reliability was done. Reliability was done by using inter rater method. Pilot study was conducted on 06 samples to determine the feasibility of the study and it was found feasible. Observation checklist was prepared to observe the sign & symptoms of cough and cold before and after the intervention. Informed consent was taken prior to conduct the study. Post results were analyzed to determine the effectiveness of the therapy. Unpaired "t" test was used to calculate the significance of the therapy. The two interventions Steam Inhalation with Tulsi Leaves and Plain steam inhalation were tested on the sign and symptoms of cough and cold. In the intervention with Tulsi leaves, 6-8 tulsi leaves were used. It was given twice a day with electric steam inhaler for 15 minutes. Post observation was recorded after the 3 days of intervention.

Results

Table 1: Analysis of Demographic Data n=60

S. No.	Demographic Data		Exp. Group-1		Exp. Group-2	
			Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
1.1	Age:	20-30	15	50%	9	30%
		31-40	6	20%	9	30%
		41-50	10	33.33%	11	36.66%
1.2	Gender:	Male	8	26.66%	13	43.33%
		Female	22	73.33%	17	56.66%
1.3	Respiratory Illness	Yes	1	3.33%	1	3.33%
		No	29	96.66%	29	96.66%
		If Yes Specify	Asthma		Cold & Cough	
1.4	Pet In The House	Yes	2	6.66%	2	6.66%
		No	28	93.33%	28	93.33%
		If Yes Specify	Cat, Dog		Parrot, Cat	
1.5	Any Allergy	Yes	1	3.33%	8	26.66%
		No	29	96.66%	22	76.33%
		If Yes Specify	Dust		Guthaka, Soil	
1.6	Since How Many Days Suffering From Cold And Cough	1-2days	9	30%	9	30%
		3-4days	15	50%	13	43.33%
		5-7days	5	16.66%	3	10%
		More Than 1 Week	1	3.33%	5	16.66%

Table N0.1 shows that, Majority of samples were 41-50 years of age and were male. Majority of them had no history of any major respiratory illness other than cough and cold. Very few samples were having pets in the house and majority of them hadn't had the history of allergy. Most of them were suffering from cough and cold since 3-4 days.

Table 2: Analysis of Pre Observation of Cough & Cold, n=60

Sr. No.	Items		Frequency (F)		Percentage (%)	
	Ex-1	Ex-2			Ex-1	Ex-2
Mild	0	0	0		0%	0%
Moderate	24	28	24	29	80%	96.66%
Severe	06	02	6	1	20%	3.33%

Ex-1: Steam Inhalation with Tulsi Leaves, EX-2: Plain Steam Inhalation

Table 2 depicts that Majority (80 % & 96.66%) of adults having Moderate level of Cough and cold in pre intervention phase of the research process in experimental group 1 & 2.

Table 3: Analysis of Post Observation of Cough & Cold, n=60

Sr. No.	Items		Frequency (F)		Percentage (%)	
	Ex-1	Ex-2			Ex-1	Ex-2
Mild	25	07	25	07	83.33%	23.33%
Moderate	05	23	05	23	16.66%	76.66%
Severe	00	00	0	0%	0%	0%

Ex-1: Steam Inhalation with Tulsi Leaves, EX-2: Plain Steam Inhalation

Table 3 depicts that Majority (83.33%) of adults having Mild level of Cough and cold in post intervention phase of the research process in experimental group 1 & 76.66% of adults having moderate level of cough and cold in Post intervention phase of experimental group 2.

Table 4: Analysis of Pre & Post Observation of Cough & Cold between two experimental groups, n=60

Score Level	Pre Test				Post Test			
	Steam Inhalation With Tulsi Leaves		Steam Inhalation		Steam Inhalation With Tulsi Leaves		Steam Inhalation	
	(F)	%	(F)	%	(F)	%	(F)	%
Mild	-	-	-	-	26	86.66%	8	26.66%
Moderate	24	80%	28	93.33%	4	13.33%	22	73.33%
Severe	6	20%	2	6.66%	-	-	-	-

Table No.4 indicates change in the status of cough and cold of an adults in experimental group 1 (with tulsi leaves) as majority of them were recovered and stepped up to mild level of cough and cold, wherein experimental group 2 majority of them were in moderate level after the intervention also.

Table 5: Analysis of effectiveness between two groups by using unpaired "t" test

Group	Mean	S. D.	t Table Value	t Cal. Value
Tulsi leaves inhalation(e1)	5.4	1.68	2.02	6.10
Steam inhalation(e2)	7.86	4.26		

Above table shows the comparison of an effect of two different intervention (Steam inhalation with extracts of Tulsi Leaves & Steam Inhalation) on status of cough and cold among adults. The mean (5.4) of the experimental group 1 was significantly less than the mean (7.86) of experimental group 2, which indicates that sign & symptoms of cough and cold was reduced significantly in a group taking steam inhalation with the extract of Tulsi leaves. Similarly, calculated t value (6.10) was greater than t table value (2.02), which shows that there is a significant difference in the results of intervention between two groups

Discussion

Steam inhalation is a method of introducing warm, moist air into the lungs via the nose and throat for therapeutic benefit. Inhaling steam is a great treatment for respiratory complications and is recommended for dealing with common cold, flu, bronchitis, sinusitis, asthma, and allergies. Dry air passages are moistened, and mucus is loosened/ eliminated easier by coughing or blowing the nose. The moist air also alleviates difficulty breathing, throat irritation and inflammation. Similar kind of finding was observed after the analysis of the data in the current study also. Both interventions has shown the effectiveness on the sign and symptoms of cold, but there was significant reduction in sign and symptoms of cold among the adults, who were taking Steam inhalation with extracts of Tulsi Leaves. The difference between the two groups was significant as calculated t value (6.10) was greater than t table value (2.02).

Conclusion

This study helps to practice simple and cost effective home management procedures to reduce the symptoms of cold and cough at home and community area. Both steam inhalation and inhalation with extract of Tulsi leaves were effective against cough and cold and cost effective also. This current research helped us to understand the difference between the effectiveness of two interventions. If the intervention is cost affective and at the same time it gives faster results, then it becomes boon for the clients or patients. Results concluded that both the intervention were helped the adults in reducing cough and cold on statistical point of view the inhalation with the extracts of Tulsi leaves were more effective than plain steam inhalation. The reason being is that Tulsi has immunomodulatory (helps to modulate the immune system), antitussive (suppresses the cough centre, reducing the amount of cough) and expectorant properties (helps expel phlegm from the chest), that make it a great relief for coughs, cold, and other respiratory disorders including chronic and acute bronchitis. This concludes that, instead of plain steam inhalation, if the clients suffering from cough and cold takes steam with the extract of Tulsi leaves would recover fast.

References

1. Park textbook of preventive and social medicine; k.park; bhanot publishers; 20th dition. 2009, 408-13.
2. Bhore J, Gatkul B. therapeutic uses of tulsi and remedies in India. International Indexed and Referenced Research Journal. 2012, 4.
3. Butlar C, Hood K. Predicting the clinical course of suspected acute viral upper respiratory tract infection in children. Oxford Journal-Family Practice UK. 2004; 22:92-5.
4. Dharmony MR. Herbs [Internet]. 2012. Available from: URL:www.dharmonyherbs.com/tulsi-plant. Accessed 26 Feb 2014.
5. Effectiveness of tulsi in respiratory infection. New Nation Bangladesh, 2009 Aug. Available from: URL:http://www.holybasil.com/305/html.
6. Gupta N, Jain SK. An evaluation of acute respiratory infection control program in a Delhi slum. Indian Journal of Pediatrics. 2007; 74(5):471-6.
7. Health benefits of steam inhalation. One Radio Network. [Internet]. 2012. Oct 31 [cited 2012 Dec 14]. Available from: URL:oneradionetwork.com/.../5-health-benefits-of-steam-inhalation-2-
8. Hendley JO, Abbott RD, Beasley PP, Gwaltney JM Jr. Department of pediatrics, University of Virginia Health Science Center, Charlottesville 22908, 1994.