

**An operational research to explore interventions for reducing sodium intake among patients with diabetes mellitus and hypertension in Muang District, Chiang Rai Province, Thailand.**

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**Abstracts of qualitative studies**

**Abstract 2**

**Reasons of success and failure in salt reduction among patients with hypertension who received information about their level of urine sodium**

**Objectives:** To explore reasons and contributing factors for success and failure in salt reduction among hypertensive patients who received urinary test for sodium and saw level of sodium in their urine.

**Method:** Qualitative research through focus group discussions and interpretive content analysis

**Study setting and participants:** Patients with hypertension from a large health center (Health Center A) participating in an intervention study for salt reduction using urine dipstick to measure level of urine sodium from November 2014 - June 2015. Patients received urine test once every month for 6 consecutive months. Every time, when a patient received urine test, a research staff show and informed about level of urine sodium which was displayed in line graph. The staff show the result by comparing with the normal level and the previous month result. Of the 102 patients, we used a computer software (Stata 11) to purposively select 2 groups of patients according to the criteria, i.e a group of patients with highest level of salt reduction (successful group – 7 female and 1 male) and a group of patients who failed to reduce salt (failure group – 5 females and 2 males).

**Results:** Compare to the failure group, members of the successful group were older, had better economic status and had higher literacy rate. Members of both groups had knowledge about diseases caused by exceeding salt consumption. They applied same ways to reduce salt which include: reducing amount of salt, monosodium glutamate (MSG) and other condiments. They used spoon to control amount of salt when they cooked. Both group reported that they took immediate actions to reduce salt after knowing result of their first urine sodium test. Both groups thought urine testing and showing the level of urine sodium was an effective way to motivate patients to reduce salt. Members of failure salt reduction group felt that they had put efforts to reduce salt but the level of salt remained unchanged. Possible factors contributing to failure in salt reduction were related to work reasons. Most patients were labor workers leaving home for work from early morning. Due to hectic life style, they tended to rely on the ready cooked foods in the market. Lunch and snack such as sandwich which contained high-sodium including sport-drinks offered by the employers or sharing and eating lunch together with workers contributed to failure in salt-reduction. In contrast, several members in the successful salt reduction group stayed home and cooked by themselves. The outstanding benefit from salt reduction in the members of the successful group were reduced blood pressure, disappearing of waist pain and body ache. One participant reported that since she reduced salt, she could stop injection for her waist pain at the clinic which she usually paid 500 baht for the treatment once every two months.

**Conclusion and recommendation:** Testing of the urine sodium and informing and showing the level of sodium to patients contributed to salt reduction. The unsuccessful patients were likely to be labor workers eating high-sodium foods, provided by the employers. Future research should emphasize interventions to reduce salt for labor workers.

**Keywords:** urine-sodium dipstick, visualized education, sodium reduction, qualitative research, labor workers