

Scottish Crime and Justice Survey

Covid-19, mode effects and the SCJS: Did changes to the survey approach post-pandemic impact survey estimates?

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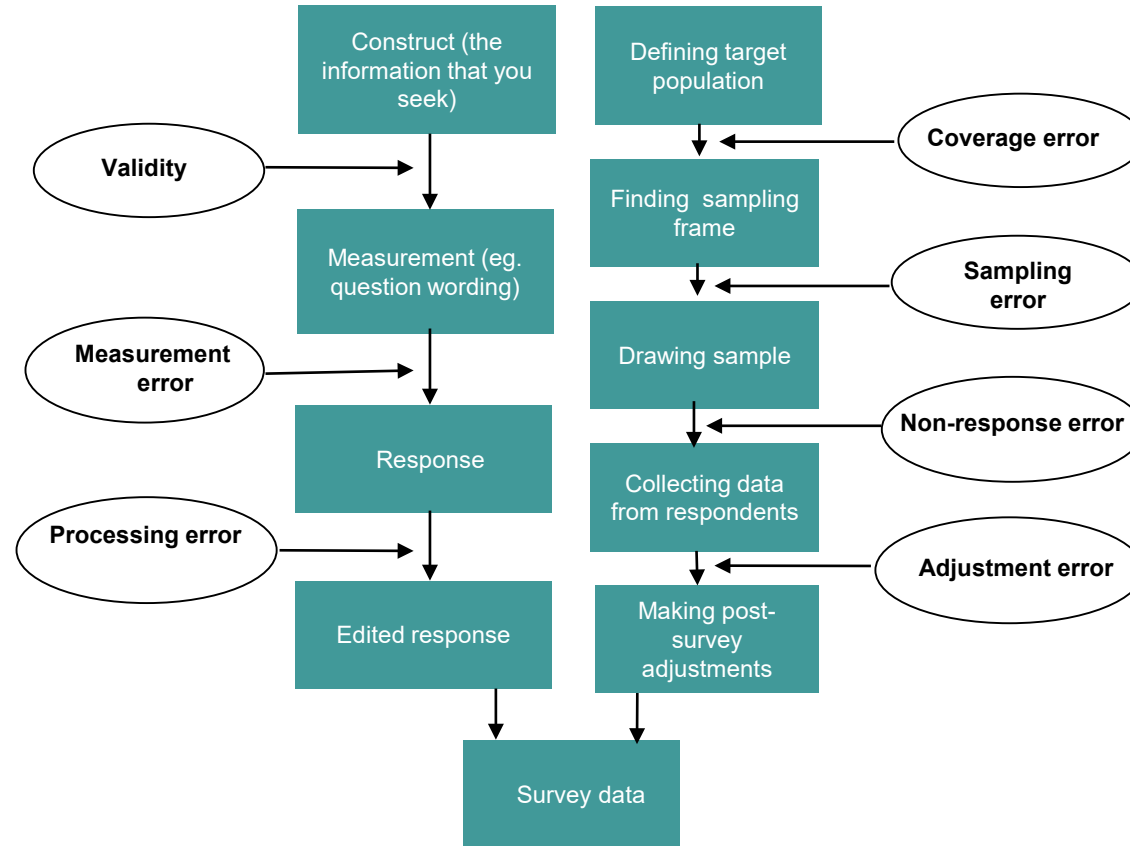
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Mode effects – mode of interview

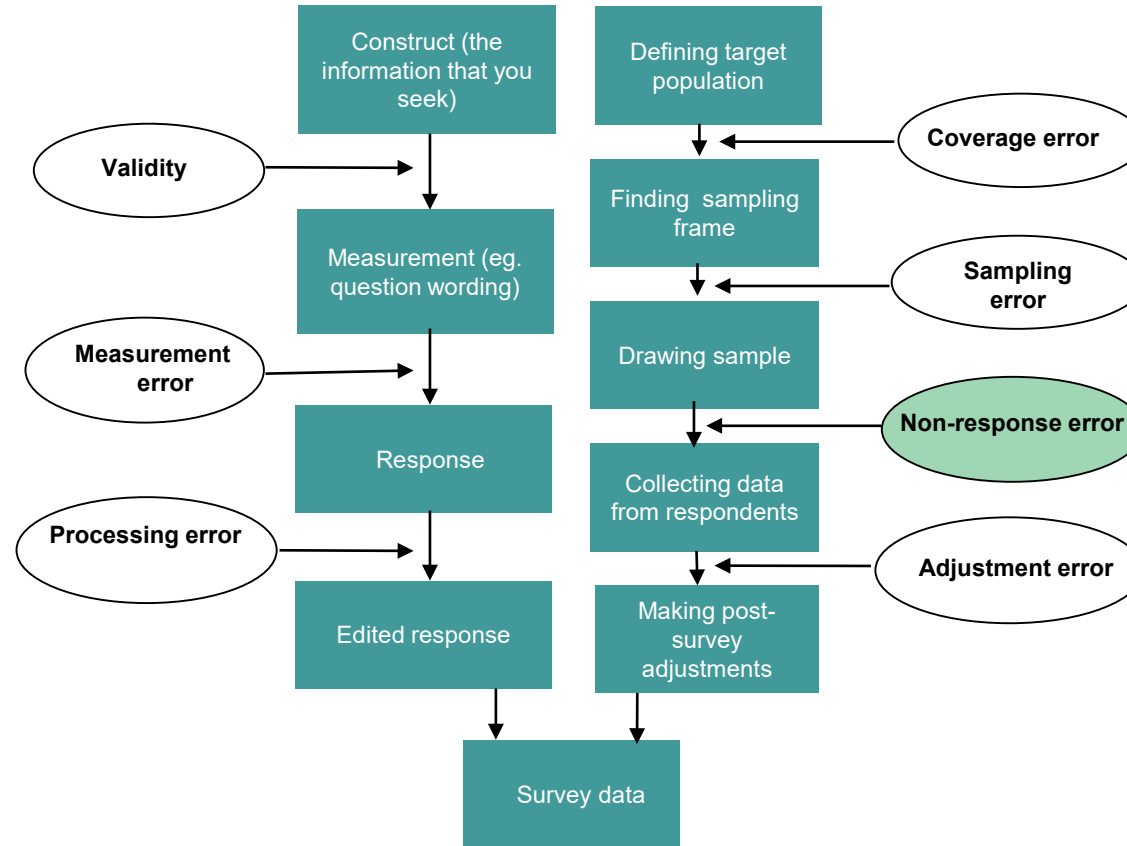
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Total Survey Error Framework and Survey Mode



Total Survey Error Framework and Survey Mode



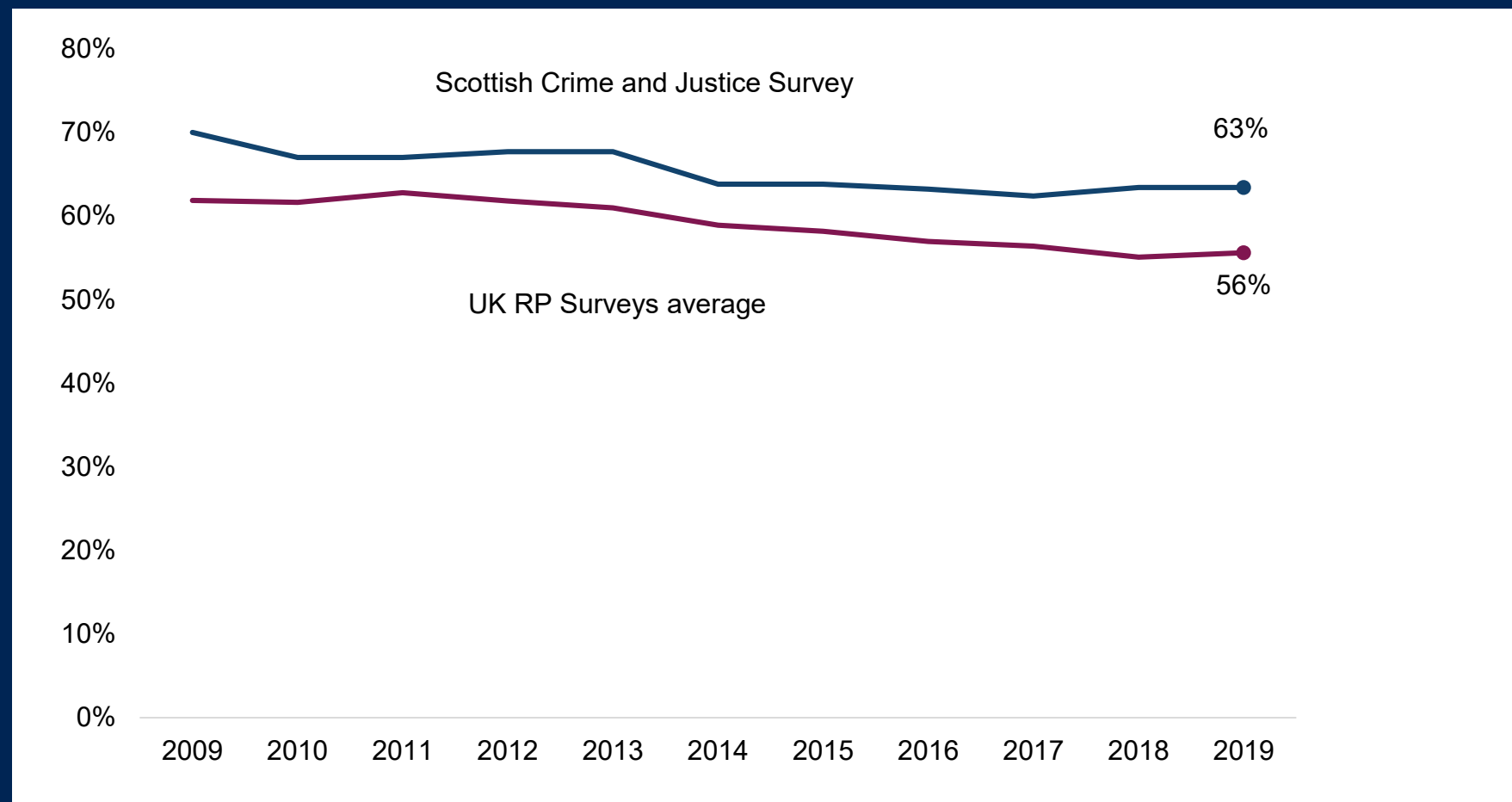
Mode of approach

...tends to impact non-response error.

(the difference between those who take part in a survey and those who do not)

Historic SCJS response rate trend

SCJS response rate versus average across all major UK RP surveys

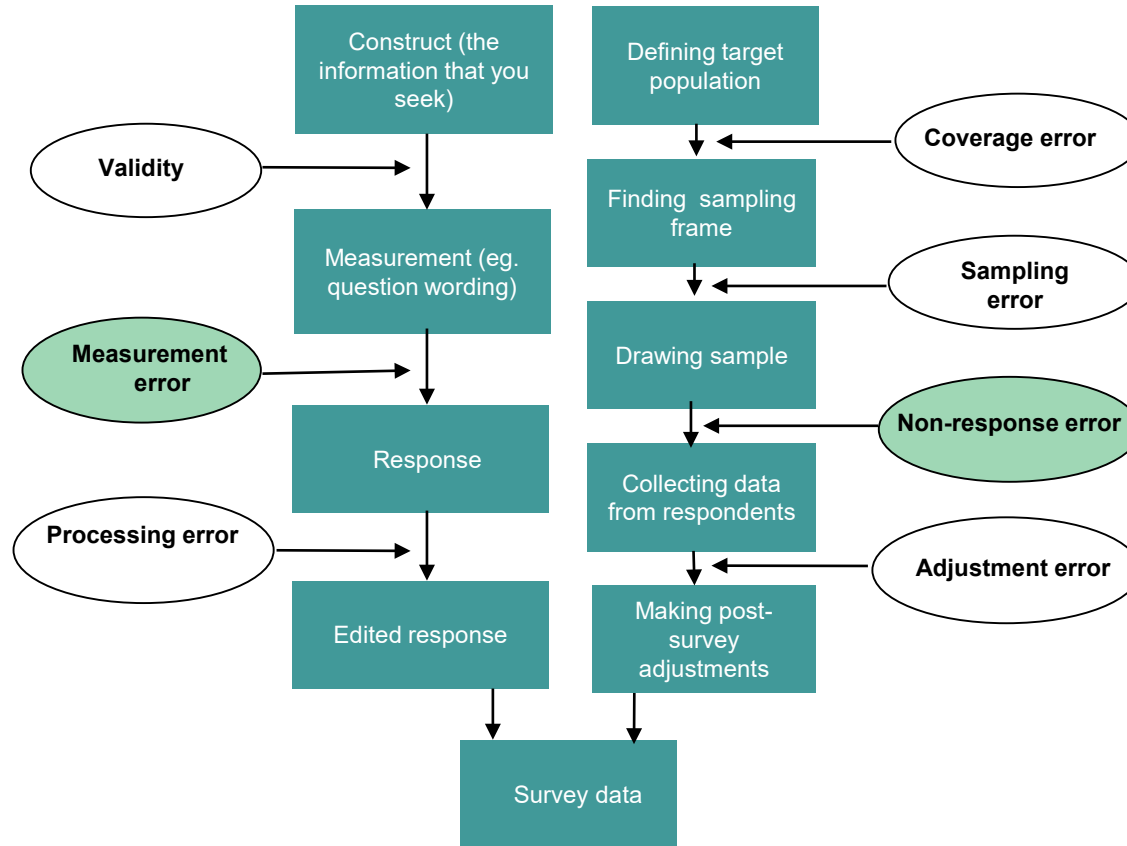


Total Survey Error Framework and Survey Mode

Mode of interview

...tends to influence measurement error.

(the difference between a true value and a respondent's answer)



Mode of approach

...tends to impact non-response error.

(the difference between those who take part in a survey and those who do not)

Three previous studies that provide context

1

2003 SCS Calibration study

F2F approach directly compared to a RDD telephone approach

2

SCJS response rate study

Analysis of impact of response rate change on estimates (2012/2013 & 2016/2017 data)

3

SHS mode effect report

Pre-pandemic approach compared to Covid-19 opt-in approach.

1 - SCVS Calibration Exercise

The approach

In 2003, an experiment to test whether it was possible to move from the traditional face-to-face to telephone using random digit dialling.

Calibration exercise undertaken comparing the two approach

(~12,000 in total)

Hope, S. (2005); SCVS: Calibration Exercise Report, Edinburgh, Scottish Government. Available from the Scottish Government website

Key findings

“Considerable evidence of substantial differences between the approaches”

“Unable to devise a weighting approach that satisfactorily corrects the many demographic biases that are observable in the data”

RDD telephone element subsequently dropped and survey returned to traditional face-to-face approach.

2 - Impact of lower response rates on survey estimates (based on 2012-13 and 2016-17 data)

The approach

No change to survey approach.

Examined the potential impact of lower response rate on survey estimates based on 2012-2013 data and 2016-2017 data

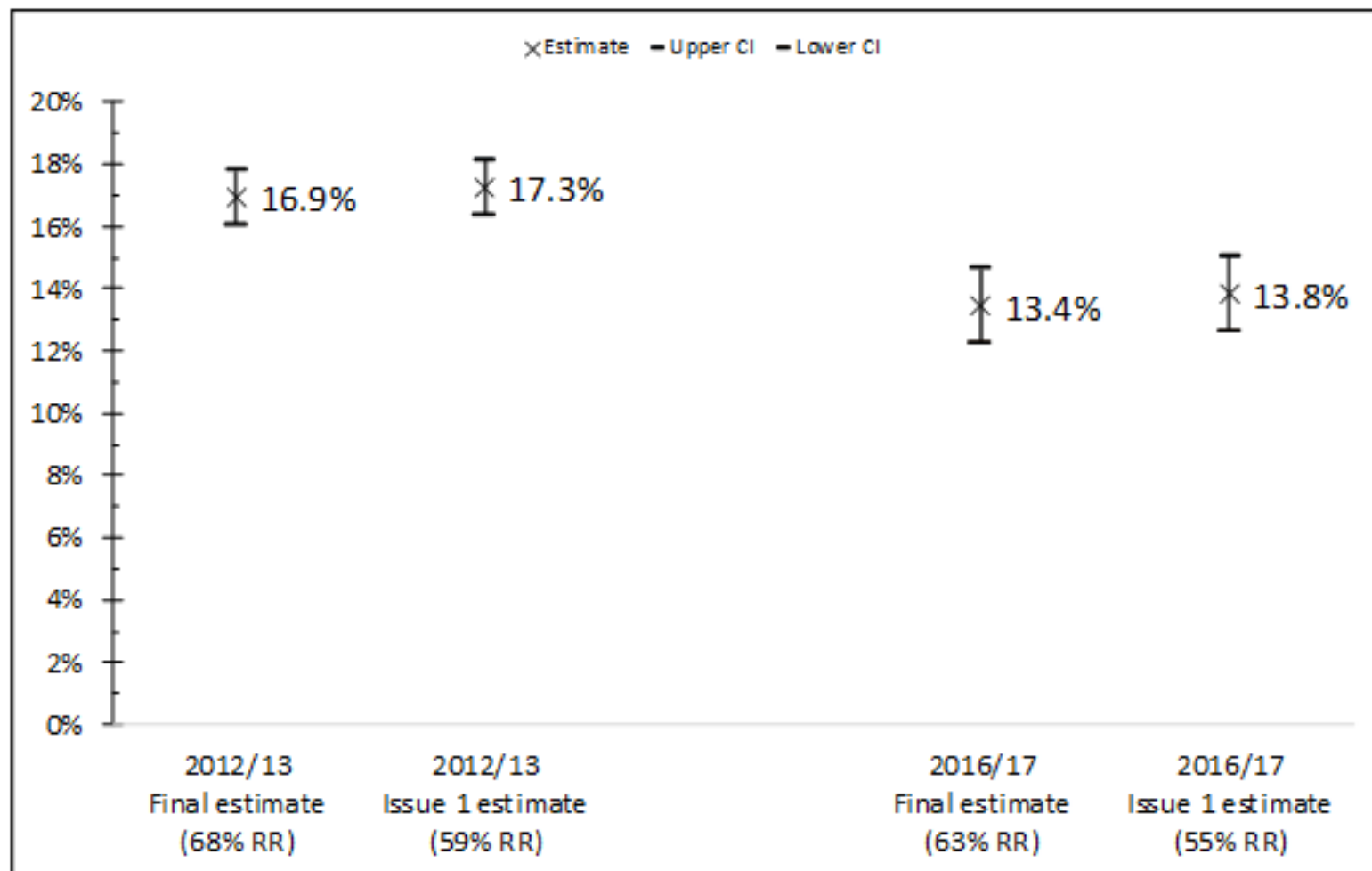
Compared weighted estimates of various before and after reissuing – what would happen if response rate had been 8-9 percentage points lower.

Key finding

“Increasing the response rate through reissuing has a marginal impact on national and sub-group estimates.”

Martin, C. (2020) Response rates, reissuing and survey quality: does reissuing reduce non-response bias in the Scottish Crime and Justice Survey. Scottish Government web-based report.

Figure 4.2: Estimates of whether experienced any crime in last 12 months by year and by whether reissues included in data. SCJS 2012-2013 and SCJS 2016-2017.



Sample sizes: 2012/13 final estimate 12,045, 2012/13 I1 estimate 10,500, 2016/2017 final estimate 5,567, 2016/2017 I1 estimate 4,849.

3: Scottish Household Survey 2020 mode report

Changes to the approach

1. **Opt-in model based on mail-outs** rather than interviewers persuading people to take part on the doorstep.
2. Interviews carried out remotely by **telephone or video**.
3. Tried to **match telephone numbers to PAF** to allow an approach by telephone. (23% match rate)
4. Incentives.

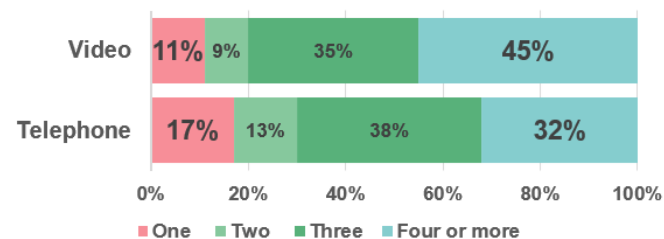
Martin, C. (2022) Scottish Household Survey 2020: methodology and impact of change in mode. Scottish Government web-based report..

Key findings

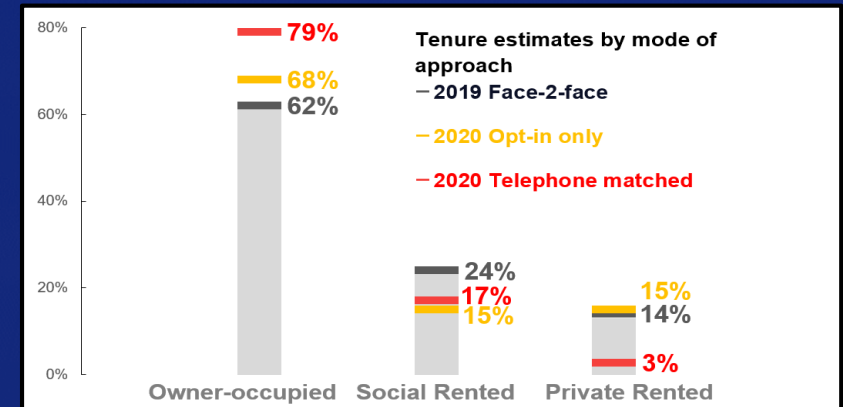
	Response Rate*
2019 Face-to-face	57%
2020 Face-to-face (pre-lockdown)	55%
2020 Opt-in only	14%
2020 Telephone matched sample	37%

Most estimates in line with previous findings after weighting. (Some notable exceptions including tenure, length of time at property, and educational qualifications)

Number of types of qual held among those with a degree by mode of interview



Sizeable drop in the response rate with revised opt-in approach (interviewers are very good at getting people to take part)



Respondents were given choice of telephone or video interview: mode effects found on some questions (especially qns with multi-options and those relying on showcards)

How did the SCJS approach change during Covid-19?

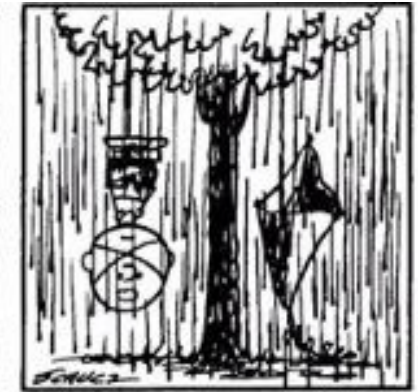
Pre-covid.....

- Survey run since 1993 as a random pre-selected face-to-face survey
- From 2017 until Covid-19 struck...
 - Random pre-selected, full coverage of Scotland, fully unclustered, based on PAF
 - Target of 6,000 interviews annually (Apr to Mar)
 - 40-minute survey
 - **Mode of approach:** Face-to-face (Interviewer visits after advance letter/leaflet, 6+ calls, reissues)
 - **Mode of interview:** Face-to-face, in-home, using CAPI with self-completion element

Covid-19 timeline

Summer 2020

Various options
papers/memos/
false starts



17 March 2020

All interviewing
stops – no
interviewer travel
allowed

Sept 2020

Scottish Crime
Telephone Survey
Fieldwork

Nov 2021

SCJS 21/22
wave starts
using 'knock-
to-nudge'
approach

Apr 2022

Return to in-
home
interviewing

Mar-20 Jun Jul Aug Sep Oct Nov Dec Jan-21 Feb Mar Apr May June July August Sept Oct Nov Dec Jan-22 Feb Mar Apr

How did the approach change?

The post-pandemic 2021-2022 wave

- Sampling approach same as pre-pandemic
 - **except for response rate assumption reduction**
- Minor changes to the questionnaire
 - reduced self-completion section, small number of questions adapted for telephone, single-use showcards & e-showcards
- Conditional incentive of £10 for completion
- November 2021 to April 2022 fieldwork.
 - Mode of approach: 'Knock-to-nudge', face-to-face following advance mailout.
 - Mode of interview: **Telephone or video.**
- April 2022 to December 2022 fieldwork.
 - Mode of approach: Face-to-face (following advance mailout, 6+ calls)
 - Mode of interview: **Return to face-to-face (but allowing alternative modes)**

Impact of mode of approach



Impact of mode of approach on response rates

	Response rate
SCJS Pre-pandemic wave (Apr 2019- Mar 2020)	63.4%
SCJS Post-pandemic wave (Nov 2021 – Dec 2022)	47.3%
<i>Sample initially allocated Nov-Dec</i>	43.6%
<i>Sample initially allocated Jan-Mar</i>	49.6%
<i>Sample initially allocated April-June</i>	49.0%
<i>Sample initially allocated July onwards</i>	46.9%

Variation in response rates by area deprivation

Unadjusted response rates by SIMD quintile by wave

	2019-2020	SVTS	2021-2022
Most deprived	57%	33%	43%
2nd	63%	36%	45%
Middle quintile	66%	42%	49%
4th	65%	47%	51%
Least deprived	65%	48%	48%

Most estimates in line with previous findings, some exceptions

- We examined 20 measures (weighted and unweighted).
 - 2 geographic measures (Area deprivation & rurality)
 - 5 individual level measures (age, sex, attainment, working status, health)
 - 6 household measures (inc tenure, car ownership, household composition)
 - 7 substantive estimates (4 victimisation rates, 3 attitudinal statements)
- **For most measures (that we would expect to be stable) there was very little difference after weighting. Largest differences in:**
 - Tenure
 - Household income
 - Attainment

Age

No discernable difference

	Unweighted			Weighted		
	19/20	21/22	Difference	19/20	21/22	Difference
16-24	7.0%	6.1%	-0.9%	12.0%	11.8%	-0.2%
25-44	28.3%	27.9%	-0.4%	32.0%	32.1%	0.1%
45-64	34.5%	34.3%	-0.2%	33.0%	32.6%	-0.4%
65+	30.2%	31.7%	1.5%	23.0%	23.5%	0.5%

Tenure

Slightly lower proportion of renters

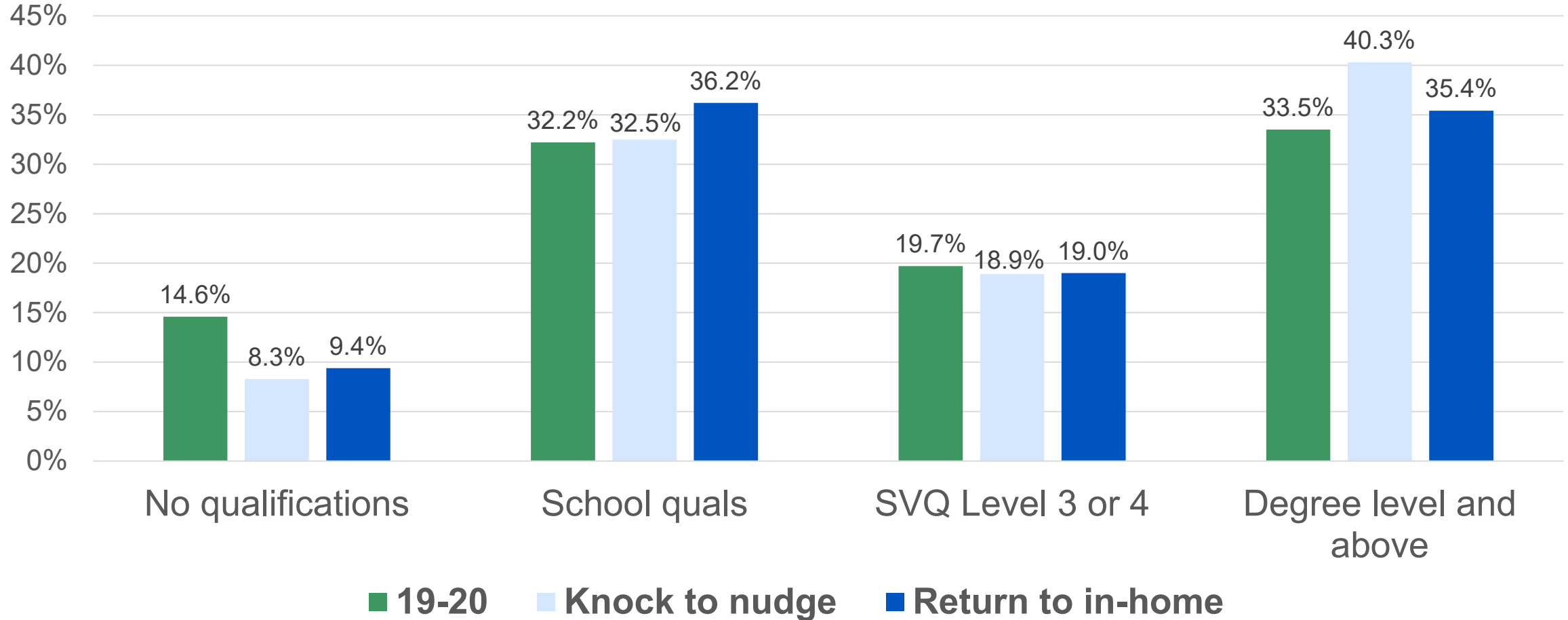
	Unweighted			Weighted		
	19/20	21/22	Difference	19/20	21/22	Difference
Owner occupied	65.7%	66.4%	0.7%	62.0%	64.4%	2.4%
Social rented	21.7%	21.6%	-0.1%	23.2%	22.5%	-0.7%
Private rented	11.4%	10.6%	-0.8%	13.5%	11.8%	-1.7%
Other	1.2%	1.4%	0.2%	1.2%	1.3%	0.1%

Educational qualifications

Lower proportion with no qualifications

	Unweighted			Weighted		
	19/20	21/22	Difference	19/20	21/22	Difference
No qualifications	18.0%	11.8%	-6.2%	14.6%	9.1%	-5.5%
School quals	30.9%	33.7%	2.8%	32.2%	35.2%	3.0%
SVQ L3 or L4	18.8%	19.0%	0.2%	19.7%	19.0%	-0.7%
Degree level	32.4%	35.5%	3.1%	33.5%	36.7%	3.2%

Educational qualifications by stage of fieldwork compared to 2019/2020



Victimisation estimates

Lower proportion with no qualifications

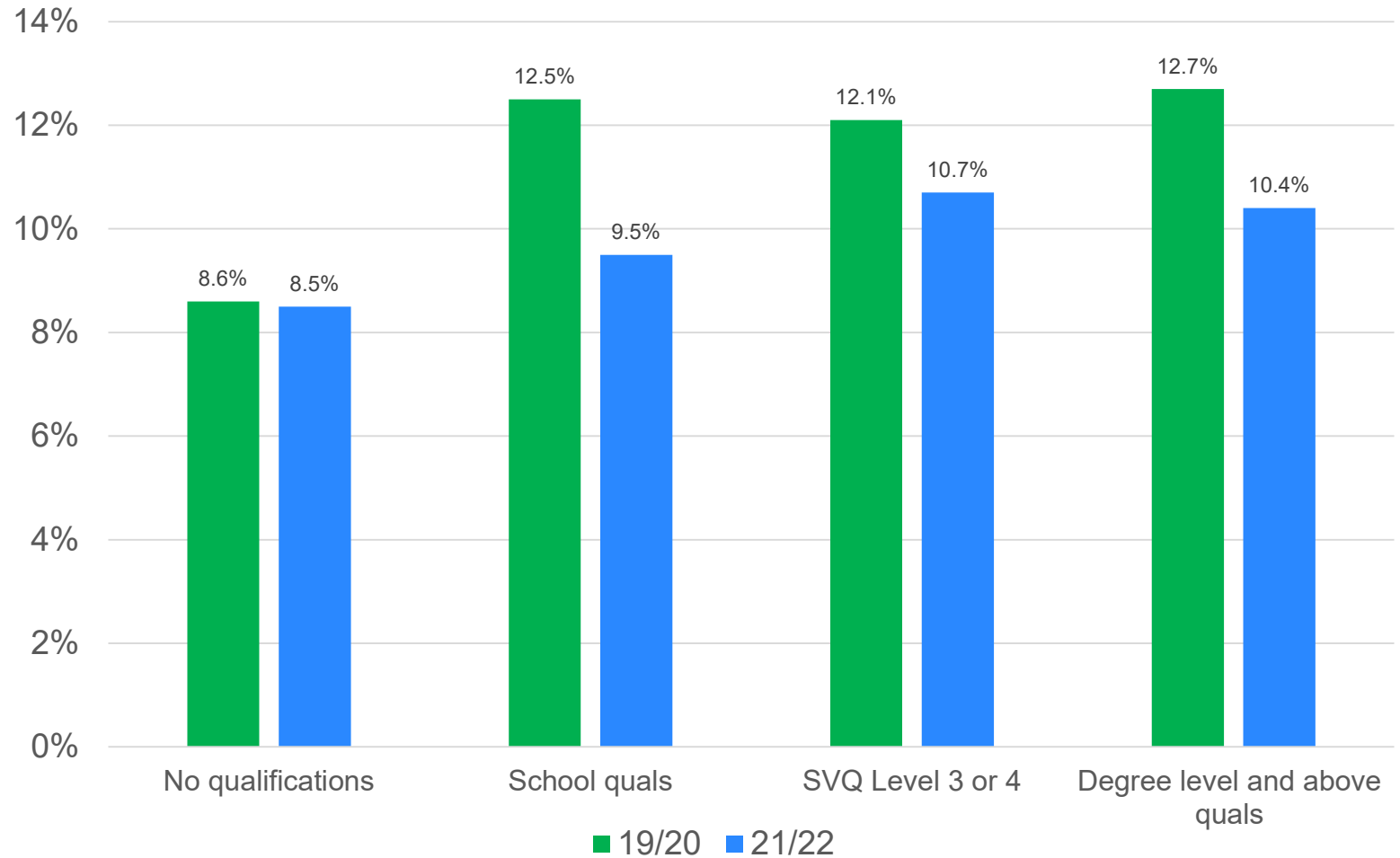
	Unweighted			Weighted		
	19/20	21/22	Difference	19/20	21/22	Difference
Victim of crime	10.8%	9.6%	-1.2%	12.0%	10.0%	-2.0%
Victim of property crime	9.2%	8.3%	-0.9%	10.0%	8.7%	Not significant
Victim of violent crime	2.1%	1.7%	-0.4%	2.5%	1.7%	-0.8%
Victim of multiple crime	3.3%	3.0%	-0.3%	3.6%	3.0%	Not significant

Victimisation estimates by educational qualifications

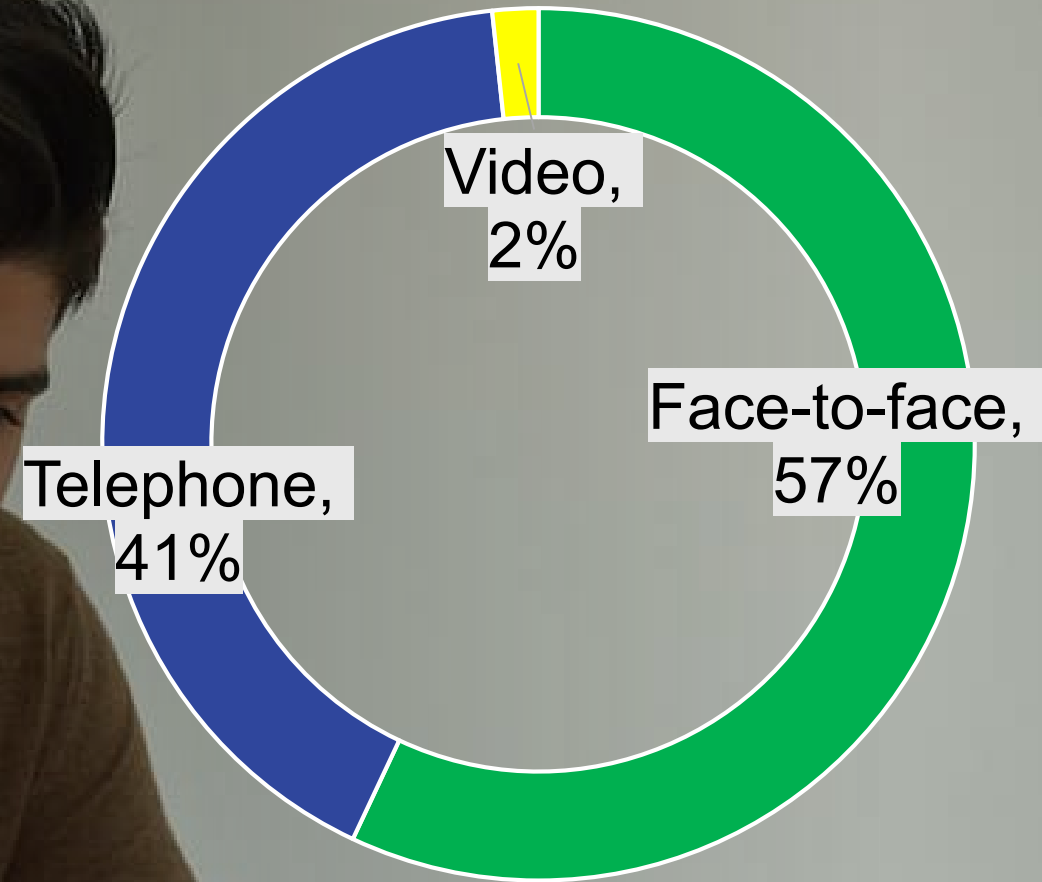
Victimisation not closely associated with attainment.

Consistent pattern across qual levels

Victimisation rate by educational qualification



Impact of mode of interview

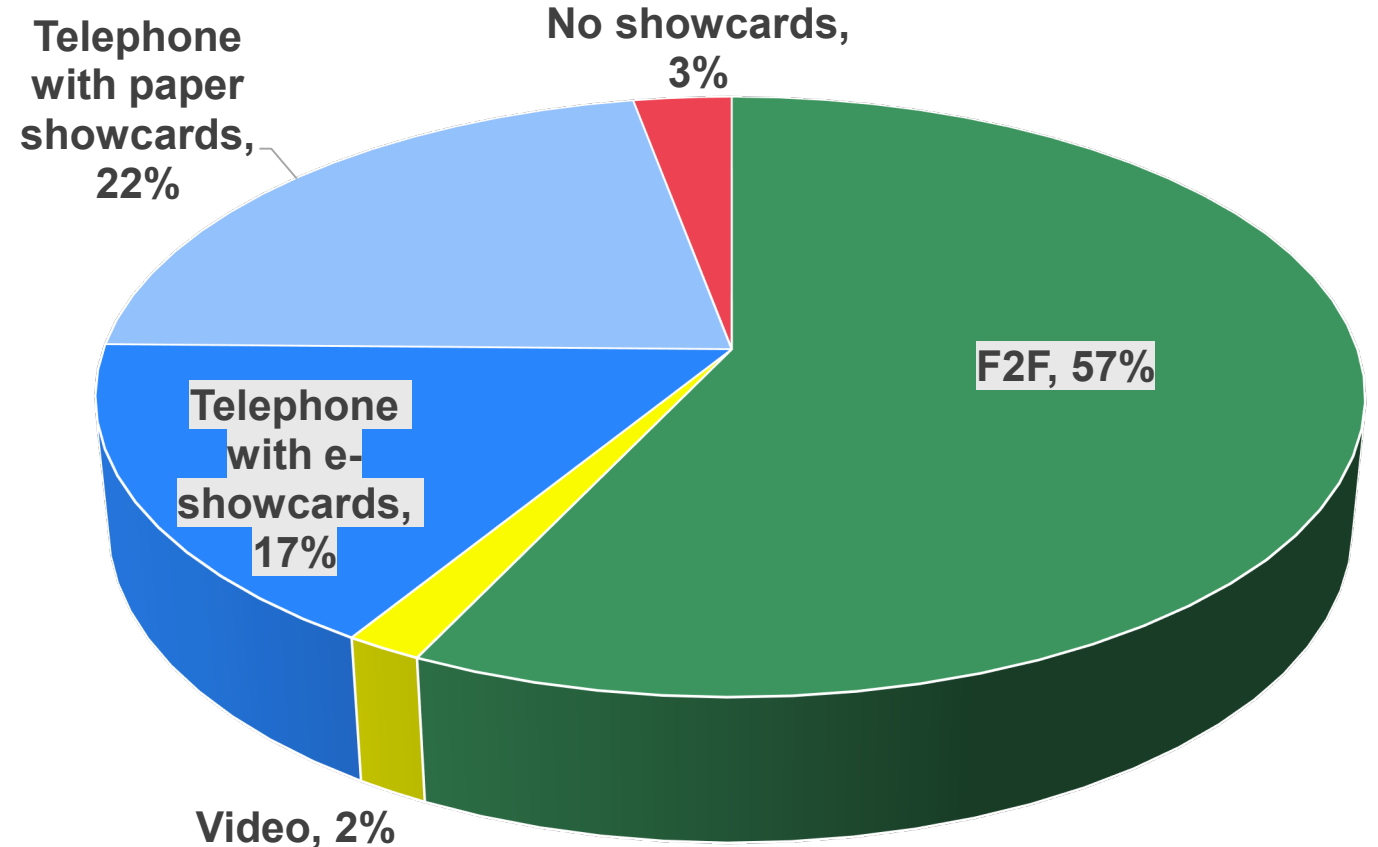


Two potential effects of different mode of interview

1. Fewer categories chosen to multi-code questions when the survey is completed on telephone and/or without showcards.
 - No clear evidence found.
2. Whether people tend to use the middle, neutral categories in a five point strongly agree or strongly disagree scale.
 - When showcards used, the neutral 'neither agree nor disagree' response is more commonly use.
 - Fewer 'don't know' or 'refused' answers.

Two major mitigating factors

1. Compared to other studies (such as the SHS) the SCJS relies less on visual cues given by showcards.
2. Mode of approach meant that we could use showcards (either single-use paper showcards or online showcards) with almost everyone.



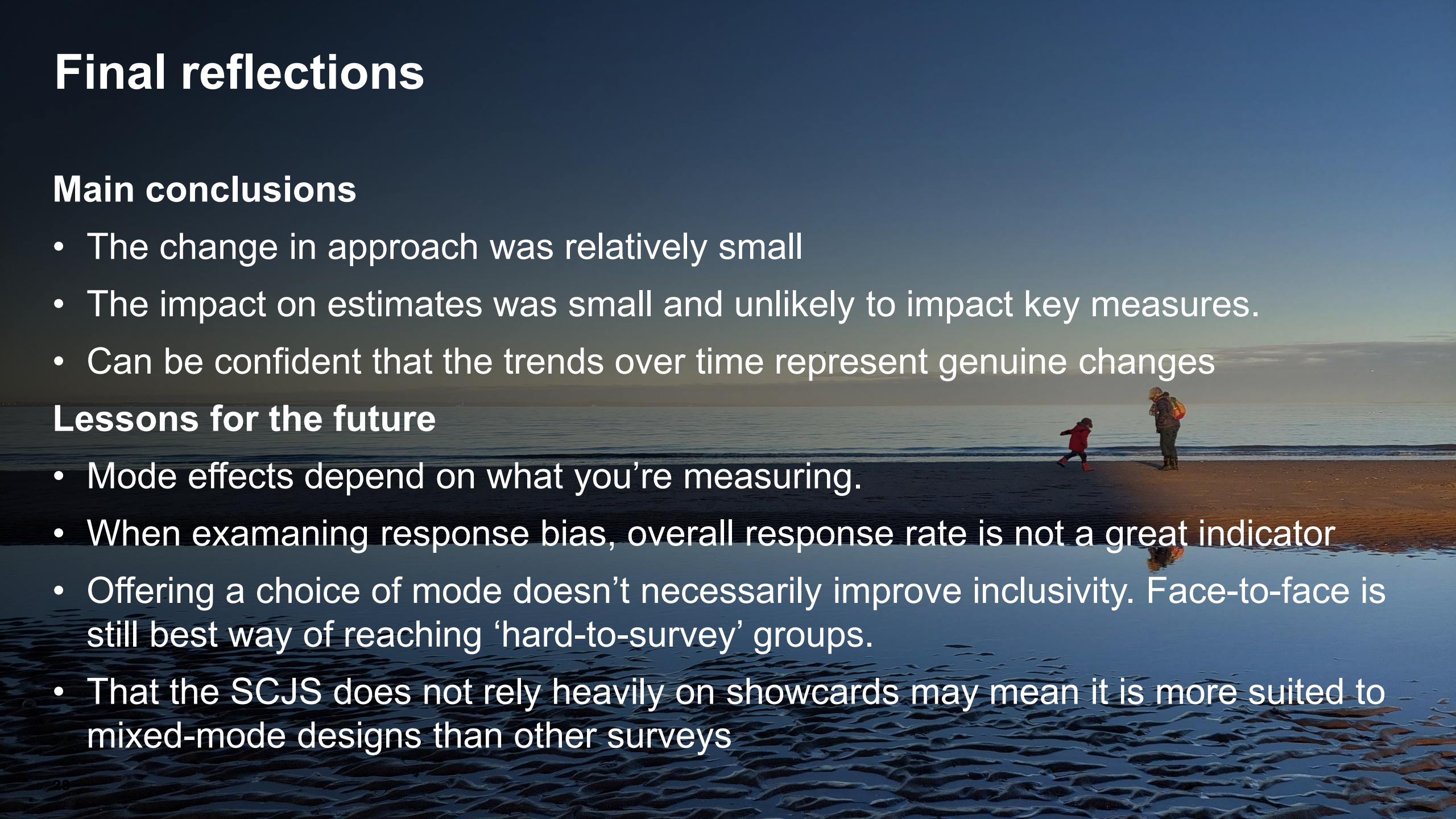
Final reflections

Main conclusions

- The change in approach was relatively small
- The impact on estimates was small and unlikely to impact key measures.
- Can be confident that the trends over time represent genuine changes

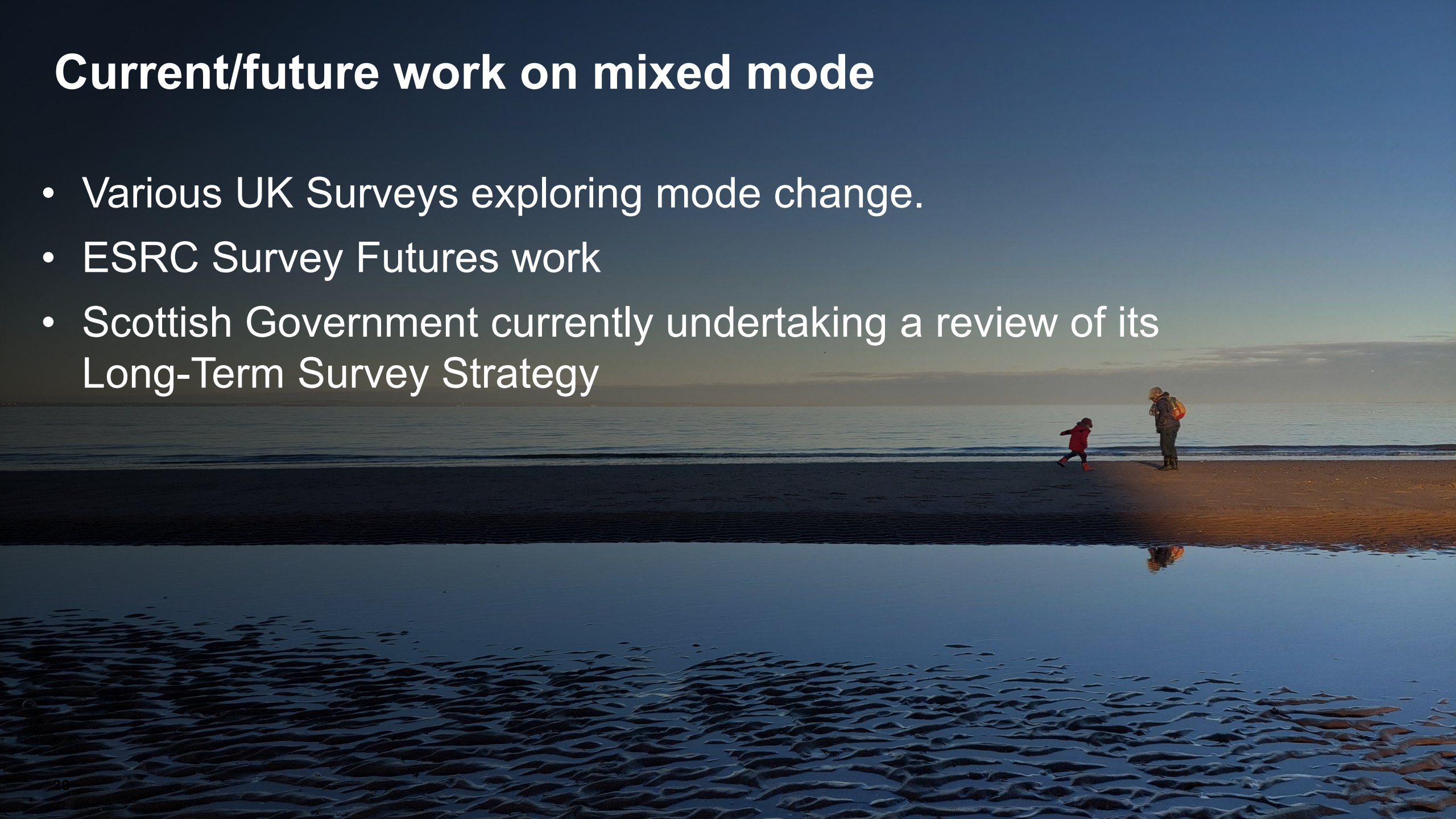
Lessons for the future

- Mode effects depend on what you're measuring.
- When examining response bias, overall response rate is not a great indicator
- Offering a choice of mode doesn't necessarily improve inclusivity. Face-to-face is still best way of reaching 'hard-to-survey' groups.
- That the SCJS does not rely heavily on showcards may mean it is more suited to mixed-mode designs than other surveys



Current/future work on mixed mode

- Various UK Surveys exploring mode change.
- ESRC Survey Futures work
- Scottish Government currently undertaking a review of its Long-Term Survey Strategy



THANK YOU

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Martin, C., Bell, M., Napier, S. (2023) Scottish Crime and Justice Survey:
Analysing the effects of using a mixed-mode approach to adapt to
COVID-19 challenges. Scottish Government web-based report.
<http://tinyurl.com/2jed4nks>

