

SURVEY FUTURES

SURVEY DATA COLLECTION
METHODS COLLABORATION

Knock-to-nudge methods to improve survey participation in the UK

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Introduction

- **Research Strand 4** of Survey Futures studies **recruitment methods for surveys without field interviewers**
- In Subproject 4 we:
 - analyse the **knock-to-nudge (KtN)** approach for survey recruitment;
 - evaluate its effects in response rates, sample composition, and data quality; and
 - assess its post-pandemic future
- An evidence review and a working paper have been published on the Survey Futures website

Definition and characteristics

- KtN can be defined as a survey contact method in which in-person interviewers
 - Visit sampled households
 - **Knock** on their door
 - Persuade (**nudge**) participants to respond to a non-face-to-face survey (telephone or online) at a later date
 - Collect basic household information (e.g. obtain phone numbers, record household size, conduct within household-selection)
- In principle, no major data collection occurs at the KtN stage
- KtN was originally introduced in the UK when Covid-19 restrictions were slightly relaxed, aiming to increase participation under these restrictions

Definition and characteristics

- Three main approaches have been used in UK surveys:
 - Nudging **all sampled addresses**
 - Nudging **all non-responding addresses**
 - Nudging **a pre-selected subset of non-responding addresses**

Knock-to-nudge in UK surveys

- Indicators of effectiveness for **between-instances comparison**:

Survey	Period	Response rates (%)		Effects on sample representativeness	Source
		Without KtN	With KtN		
Continuous Household Survey (Northern Ireland)	2020-2022	16.0	41.0	Generally improved	Technical report
Health Survey for Northern Ireland	2020-2022	18.3	47.3	Generally improved	Technical report
Labour Force Survey (LFS), Wave 1	2020-2021	28.7	39.4	Generally improved, although less marked than other ONS surveys	Kastberg and Siegler (2022)
Living Cost and Food Survey (LCF)	2020-2021	29.8	32.2	Generally improved	Kastberg and Siegler (2022)
Survey on Living Conditions (SLC), Wave 1	2020-2021	27.5	34.2	Generally improved	Kastberg and Siegler (2022)
Travel Survey for Northern Ireland	2020–2022	25.1	33.4	Generally improved	Technical report
Wealth and Assets Survey (WAS)	2020-2021	25.5	30.6	Generally improved, particularly socioeconomic status	Kastberg and Siegler (2022)

- Indicators of effectiveness for **within-instances comparison**:

Survey	Period	Response rates (%)		Effects on sample representativeness	Source
		Without KtN	With KtN		
Ervaren Discriminatie 2018 (ED18)	2018	18.6	24.0	Information not provided	Cleary (2023)
European Social Survey Round 10: Poland	2020	31.0	37.0	Improved, particularly size of settlement	Cleary (2023)
Labour Force Survey (LFS), Wave 1	2020-2021	28.7	39.4	Generally improved, although less marked than other ONS surveys	Kastberg and Siegler (2022)
Publishers Audience Measurement Company (PAMCo)	2021	18.9	36.5	Improved, particularly socioeconomic status and home ownership	Cleary (2023)
Recruitment survey for the AmeriSpeak Panel	2014-2017	27.9	33.7	Generally improved	Cleary (2023)
Stated choice survey of housing, neighbourhood, and travel preferences in New Zealand	N/D	29.9	38.4	Generally improved	Dodge and Chapman (2018)
University of Michigan survey of student sexual misconduct	2018	54.0	67.0	Generally improved	Cleary (2023)
Wealth and Assets Survey (WAS)	2020-2021	25.5	30.6	Generally improved, particularly socioeconomic status	Kastberg and Siegler (2022)
Immigrant German Election Study II (Turkish group)	2021	12.4	33.0	Improved, as ethnic minority groups are more represented	Ellis et al. (2023)
Immigrant German Election Study II (former USSR group)	2021	17.2	38.6	Improved, as ethnic minority groups are more represented	Ellis et al. (2023)

- KtN generally improves response rates and sample composition.**

UK case studies

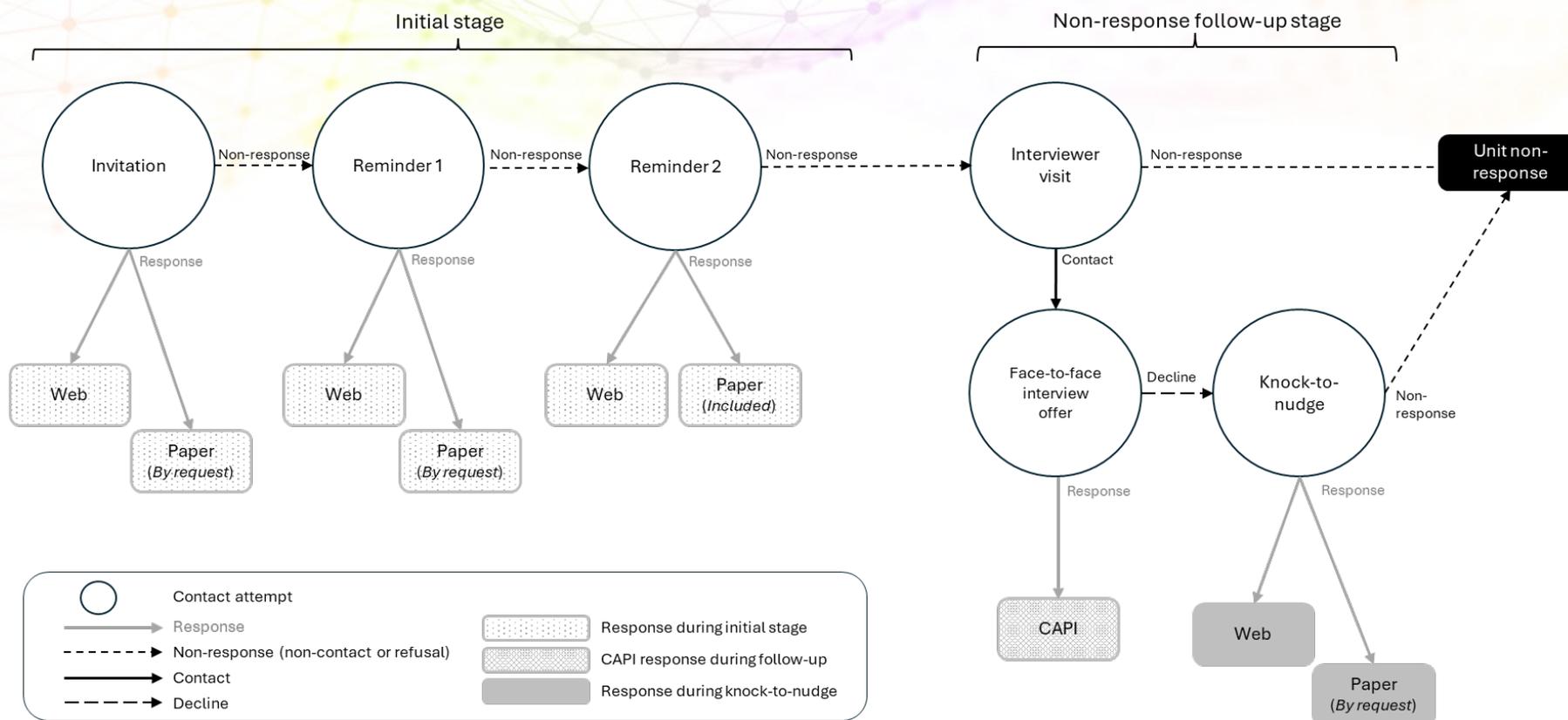
- **Three** surveys that used knock-to-nudge in the UK:
 - I. National Readership Survey (Publishers Audience Measurement Company, PAMCo, 2022) – IPSOS; *working paper available*
 - II. National Survey for Wales (Welsh Government, 2022–23) – ONS; *work in progress*
 - III. Transformed Labour Force Survey (TLFS) (ONS, 2024 first semester) – ONS; *work in progress*
- **Research questions:**
 1. To which extent does KtN help improve **response rates**?
 2. To which extent does KtN help improve **sample composition**?
 3. Do participants recruited via KtN provide **data of similar quality** to respondents recruited at earlier stages of the recruitment process? (I and II only)
 4. Are there differences in **substantive results** between those recruited via KtN and those recruited at earlier stages? (I and II only)
 5. Which factors contribute to the **effectiveness of KtN visits**? (II and III only)

I: PAMCo survey

- **National Readership Survey (2022):**
 - Commissioned by the Publishers Audience Measurement Company (PAMCo)
 - Provides newspaper and magazine publishers with data to understand their audience
 - Designed to be representative of the adult population aged 15 years or over residing in households of Great Britain (England, Wales, and Scotland)
 - Up to two residents aged 15 or over are invited to participate
 - The survey is conducted continuously over the year

I: PAMCo survey

- The PAMCo survey uses an **online-first design**:



I: PAMCo survey – Results

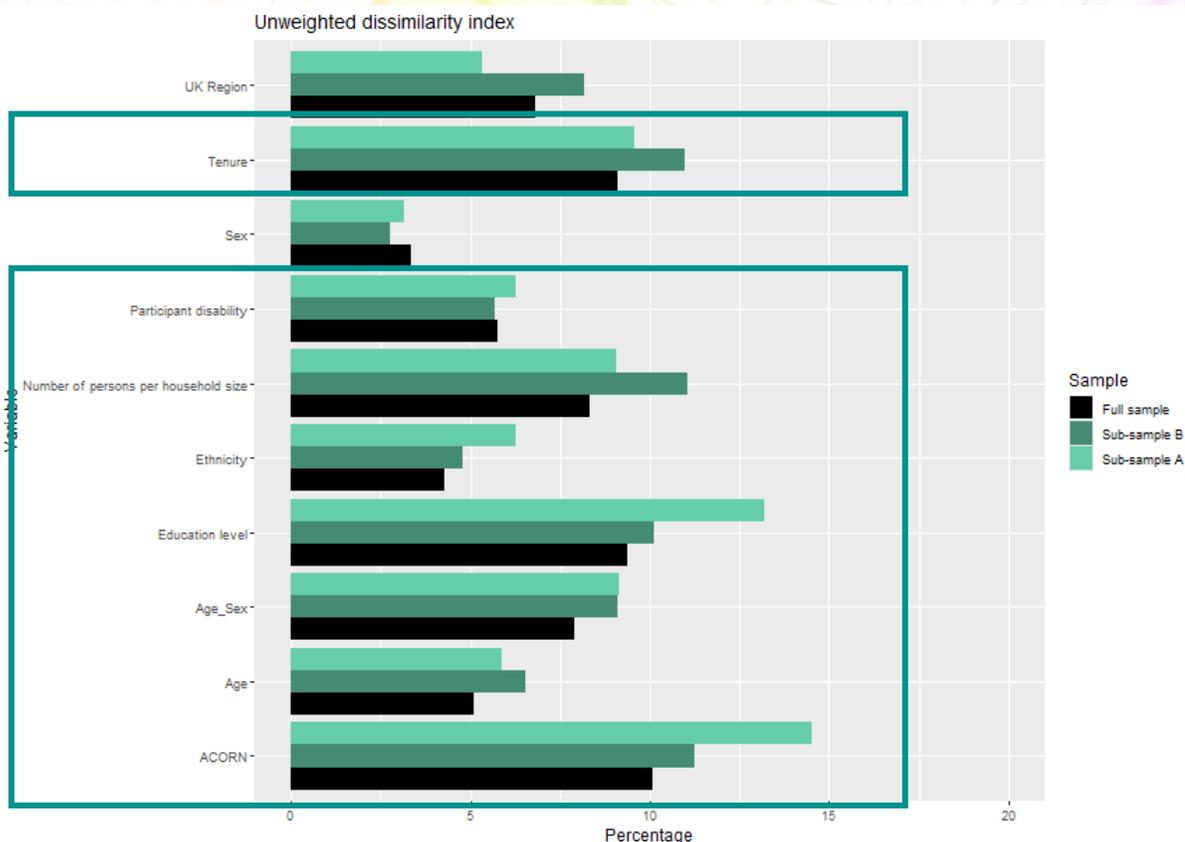
RQ1: Does knock-to-nudge improve response rates?

Area	Variable	Initial recruitment stage	Non-response follow-up stage		Full sample
			CAPI	KtN	
Sample sizes and Response rates	Response rate (household level, %)	16.4	8.7	12.8	38.0
	Number of responding households	8,306	4,437	6,514	19,257
	Number of individual interviews	11,342	4,744	7,487	23,573
	Mean number of interviews per household	1.36	1.06	1.15	1.22

- Response rate increases from 16.4% to 38.0% after the follow-up
- The follow-up contributes with 57% of responding households and 52% of individual interviews to the main sample (KtN: 34% of households, 32% of individuals)
- The proportion of households with 2+ eligible respondents and one complete interview increase from 43% in the initial stage to 61% for nudged addresses.

I: PAMCo survey – Results

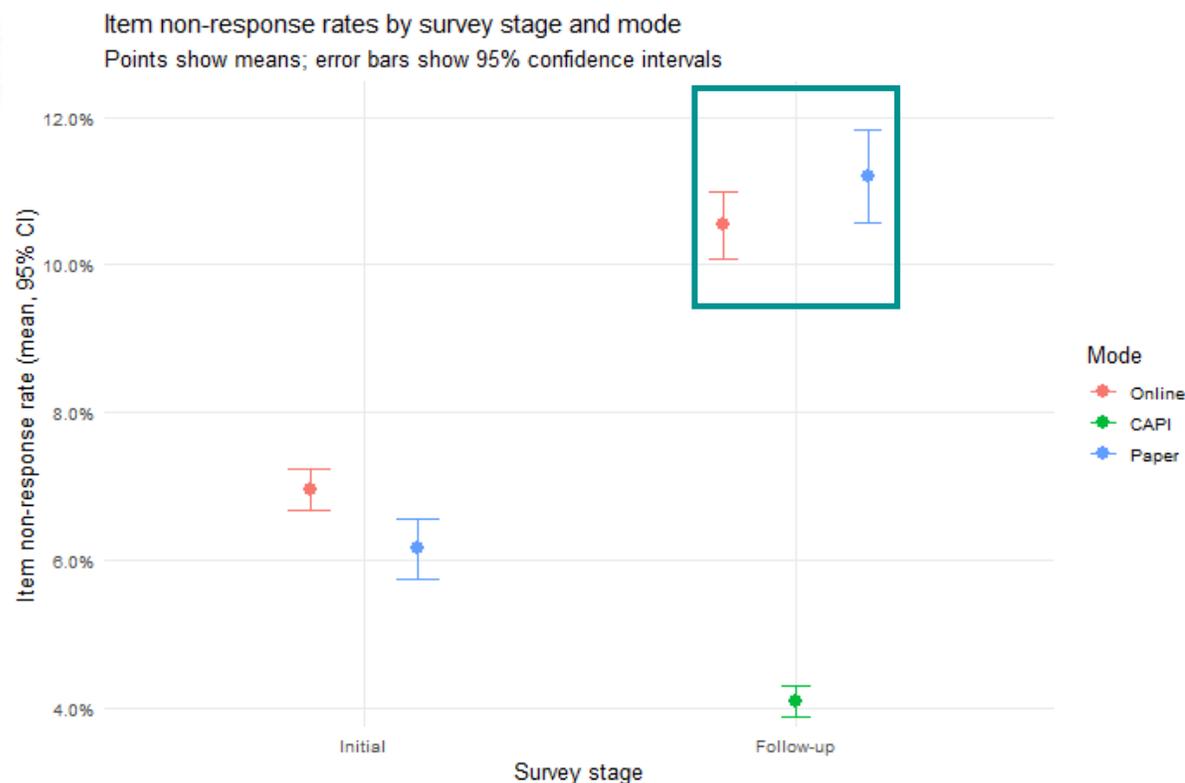
RQ2: Does knock-to-nudge improve sample composition?



- The **dissimilarity index** compares the distribution of each variable with high quality benchmarks from Census information for 2021 (England and Wales) and 2022 (Scotland). We consider three samples:
 - Sub-sample A: Initial stage.
 - Sub-sample B: Initial stage + CAPI.
 - Full sample
- **KtN stage improved:** age (youngest and oldest), education (no qualification and degree and above), ethnicity (other), housing tenure
- **BUT** there are still differences between the benchmarks and the unweighted survey estimates

I: PAMCo survey – Results

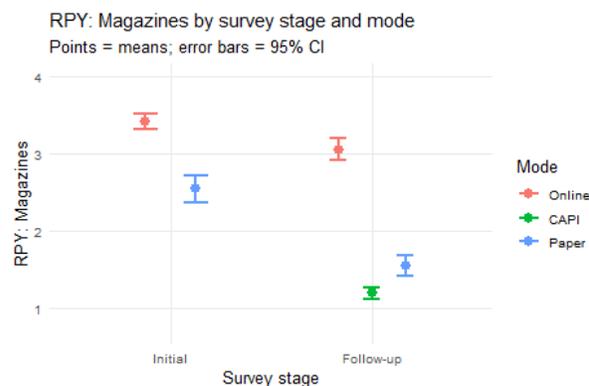
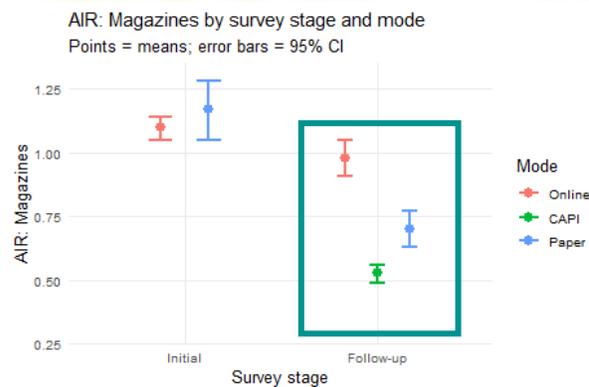
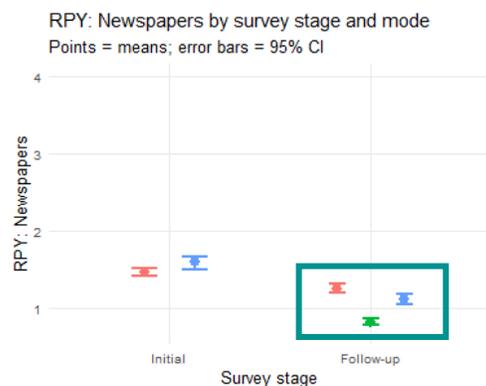
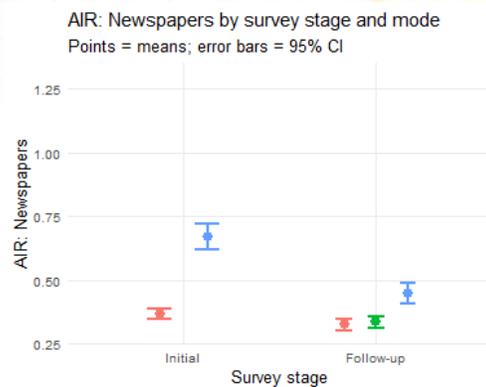
RQ3: Do participants recruited via knock-to-nudge provide data of similar quality to respondents recruited during initial stage?



- Item non-response based on 33 survey questions
- Respondents recruited via KtN have **significantly higher item non-response** than both those who responded via CAPI, and those who responded during the initial stage

I: PAMCo survey – Results

RQ4: Do participants recruited via knock-to-nudge differ from respondents recruited via postal letters in terms of their substantive results?



- Participants recruited during the non-response follow-up stage **read significantly fewer newspapers and magazines** than those recruited during the initial stage
- The results hold after controlling for demographic and socio-economic characteristics

RPY: Read per year
AIR: Average issue readership

I: National Survey for Wales (NSW)

- **National Survey for Wales (2022-23):**
 - Commissioned by the Welsh Government
 - Comprises over 50 main modules covering a wide range of public policy and quality of life topics
 - Cross-sectional survey conducted annually, designed to be representative of all adults aged 16 or over living in private households in Wales
 - In 2022-23 it was a telephone survey (unimodal)
 - Three KtN visits to non-responding addresses
 - One participant per household responds to the survey (no within-household selection)
 - We use data collected between April 2022 and March 2023

II: NSW – Results

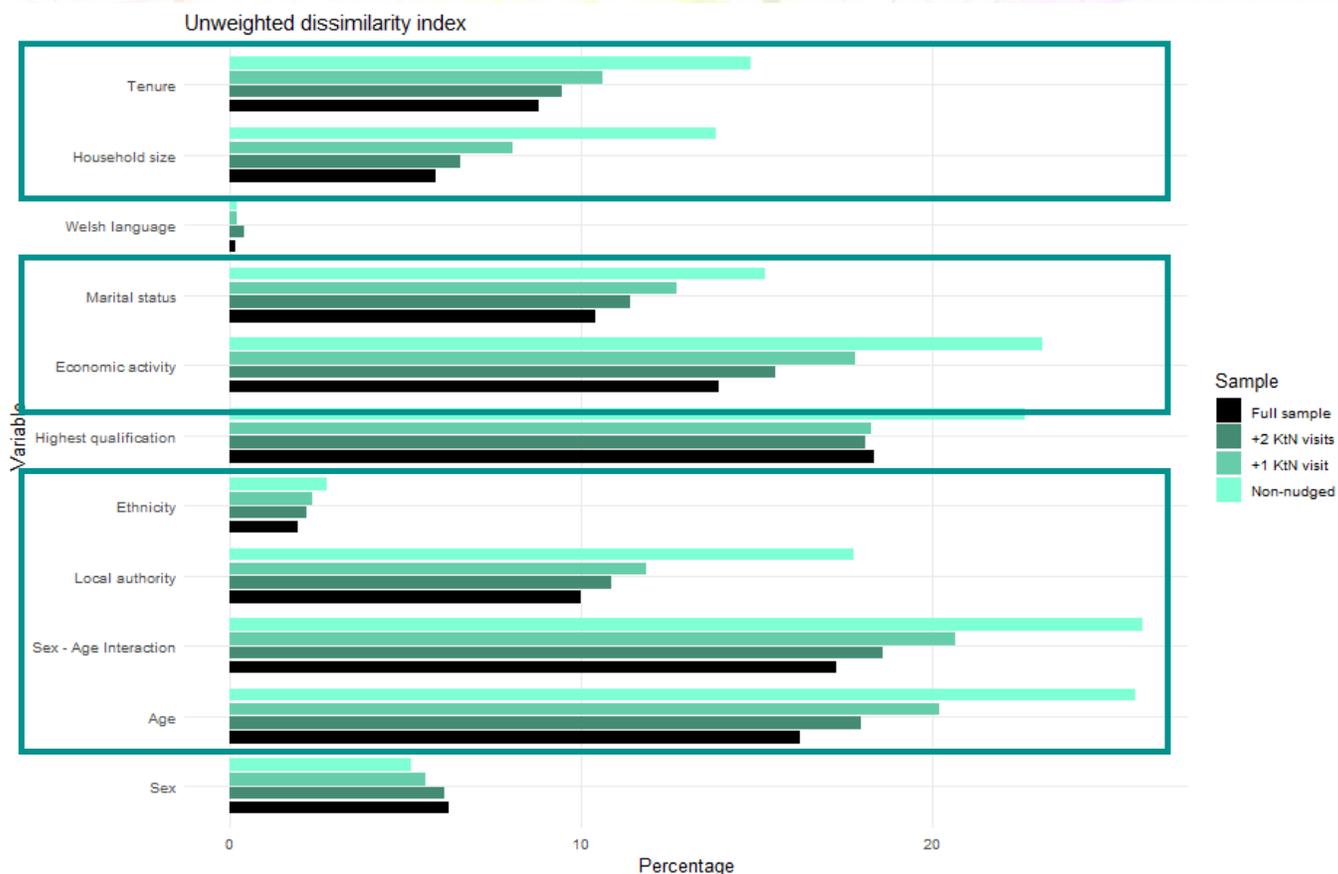
RQ1: Does knock-to-nudge improve response rates?

Number of KtN visits	Eligible addresses	Responding addresses	% of responding addresses	Cumulative response rate (%)
No KtN visits	6,143	4,015	36.1	13.8
One KtN visit	11,340	4,658	41.9	29.8
Two KtN visits	5,817	1,458	13.1	34.8
Three KtN visits	4,644	667	6.0	37.1
No info on KtN visits	1,227	320	2.9	38.1
Total	29,171	11,128	100.0	-

- Response rate increases from 13.8% to 38.1% after the KtN stage
- The KtN stage contributes with 64% of complete responses in the sample

II: NSW – Results

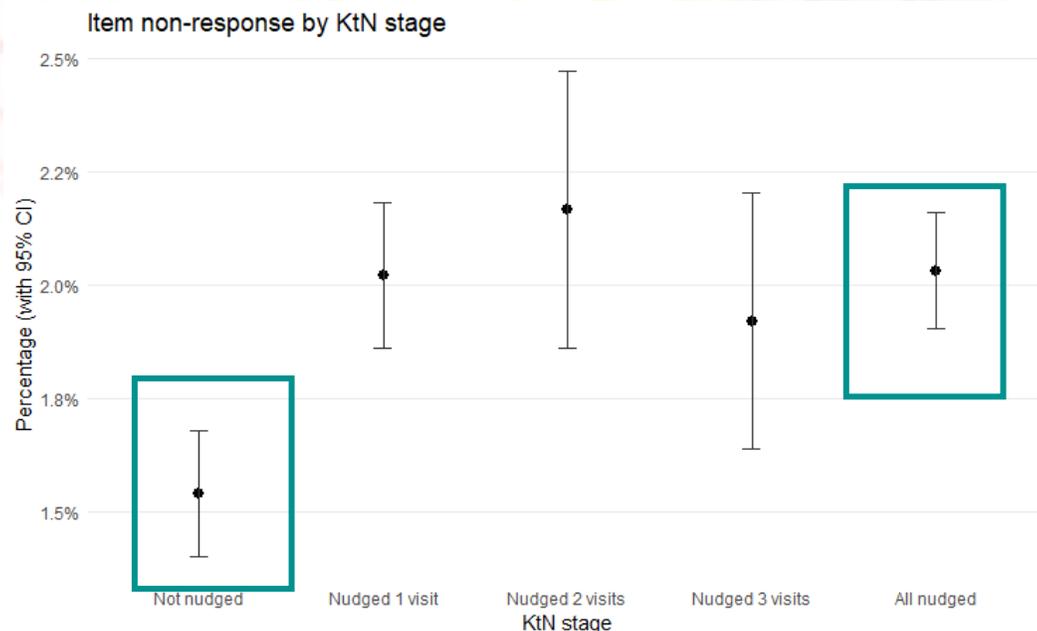
RQ2: Does knock-to-nudge improve sample composition?



- We compare the distribution of each variable with high quality benchmarks from Census information for 2021 (Wales)
- **KtN stage improved** most variables
- The biggest improvements come after the first visit
- The overall dissimilarity index drops from 15.2% (non-nudged) to 11.7% (+1 visit), 10.6% (+2 visits) to 9.9% (full sample)

II: NSW – Results

RQ3: Do participants recruited via knock-to-nudge provide data of similar quality to respondents recruited during initial stage?



- Item non-response based on 43 “ask-all” questions in the survey
- Respondents recruited via KtN have **significantly higher levels of item non-response** than those recruited initially

II: NSW – Results

RQ4: Do participants recruited via knock-to-nudge differ from respondents recruited via postal letters in terms of their substantive results?

Substantive variable	Percentage of participants (%)			χ^2	p-value	Sample size
	Full sample	Non-nudged	All nudged			
Car available for use	85.6	87.4	84.5	17.3	0.000	11,047
Internet access at home	91.6	91.9	91.5	0.6	0.457	11,047
Used bus	39.2	39.6	39.1	0.3	0.613	11,045
Used train	38.8	37.5	39.5	4.5	0.034	11,043
Carer for someone else	28.5	28.1	28.7	0.4	0.509	11,025
Received help for themselves	5.3	5.3	5.2	0.1	0.786	11,025
Received help for caring for others	6.6	6.6	6.5	0.0	0.922	11,020
Good or very good health	64.6	65.4	64.1	1.9	0.174	11,016
Limiting disability or illness	55.0	57.7	53.5	18.2	0.000	10,879
Seen a GP in the last year	65.3	66.5	64.7	3.8	0.051	11,011
Seen another professional at GP practice	48.5	52.8	46.0	46.0	0.000	11,013
Had a hospital appointment	41.5	43.6	40.3	11.2	0.001	11,013
Attended A&E or minor injuries	14.1	13.5	14.5	1.7	0.191	11,020
No religion	45.9	42.1	48.1	35.9	0.000	11,028
Used archives or record offices	7.9	9.2	7.1	14.9	0.000	11,042
Concerned about climate change	75.8	78.5	74.3	24.7	0.000	10,872

- Significant differences across several key estimates

Conclusions

- We found evidence that, compared to postal recruitment, KtN strategies:
 - Increase sample sizes
 - Improve sample composition
 - May incorporate participants with different substantive responses
 - May incorporate more “reluctant” participants with higher levels of item non-response and less committed to follow-ups
- There are diminishing returns in improvements after the first KtN visit
- Experimental designs would be beneficial
- Cost-effectiveness of these methods needs to be established

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