

A Pilot Study on Assessing Dietary Salt Intake among Older People in Hong Kong

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Background

- High salt intake has been shown to be related to elevated blood pressure (He and MacGregor, 2010)
- The World Health Organization (WHO) recommends a daily salt intake of less than 5g (WHO, 2007)
- Globally, many countries around the world cannot achieve the WHO recommendation (Powles et al., 2013)
- Hong Kong is not an exception
 - Over 60% of the adult population aged 20-84 years exceeded the WHO recommendation of dietary sodium intake (Centre for Food Safety, 2014)

Need to Measure Sodium Intake

- Reduction of salt intake as a means to prevent hypertension has been drawing increasing attention
- Before developing interventions for reducing salt intake, there is a need to develop instruments for outcome measures in order to assess the effectiveness of the interventions
- Dietary sodium intake can be estimated through:
 - Food diary
 - Dietary recall
 - 24-hour urinary sodium excretion



The Gold Standard?

- While 24-hour urinary sodium excretion is the gold standard, incomplete measurements are not uncommon
 - Subject compliance
 - Logistic arrangement issues
- If the target population is older people, would it be feasible for them to follow the urine collection protocol?

Objective

- To examine the feasibility of collecting 24-hour urinary sodium excretion among older people in Hong Kong



Methods

- A convenience sample was recruited from elderly center in Hong Kong
- Inclusion criteria:
 - People aged 65 or above
- Exclusion criteria:
 - Renal illness
 - Taking diuretics
- An one-hour briefing was provided to the participants about collecting 24-hour urine and completing a 3-day food diary
- Jugs/bedpans and bottles were provided to facilitate urine collection



Methods

Briefing

**Participants
collect 24h
urine and
complete 3-
day food
diary**

**Participants
return
collected
urine and
food diary**

Definition of a complete sample

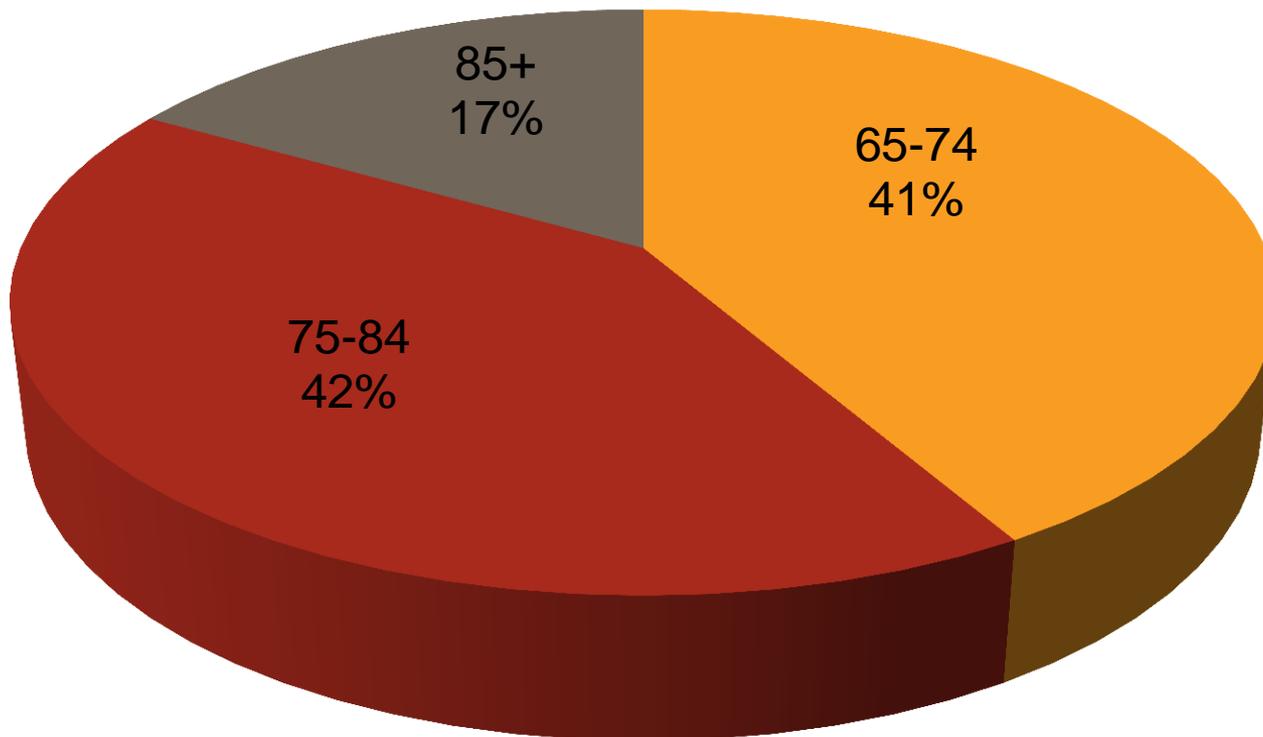
- Urine collection for 24 hours
- No reported missed void
- Urine volume over 1000ml

Results

- By July 2015, 37 elderly people were recruited from one elderly centre and attended the briefing session
- 36 participants returned the 24-hour urine

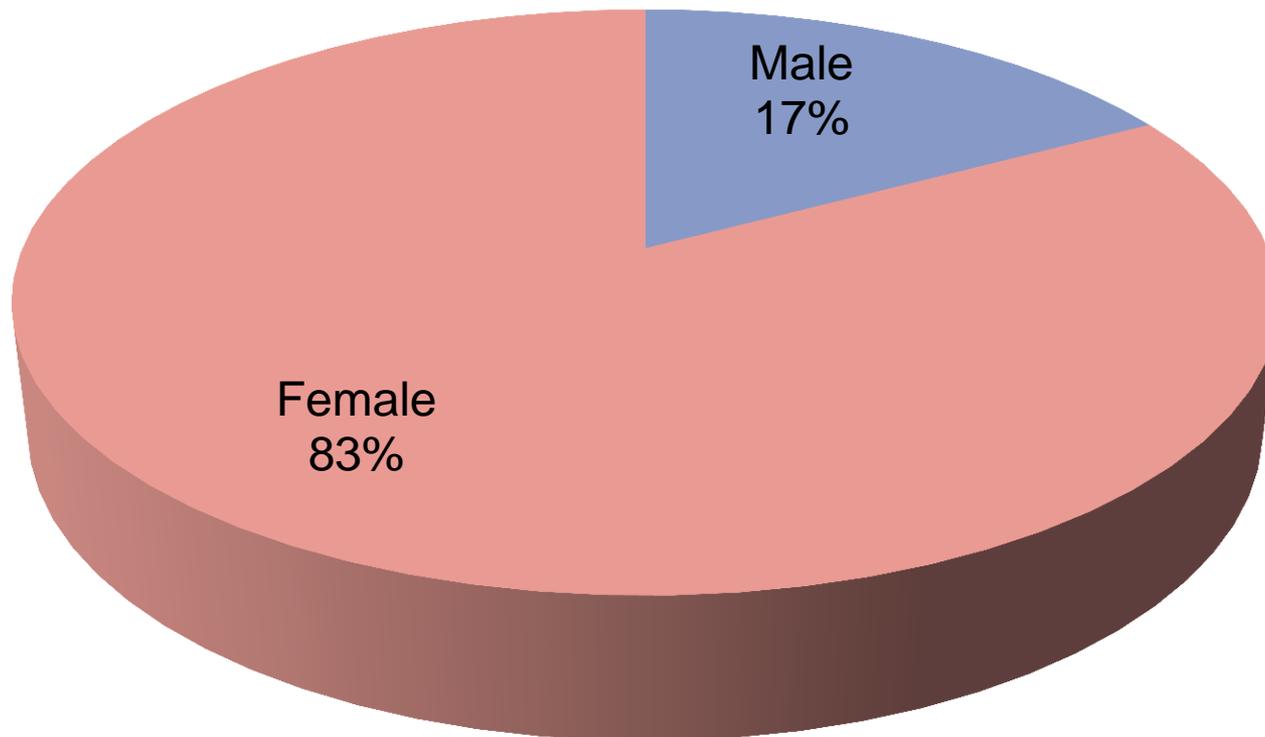
Participants Characteristics

Age Group



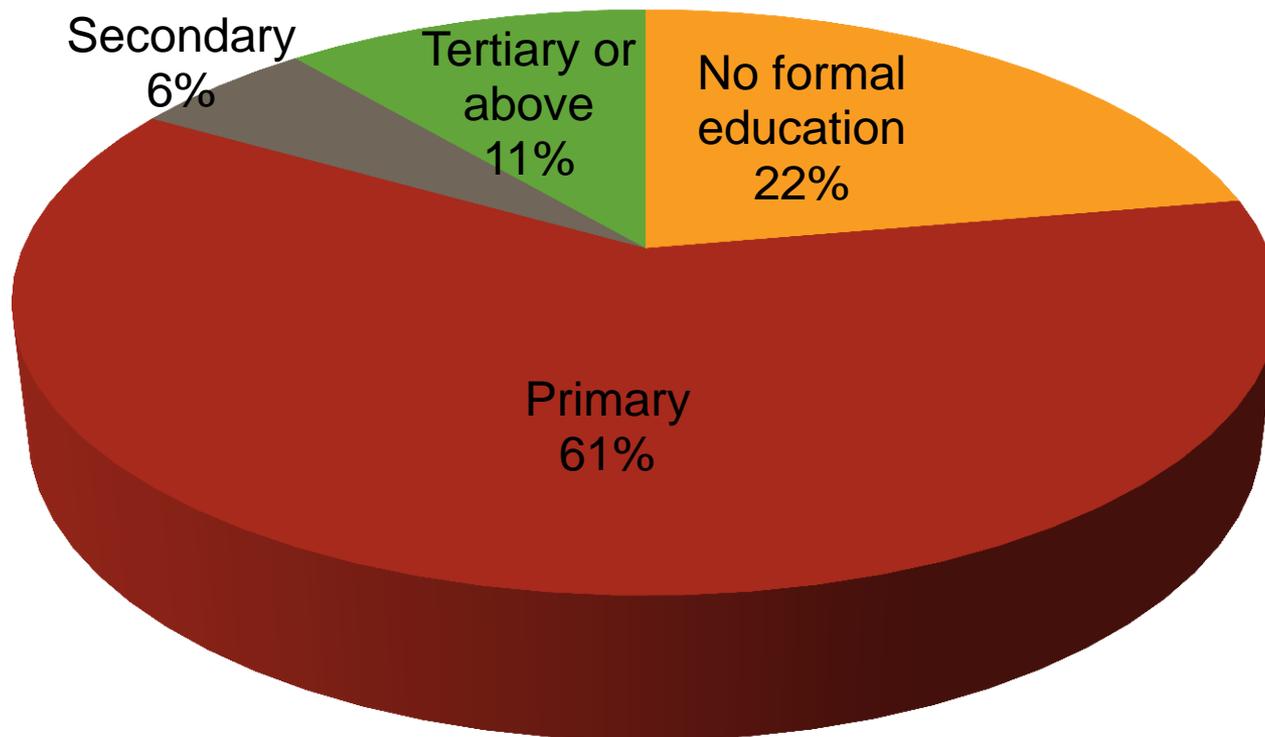
Participants Characteristics

Gender

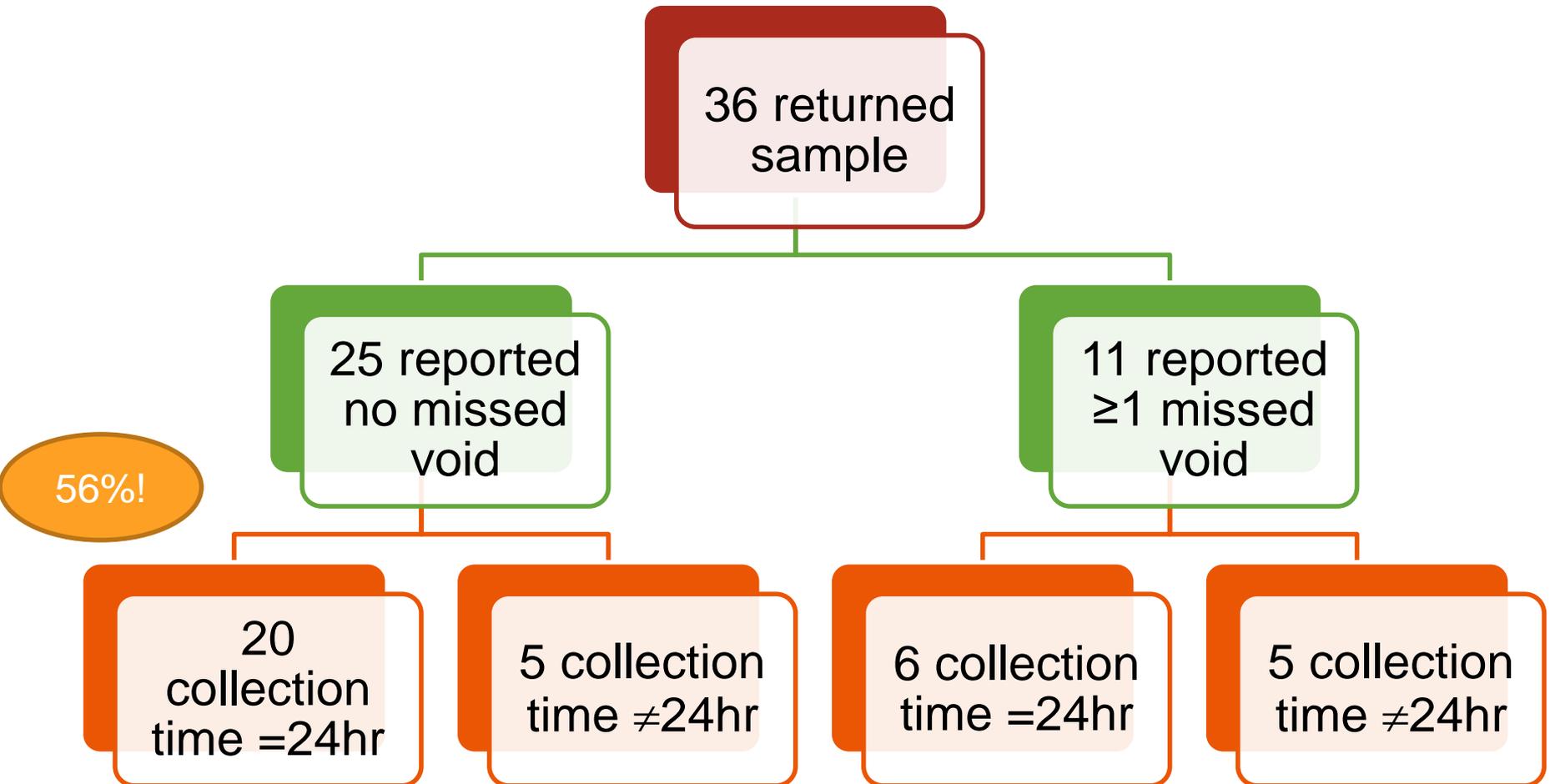


Participants Characteristics

Education Level



Urine Collection Compliance



Compliance by Characteristics

Characteristics	Self-reported compliance
Age group	
65-74	60%
75-84	33%
≥85	100%
Gender	
Male	50%
Female	59%
Education Level	
No formal education	50%
Primary	59%
Secondary	50%
Tertiary or above	50%

Lessons

- Collecting 24-hour urine can be challenging to the older people.
- No obvious potential factor of low compliance
- Further studies will be conducted to investigate
 - if the compliance can be improved by eliminating parallel tasks like completing a food diary
 - if there are alternatives to 24-hour urine as outcome, e.g. self-reported questionnaire—Chinese Health Literacy for Low Salt Consumption

Acknowledgement

- This study was funded by the Small Project Funding (no.201409176162) of The University of Hong Kong.

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