

# A “Fear-Less” Occupational Therapy Programme for Patients with White-Coat Hypertension or Hypertension with White-Coat Effect in NTWC Primary Care Setting



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## Introduction

White-coat hypertension (WCHT) or hypertension (HT) with white-coat effect (WCE) is commonly encountered in primary care setting with 15-30% prevalence in the general population. Patients with WCHT or WCE have higher blood pressure and anxiety in clinic. Ambulatory Blood Pressure Monitoring (ABPM) is a gold standard investigation to confirm the diagnosis. However, related therapeutic intervention is uncommon in General Out-patient Clinic (GOPC).

Occupational Therapist with expertise in individual or group based lifestyle redesign intervention pioneered the “Fear-Less” Occupational Therapy Programme for patients with WCHT or WCE in New Territories West Cluster (NTWC).

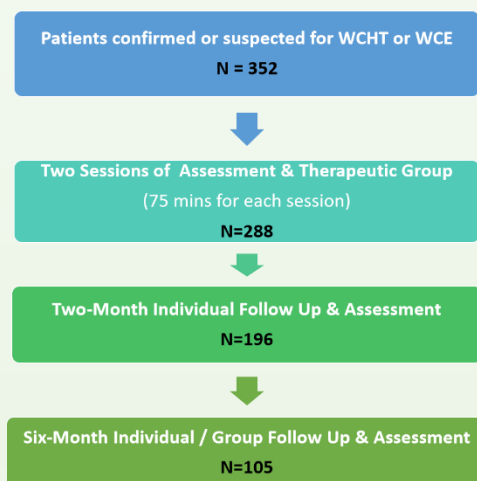
## Objectives

- To empower the patients with WCHT or WCE to handle their anxiety in clinic
- To reduce the risks of HT and promote better self-management for chronic disease

## Methodology

352 patients with confirmed or suspected WCHT or WCE were recruited from GOPCs in NTWC from April 2017 to January 2020. The “Fear-Less” Programme included two therapeutic group sessions, individual consultation at two-month and follow up session at six-month with contents in

- Understanding WCHT or WCE
- Stress management in clinic
- Mind-body relaxation practice (breathing relaxation, progressive muscle relaxation & imagery relaxation)
- Lifestyle modification
- Home programme



## Result & Outcome

Amongst the 352 subjects recruited, the mean age was 62.0 years (range 32-86, SD 8.4) with a female to male ratio of 4:1. Two-third of the subjects were prescribed with anti-HT medication. About half (53.7%) undergone ABPM to confirm the diagnosis, while 41.5% were suspected for WCHT or WCE by comparison with home BP monitoring.

288 cases completed two group sessions. The mean clinic systolic blood pressure (SBP) and diastolic blood pressure (DBP) was statistically significantly lowered by 5.4% and 2.4% respectively while the clinic heart rate (HR) decreased 6.3%.

196 cases attended the two-month individual follow up. Comparing with intake, the mean clinic SBP and DBP statistically significantly decreased 6.4% and 3.9%. Clinic HR dropped 7.3% though not significant. Generalized Anxiety Disorder(GAD)-7 Scale total score decreased from 5.1 to 3.9 (cut off at 5 for mild anxiety symptom). In self-rated 10-point scales, subjective anxiety level in clinic decreased 18.6%, both self-efficacy to HT self-management and sleep quality improved 11.7% and 8.8%.

105 cases completed the programme and showed sustained effect at six-month review. While clinic SBP and DBP kept statistically significant decrease of 5.7% and 5.3%, GAD-7 Scale total score was 3.0 with subjective anxiety level in clinic dropped 16.7%, self-efficacy to HT and sleep quality kept 11.5% and 10.3% improvement when compared to intake.

Paired t-test	Intake		Reassessment		% change	N	Sig. (2-tailed)
	Mean	SD	Mean	SD			
<b>Clinic Systolic Blood Pressure (mmHg)</b>							
Post group	147.4	21.3	139.5	22.4	- 5.4	288	0.000***
Two month	147.9	17.6	138.4	15.7	- 6.4	196	0.000***
Six month	146.6	17.1	138.3	16.8	- 5.7	105	0.000***
<b>Clinic Diastolic Blood Pressure (mmHg)</b>							
Post group	74.3	13.4	72.5	11.3	- 2.4	288	0.000***
Two month	74.9	12.0	72.0	11.1	- 3.9	196	0.000***
Six month	75.2	12.9	71.2	10.9	- 5.3	105	0.004**
<b>Clinic Heart Rate (beat per minute)</b>							
Post group	83.7	39.7	78.4	13.6	- 6.3	288	0.001**
Two month	84.0	46.2	77.9	11.2	- 7.3	196	0.180
Six month	80.9	12.8	79.1	12.4	- 2.2	105	0.511
<b>Subjective Anxiety Level in Clinic</b>							
Two month	7.0	2.4	5.7	2.6	- 18.6	196	0.000***
Six month	6.6	2.5	5.5	2.6	- 16.7	105	0.000***
<b>General Anxiety Disorder (GAD)-7 Scale</b>							
Two month	5.1	4.5	3.7	4.0	- 27.5	196	0.000***
Six month	5.2	5.0	3.0	3.5	- 42.3	105	0.000***
<b>Self Efficacy to HT Self-management</b>							
Two month	6.0	1.6	6.7	1.5	+ 11.7	196	0.000***
Six month	6.1	1.7	6.8	1.7	+ 11.5	105	0.001**
<b>Sleep Quality</b>							
Two month	5.7	2.0	6.2	1.8	+ 8.8	196	0.000***
Six month	5.8	2.2	6.4	2.1	+ 10.3	105	0.016*

\*\*\*p<0.001  
\*\*p<0.01  
\*p<0.05

Outcome measure included clinic blood pressure and heart rate, General Anxiety Disorder-7 Scale, which is a self-administrated instrument to screen and measure individual's anxiety symptoms and severity in last two weeks, subjective anxiety level in clinic, self efficacy to HT self-management, and sleep quality (in 10-point scales).

## Conclusion

The results provided evidence for Occupational Therapy interventions to improve the clinic BP, subjective anxiety level in clinic and HT self-management among patients with WCHT or WCE, making them “Fear-Less” to the condition and have better self-management for chronic disease.