



“A STUDY TO ASSESS THE EFFECTIVENESS OF HOT WATER FOOT BATH THERAPY IN REDUCING BODY TEMPERATURE AMONG PATIENTS WITH FEVER IN MEDICAL WARD AT SELECTED HOSPITAL, NAMAKKAL”

MS.V.SINDHUJA M.SC (N), MRS.C.PRIYA.M.SC (N), M.SC (Psy),

Prof. Dr .M.Sumathi.,M.Sc(N),.Ph.D (N).

MEDICAL SURGICAL NURSING

VIVEKANANDHA COLLEGE OF NURSING, ELAYAMPALAYAM

ABSTRACT

The research approach used for this study was evaluated approach and the research design was quasi experimental design. The study was conducted in Swamy Vivekanandha Medical College Hospital and Research Institute. The samples consists of 60 adults with fever, among that 30 in experimental group 30 in control group were selected for this study by using purposive sampling technique. The tool used for data collection was semi structured questionnaire. It consists of two sections. Socio demographic variables and clinical variables, assessment of level of body temperature by using temperature grading chart was used to assess the level of body temperature among patients with fever.

KEYWORD: Effectiveness, hot water foot bath therapy

INTRODUCTION:

Fever is a rectal temperature over 38°C (100.4°F) and an oral temperature of 37.8°C (100°F). During fever, dilation of internal blood vessels and constriction of peripheral blood vessels occurs. Fever should be controlled with

medical therapy or physical methods. Pharmacological interventions to reduce body temperature can have several adverse effects such as hypotension, gastrointestinal bleeding, hepatic and nephritic toxicity. There are several methods for surface cooling, the most commonly used of which include cold or hot compress, warm or lukewarm bath, hypothermia blankets, air conditioning and elevation of environmental temperature. Hot water footbath therapy (HWFBT), one of the hydrotherapeutic measures, improves peripheral blood circulation and provides warmth and comfort for the patients. HWFBT is said to improve immune response which helps in counteracting the underlying infection which causes the fever. A hot foot bath therapy is the immersion of both feet and ankles in hot water for 10-30 minutes. It is an excellent way to draw blood from inflamed or congested areas of the body. Indications for use are foot and leg cramps, sore throat, cold flu, nausea, insomnia and chest or pelvic congestion.

OBJECTIVES OF THE STUDY

- ❖ To assess the level of body temperature before and after hot water foot bath therapy in experimental and control group.
- ❖ To evaluate the effectiveness of hot water foot bath therapy in reducing body temperature in both experimental and control group.
- ❖ To determine the association between the post test level of body temperature with selected demographic variables and clinical variables in both experimental and control group.

SETTING OF THE STUDY

The study was conducted at the medical wards, Swamy Vivekanandha Medical College Hospital and Research Institute, Namakkal.

RESEARCH DESIGN:

The research design adopted for the study was Quasi experimental non randomized control group design.

SAMPLE SIZE:

The sample size for this study is composed of 60 adult subjects, 30 for experimental and 30 for control group.

DESCRIPTION OF TOOL

Semi structured questionnaire and temperature grading chart was used to assess the effectiveness of hot water foot bath therapy in reducing body temperature among patients with fever.

The tool was prepared by the investigator after an extensive study of the related literature and with the guidance of the experts. The tool consists of two sections.

Section A – Socio demographic variables and clinical variables.

DEMOGRAPHIC VARIABLES

This section consists of socio demographic variables like age, sex, religion, education, occupation, type of family, income, marital status and dietary pattern. The baseline data were collected by using semi structured questionnaire.

CLINICAL VARIABLES

The clinical variables are weight, body temperature, duration of fever, type of fever previous hospitalization, history of travel, food poisoning, associated symptoms, antipyretics and home remedies.

Section B- Assessment of level of body temperature by using temperature grading chart.

GRADING	CELSIUS	FAHRENHEIT	SCORE
Normal	37-38° C	98.6-100.4° F	0
Low grade	38-39° C	100.4-102.2° F	1
Moderate	39-40° C	102.2-104° F	2
High grade	40-42° C	104-107.6° F	3
Hyperpyrexia	Over 42° C	Over 107.6° F	4

Frequency and percentage distribution of pre-test and post-test level of body temperature among patients with fever in the **experimental group**

Grading pattern	Pre- test		Post-test	
	Frequency	Percentage	Frequency	Percentage
NORMAL(0)	-	-	13	43.3
LOW GRADE(1)	13	43.3	17	56.7
MODERATE (2)	17	56.7	-	-
HIGH GRADE(3)	-	-	-	-
HYPERPYREXIA(4)	-	-	-	-

Frequency and percentage distribution of pre-test and post-test and post-test level of body temperature among patients with fever in the **control group**

Grading pattern	Pre- test		Post-test	
	Frequency	Percentage	Frequency	Percentage
NORMAL(0)	-	-	4	13.3
LOW GRADE(1)	12	40	18	60
MODERATE (2)	18	60	8	26.7
HIGH GRADE(3)	-	-	-	-
HYPERPYREXIA(4)	-	-	-	-

Comparison of Pre-test and Post-test level of body temperature among study participants in **experimental group**

Level of body temperature	Mean	Standard deviation	Mean difference	Paired T value	P level	Remarks
Pre - test	1.5	0.5	1	11.38	2.05	Significant
Post - test	0.5	0.48				

Comparison of post-test level of body temperature among patients in both experimental and control group.

Group	Level of body temperature	Mean	Mean difference	Unpaired 't' test value	P value	Remarks
Experimental group	Pre-test	1.5	1	4. 61	2.0	Significant
	Post- test	0.5				
Control group	Pre –test	1.6	0.5			
	Post-test	1.1				

Association of post-test level of body temperature among patients with fever and demographic variables & clinical variables in experimental group

There is no association between the level of body temperature variables age, sex, religion, education, type of family, type of occupation, family monthly income, marital status, dietary pattern, locality, weight, body temperature, previous history of hospitalization due to fever, history of travel, family members suffering from fever, recent history of food poisoning, associated symptoms with fever, use of antipyretics and use of any home remedies of the individual and the type of fever had association with the level of body temperature.

CONCLUSION

The main conclusion drawn from the present study was that most of the patients with fever had low, moderate, high temperature. After receiving the hot water foot bath therapy, level of body temperature was reduced significantly. Samples became familiar and found themselves comfortable and also expressed satisfaction. It is thus concluded that the hot water foot bath therapy is effective in reduction on level of temperature among patients with fever.

NURSING IMPLICATIONS:

The study has implications, guidelines and suggestions for nursing practice, nursing education, nursing administration and nursing research.

RECOMMENDATIONS

The study can be conducted among large group of subjects.

A study can be conducted to assess the effectiveness of Hot Water Foot Bath Therapy on subjects with fatigue.

A study can be conducted to assess the effectiveness of Hot Water Foot Bath Therapy on subjects having headache.

A study can be conducted to assess the effectiveness of Hot Water Foot Bath Therapy on subjects with insomnia.

REFERENCES

1. Ann Marriner Tomey. M Artha RailcAlligood. "**Nursing theories and their work**". 7th edition. Missouri. Mosby publication. 2009.
2. Basavanthappa. B.T. "**Nursing Research**". (3rd Edition). New Delhi. Jaypee Brothers Medical Publishers (Pvt) Ltd. 2014.
3. Black. M. Joyce and Jane Hokanson Hawks. "**Text Book of Medical Surgical Nursing**." Philadelphia. Mosby Elsevier Publications. 2011.
4. "Hot water foot bath therapy in reducing body temperature" *TNNMC Journal of Medical and Surgical Nursing*. Volume: 6. Issue: 2. 2018.
5. A Mooventhan and L Nivetha "Scientific Evidenced based effects of hydrotherapy on various systems of the body" May 5.2014 (199-209)
6. Gita Chaurasia. Amruta Patil and Shweta Dighe. "A review on therapeutic aspects of hydrotherapy." *International Journal of Pharmaceutical Science and Research*. July 2015.
7. Jenny Geytenbeek. "Evidence for effective hydrotherapy". Science Direct. volume 88. Issue 9. Sep 2002.
8. Jobson willbert. Effectiveness of hot water footbath therapy on temperature among patients with fever in S.R.M Medical College and Hospital. Kanjeeपुरam. *International Journal of Science and Research (IJSR)* 2017.

9. Johan Ceric. “Fever therapy in febrile adults: systematic review with Meta analyses and trial sequential analyses”. *British Medical Journal*. May 2022.
10. kiran Sharma “A study to assess the effectiveness of impact of hot water foot immersion therapy on regulation of body temperature among patients with fever admitted in Sharda hospital.Greater Noida”. *International Journal of Nursing Education* . Jan 21.2019
11. M.Muthupriya .R Lakshmi . effectiveness of hot water footbath therapy in reducing body temperature among patients with fever. *Indian Journal of Continuing Education*. 2020:181-184.

