Backgrouns

- Numbering 1.3 million, the Chinese compose approximately 3.9% of Canada’s population and roughly 24% of the country’s visible minorities.
- Hypertension prevalence rate of Chinese Canadians is 15.1%, and hypertension accounts for a large proportion of stroke, myocardial infarction and heart failure in the Chinese population.
- A 10 mmHg lower systolic blood pressure (SBP) is associated with a 54% (95% CI, 53-56%) lower stroke risk and a 46% (95% CI, 43-49%) lower ischemic heart disease risk in Asians.
- Chinese Canadians consume high sodium diets and prefer to use Traditional Chinese Medicine (TCM) for their health care; four principles of the TCM food therapy include:
  1. Light eating,
  2. Balance of three food naturens, and
  3. Harmony of five tastes, and
  4. Diet consistent with different health conditions.
- The Dietary Approach to Stop Hypertension (DASH) with sodium reduction lowers BP, but DASH has not been investigated in Canada, in the community, or in ethnic minority populations.

Objectives

- Primary: To determine the feasibility of a culturally sensitive DASHNa-CC intervention delivered in a community setting.
- Secondary: To examine the potential effects of a DASHNa-CC intervention on systolic and diastolic blood pressure, health related quality of life, and health service utilization.

Methods

- This study was a pilot randomized controlled trial delivered in a Chinese Canadian community in Toronto.
- Self-identified Chinese Canadians at least 45 years of age, with grade one hypertension (SBP 140-159 mmHg or DBP 90-99 mmHg), not taking antihypertensive medications, and able to participate in the study were eligible.
- Participants were randomized to either the control or the intervention group. The control group received usual care (Heart and Stroke Foundation of Ontario general hypertension booklet) and the intervention group received usual care plus the DASHNa-CC intervention.
- Various instruments, including 24-hour food recall and SF-36v2 were used.

Results

- 618 Chinese Canadians participated in blood pressure screening and 105 (17%) met eligibility criteria.
- Of 105 eligible individuals, 60 (57.1%) consented; 30 were randomized to the control group and 30 to the intervention group (Figure 1).
- The most common reason for refusal was difficulty travelling to the community centre for the intervention (n = 19, 42.2%) and being too busy (n = 18, 40.0%).
- 29 (86.7%) participants in the intervention group attended the two classroom sessions and 100% participants received the week 5 telephone booster call.

Participants were highly satisfied with DASHNa-CC and the integration of TCM into their BP management.
- At week 8 post randomization, the control group decreased SBP by 7 mmHg and diastolic blood pressure (DBP) by 3 mmHg, and the intervention group decreased SBP by 11 mmHg and DBP by 5.5 mmHg [t (55) = 1.58, p = 0.12].
- The intervention group had a significant improvement from baseline to week eight post randomization in the physical component score of the SF-36v2 [t (55) = 2.13, p = 0.04].
- There were no group differences in health service utilization.

Conclusions

It is feasible to conduct the DASHNa-CC study in a Chinese Canadian community. The DASHNa-CC intervention has potential to decrease both SBP and DBP and improve health-related quality of life for Chinese Canadians. The findings can be used to develop a significantly powered trial to evaluate the effectiveness of the DASH-CC intervention in multiple community settings in Canada.

References

5. Integrating Traditional Chinese Medicine Food Therapy for Chinese Immigrant Hypertension Control: A Culturally Sensitive Dietary Intervention in Community. P. Zou, RN, PhD (c); M. Parry, NP-Adult, PhD; C-L. Dennis, PhD; R. Lee, RN, PhD Lawrence S. Bloomberg Faculty of Nursing, University of Toronto.