

A Methodological Study on Data Collection Methods for the Health Behaviour Surveillance of Singapore (HBSS)

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Introduction

- HBSS – new surveillance system to generate ongoing information on health behaviours in Singapore
- Most studies conducted via F2F
- Little information on other data collection methods
- Many established surveillance system uses Tel interviews

Objectives of Study

- To determine the most suitable method of data collection for the HBSS that would provide high quality data & good response rates

Methodology

Methods

- ❖ **Two modes of data collection**
 - **Face-to-face interviews**
 - **Telephone interviews**
- ❖ **Identical questionnaires for All**
- ❖ **Language: English, Mandarin & Malay**

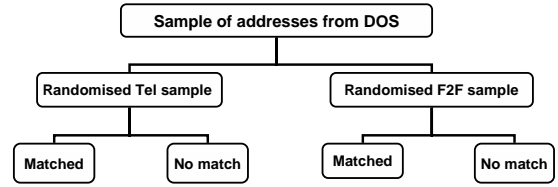
HBSS Questionnaire

- General health
- Mental health
- Physical activity
- Nutrition
- Smoking
- Obesity
- STI/HIV
- Alcohol
- Demographics
- Health screening behaviours
 - hypertension
 - diabetes
 - cholesterol
 - breast cancer
 - cervical cancer
 - colorectal cancer
 - oral health
- Osteoporosis
- Health service utilisation

Sampling

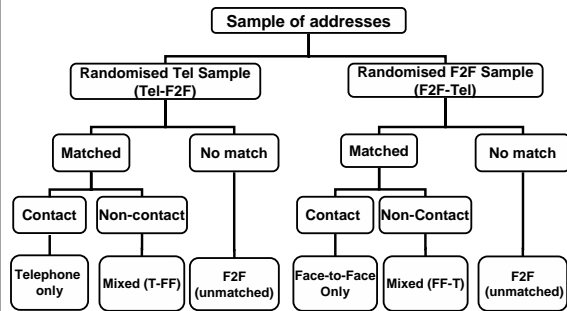
- Multi-stage stratified probability sample design
- Sampling frame : National Database of Dwellings from Dept of Statistics
- Issued sample : 3360 household addresses
- Randomise all addresses to modes (F2F or Tel)
- All addresses were matched to phone numbers by Yellow Pages
- All the sampled addresses were attempted, no replacement was allowed

HBSS Study Design



Only 65% of addresses matched to phone numbers

Sequential Mixed Mode Study Design

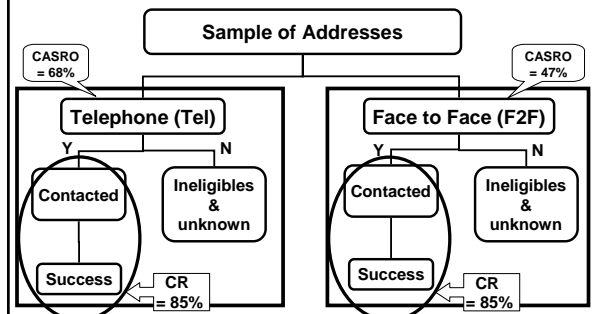


Research Questions

- How are response rates affected by different modes of data collection?
- Does the mode of data collection affect the quality of data?

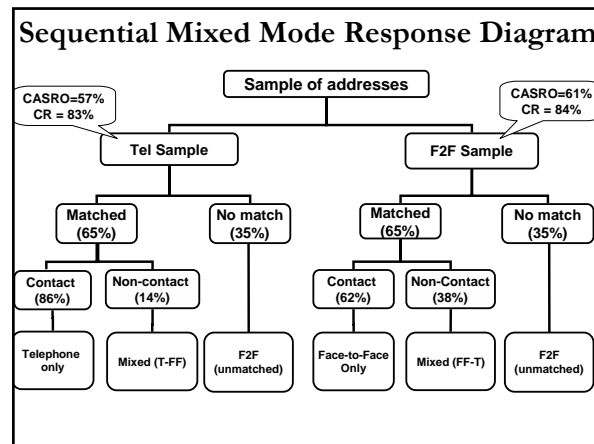
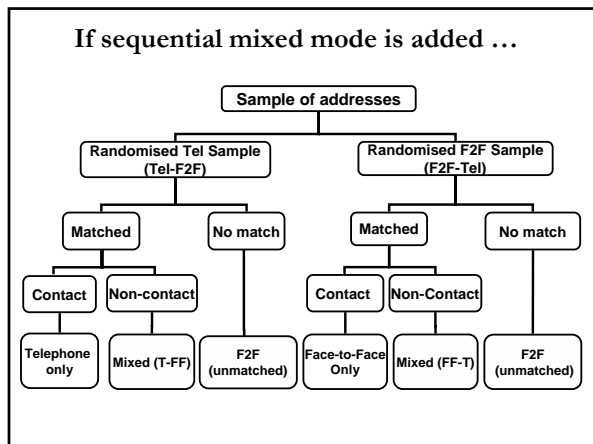
Findings

Do response rates differ between modes used?

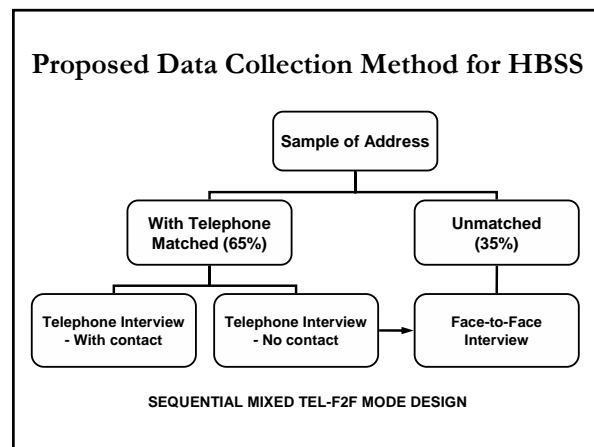


Only 65% of addresses matched to phone numbers

CR = Cooperation rate among eligible respondents
CASRO = Response rate formula developed by Council of American Survey Research Organisations



- Findings on Effects of Mode of Collection**
- Sequential mixed mode is necessary
 - Better coverage & reasonable response rate
 - Only slight effects on response rate
 - Cooperation rate remains at about 84% regardless of mode of collection
 - Advantageous of using Tel as main mode
 - Tel interviews are cheaper & quicker than F2F
 - Ease of reaching out to difficult addresses
 - Better quality control & supervision



Research Question #2

Does the mode of data collection affect the quality of data?

- Effects of Mixed Mode on Data Quality**
- Introduce measurement error
 - Mode effects are likely to vary by type of question
 - Demographics – factual, self-selection
 - Behavioural / knowledge questions – preformed answer, social desirability
 - Compare question responses for matched samples

Effects of Mixed Mode on Data Quality

- No association between response & mode for most questions.
- Calculation of 95% confidence interval
 - no significance difference for almost all the point estimates
- More powerful statistical techniques will be used to adjust for mode effect when the HBSS dataset is available

In conclusion...

- **Mode of Data Collection for HBSS:
Mixed mode – Tel supplemented by F2F**
 - Good population coverage
 - Reasonable response rate
 - Lower cost compared to F2F-Tel
 - Easier to reach population through phone
 - Better quality control for interview process
 - Little difference in the mode effect bet Tel & F2F
- Need to continue to monitor mode effect