

Investigating Live Video Interviewing in the Life in Australia™ Panel Survey: An Experimental Study

Carina Cornesse¹, Benjamin Phillips²,
Dina Neiger², Emma Farrell³ & Philip Carmo³

¹ *GESIS – Leibniz Institute for the Social Sciences*

² *The Social Research Centre (SRC)*

³ *Australian Bureau of Statistics*

Abstract

Video calls have become common in many people's lives, especially since the COVID-19 pandemic. Interviewing respondents via video calls may be a useful addition to the survey mode toolbox as it may increase response rates as well as data quality for at least some population subgroups. To assess the potential of live video interviews (VI) in Australia, a study was implemented, examining VI in a probability-based online panel in Australia in 2022, using an experimental design. The focus of the assessment presented in this paper is on (a) factors that influence VI uptake (as measured by general willingness, consent, appointment-making and response to VI), and (b) factors that influence the data quality of the resulting survey responses (as measured by satisficing and social desirability indicators), comparing the VI response group to a group using the panel's regular online self-completion design. We find that panel members who are highly educated, frequently use the internet, and have high prior panel wave completion rates are the most likely to try VI. Older panel members are more willing to try VI than younger ones, but do not actually participate at higher rates. Regarding data quality of responses, VI respondents produce more socially desirable responses compared to the online self-completion respondents while no differences in terms of satisficing behavior are detected.

Keywords: video interviewing, data quality, panel surveys, social desirability, satisficing



In the past, face-to-face interviewing was considered the gold-standard among survey modes and was widely used as the primary mode for data collection in most major survey programs. However, over the years, response rates have steadily decreased in this mode, while its costs have risen (de Leeuw et al., 2018; Smith, 1995; Williams & Brick, 2018). In today's digital era, there is a growing preference for more flexible survey modes which align with our modern lives (Schober, 2018; Smyth et al., 2014). This shift is particularly evident among certain socio-demographic subgroups, such as younger adults and highly educated people (Haan, 2015). Due to growing cost restrictions and difficulties with reaching people at home, many major survey programs are increasingly incorporating online surveys as a self-completion option for some or all their participants (Burton et al., 2020; Cernat & Revilla, 2021; Maslovskaya & Lugtig, 2022).

Online self-completion surveys promise reduced costs, faster data collection, and low social desirability bias (Bianchi et al., 2017; Kreuter et al., 2008). However, they may also come with notably higher nonresponse rates and therefore likely higher nonresponse bias, particularly among older individuals or those with lower educational attainment (e.g., Cornesse & Schaurer, 2021), ignoring the offline population altogether (Bach et al., 2024), and data quality issues, such as break-offs and speeding (e.g., Heerwegh & Loosveldt, 2008; Revilla & Ochoa, 2015; Zhang & Conrad, 2014). This is especially true in comparison to face-to-face interviews, where respondents can see, hear, and interact with interviewers (Al Baghal & Lynn, 2015; Daikeler et al., 2020; Peytchev, 2009). Live video interviewing, where respondents and interviewers are connected via video conferencing software, may offer an adequate compromise between the different types of survey modes: convenient and more cost-efficient than face-to-face interviewing, but with personal real-time interviewer interaction and assistance (Weller, 2017) and potentially higher data quality (comparable to face-to-face). In the following, we will refer to live video interviewing as just "video interviewing" (abbreviated VI)¹. At present systematic assessments of VI are still scarce, in particular in the context of panel studies. Also, most studies use observational and not experimental data that systematically assess the implementation of VI. We address these gaps here.

The study presented here examines VI using an experimental design in a probability-based online panel in Australia. We investigate (a) how factors including characteristics of respondents, access to the internet, and previous participation history in an online panel impact uptake of VI (as measured by general

¹ VI can also include the use of (pre-)recorded videos (e.g., Fuchs, 2009; Haan et al., 2017; Höhne et al., 2024), but this is outside the focus of this study.

willingness, consent, appointment-making and response to VI). Furthermore, we investigate (b) factors that influence the data quality of survey responses (as measured by satisficing and social desirability indicators), comparing the VI response group to a group using the panel's regular online self-completion design. Considerations and design choices around the practical implementation of VI are also briefly presented.

The remainder of the paper is structured as follows: The Background section presents relevant context on VI, followed by a section outlining our expectations and hypotheses regarding effects of factors and characteristics that may influence uptake of VI (here in an online panel setting). We then present our data and analytical strategy to assess VI and the details on the VI implementation in the Data and Methods section. Subsequently, we discuss the main results from our modelling in the Results section and conclude with a summary of findings and discussion of limitations and future research avenues.

Background

In this section, we first discuss the potential that VI may have as a new survey mode based on the evidence of video call use in the general population and then the potential benefits that VI may offer.

Trends in Uptake of Video Calling

VI may be particularly attractive as a new survey mode because an increasing number of individuals use video calls regularly and confidently in their professional and social lives. For example, in the United States, 81% of adults utilized video calls during the pandemic, with 12% using them multiple times a day (McClain et al., 2021). In Australia, official statistics indicate a significant rise in the use of app-based video calls during and after the pandemic: While in 2019, only 41% of adults had engaged in app-based video calling, this figure increased to 64% in 2023 (Australian Communications and Media Authority [ACMA], 2023). The potential for even more people to do video calls in the futures is high, since 93% of Australian households already have a home internet connection, 99% of the Australian population generally use the internet, and 92% use the internet multiple times a day (ACMA, 2023; ACMA, 2024).

As people have become more accustomed to video calls, they may also increasingly find it convenient and even enjoyable to participate in surveys through this mode (Schober et al., 2023). However, willingness and enjoyment of VI participation will likely differ across population subgroups depending on their internet access, digital skills, and use behavior. Official statistics on video call use from various countries convey that people who live in urban areas, are younger,

female, and more highly educated are more likely to have (regular) experiences with video calls than people who live in more remote areas, are older, male, and less highly educated (ACMA, 2023; Eurostat, 2022; Thomas et al., 2023). In Australia, 74% of 18- to 24-year-olds had used app-based video calls within 6 months in 2023, but only 31% of people aged 75 and older. Furthermore, a higher share of women (69%) than men (58%) used video calls (ACMA, 2023). While official statistics on the interaction with education are unavailable for Australia, data from other countries suggests that such a correlation exists, with more highly educated people using video calls more often than people with low educational attainment (e.g., Germany: International Standard Classification of Education (ISCED) 1 and 2 (primary and lower secondary education): 72% video call users vs. ISCED 5 to 8 (tertiary education): 83%, see Destatis, 2024).

Benefits and Uptake of VI

VI offers several benefits. Compared to online self-completion surveys, for example, recent studies indicate lower cognitive response burden and higher data quality in VI (e.g., Conrad et al., 2023; Endres et al., 2023). Moreover, undesirable interviewer effects appear to be less pronounced in video than in offline in-person interviewing (West et al., 2022). VI may thus strike an optimal balance in terms of interviewer social presence: sufficiently close to provide assistance but not overly intrusive into the respondent's private space (Schober, 2018). Additionally, the ability for both respondents and interviewers to share screens, upload documents, or exchange text messages in the chat enhances the flexibility of this survey mode. However, the extent to which VI can be a successful alternative to other modes depends on its implementation, including the choice of video call platform, interview scheduling tools, interviewer hardware, and setup (camera, background, attire, screen configuration), and interviewer training (e.g., Engward et al., 2022; Jeannis et al., 2013; Oates et al., 2022; see Schober et al., 2020 for a comprehensive overview and recommendations). In a panel survey context, the success of VI may also depend on the survey modes respondents are used to and whether they perceive VI as an improvement over the status quo.

Several studies have shown that younger and more highly educated individuals are more likely to be video interviewed than others (Martin & Fradier, 2023; Thorolfsson et al., 2023; Dulaney et al. 2023). Evidence regarding gender bias is inconclusive. Dulaney et al. (2023) and Kocar et al. (2025) report no gender differences in video participation, whereas Thorolfsson and colleagues (2023) observe that women are more likely to participate via video than men. In contrast, Fradier and Martin (2023) find higher VI uptake among men than women. Schober and colleagues (2023) suggest that socio-demographic characteristics may be completely unrelated to survey respondents' willingness to participate in VI.

Expectations of VI Uptake and Data Quality Effects

Our expectations regarding which subgroups are more likely to take up VI and which circumstances may lead to a higher data quality in our study are informed by considerations relating to the concept of digital inequality. The concept evolved as an alternative to theories on the so-called digital divide and claims that nowadays, digital inclusion should not be viewed as a binary variable anymore, where people either do or do not use the internet. Instead, it postulates a continuum of digital inclusion, where most people use the internet, but they systematically differ in how easy it is for them to do so as well as their use preferences. Digital inequality consists of the infrastructure component of digital access and the individual-level components of digital skills and use behavior (see Helsper, 2021 for a detailed theory of digital inequality). It can generally be expected that people who benefit from good digital access (i.e., high speed internet connections and high quality devices) and who use the internet confidently for a variety of tasks (e.g., taking online surveys but also shopping, banking, social media; e.g., Jäckle et al., 2024) will be more willing and able to try VI than people in a less digitally privileged situation. Based on the concept of digital inequality, as well as the empirical evidence on uptake of video calling and VI (see Background section), we develop seven hypotheses around the characteristics of those that take up VI. We expect panel respondents used to online self-completion surveys to be more likely to try VI if ...

- ... they live in urban rather than remote areas (H1), because of the better high-speed internet access.
- ... they are younger rather than older (H2) and/or more highly educated rather than not (H3), because they may have more confidence in their digital skills.
- ... they are female rather than male (H4), because video interviews fit well with women's higher video call use as already evidenced in official video call statistics.
- ... they are more frequent internet users (H5) and use the internet for other less traditional communication tasks such as social media (H6), because they should be more confident in their digital skills.
- ... they have high prior panel survey wave completion rates, indicating a high willingness to take part in a survey and suggesting low barriers to doing so (H7).

These hypotheses are all in line with the concept of digital inequality as well as official statistics on video call use (ACMA, 2023). In addition, H2 and H3 are also in line with some studies on VI (see Martin and Fradier, 2023; Thorolfsson et al., 2023; Dulaney et al. 2023) but not others (Schober et al. 2023). Furthermore,

while H4 is in line with research by Martin and Fradier (2023) and Thorolfsson and colleagues (2023), it is not supported by Dulaney and colleagues (2023) or Schober and colleagues (2023). Regarding H7, no study to our knowledge has yet examined the association between online panel members' participation history and their likelihood to engage in video interviews. Completing online panel survey waves is a digital task like many others and requires digital access and skills. We therefore also expect this to be positively associated with uptake of VI. We expect that the seven hypotheses apply to the different phases of uptake which include general willingness to participate in VI, consent to actually do so, making an appointment for VI, and completion of the actual VI.

Apart from uptake to VI, it is also important to assess whether data quality of the resulting responses differs between this survey mode and the regular Life in Australia™ protocol, which requires online self-completion. It is reasonable to expect that common findings on comparing interviewer-administered to self-administered survey modes regarding cognitive burden, data quality, and interviewer effects apply to our setting (e.g., West & Blom 2017; Kreuter et al. 2008). This is especially true since the scarce existing literature on VI data quality outlined in the sections above suggests that such differences between modes exist. We, therefore, expect that the presence of the interviewer in the VIs will reduce satisficing behavior (H8) but increase socially desirable responding (H9) as compared to online self-completion.

Data and Methods

Life in Australia™ and the Australian Comparative Study of Survey Methods (ACSSM)

The study we report on in this manuscript was conducted in the Life in Australia™ panel, which is Australia's only probability-based online panel (Kaczmirek et al., 2019). Life in Australia™ was initially recruited in 2016 using telephone interviewing and dual-frame random digit dialing (RDD; $n=3,322$), topped up in 2018 using mobile-only RDD ($n=267$), expanded in 2019 using address-based sampling (ABS; $n=1,810$), topped up in 2020 using a combination of ABS, interactive voice response calls to mobile RDD sample, and SMS push-to-web to mobile RDD sample ($n=612$), topped up again in 2021 using SMS push-to-web to mobile RDD sample ($n=510$) in a trial of retention initiatives, and expanded in 2021 using ABS ($n=3,715$). Panel members unwilling or unable to participate in the panel online are interviewed via telephone. Following Callegaro and DiSogra's (2008) definitions, the weighted average Recruitment Rate for the study sample was 11.0% and the Profile Rate was 93.6%.

All panel members receive incentives of 10 AUD for completion of surveys of typically 20 minutes or less. The survey content consists of social and health research. Examples include surveys of Australian opinion on international affairs, social cohesion, disability attitudes, and topics in women's and sexual health. Surveys were released monthly at the time of the ACSSM, although not all panel members are invited to complete surveys each month and some are invited to complete multiple surveys in a given month. At the time of sample selection for the ACSSM in 2022, there were 7,265 active panel members. Over the period from October 2021 to November 2022, panel members were invited to an average of 12 monthly waves and completed an average of 9 surveys.

The experiment we report on in this paper is part of the ACSSM (Pennay et al., 2023; Phillips et al. 2023), which had the goal to evaluate and improve contemporary and emerging practices for general population surveys building on earlier work conducted in Life in Australia™ and beyond (Cornesse et al., 2020; Dutwin & Lavrakas, 2016; Lavrakas et al., 2022; Pennay et al., 2018; Pew Research Center, 2019). For the full experimental design of the ACSSM see its technical report composed by Pennay et al. (2023). In the ACSSM, surveys with questionnaires as similar as possible were fielded in different designs (e.g., different modes and sample selection procedures). Our paper focuses on the comparison of VI versus online self-completion implemented experimentally in Life in Australia™.

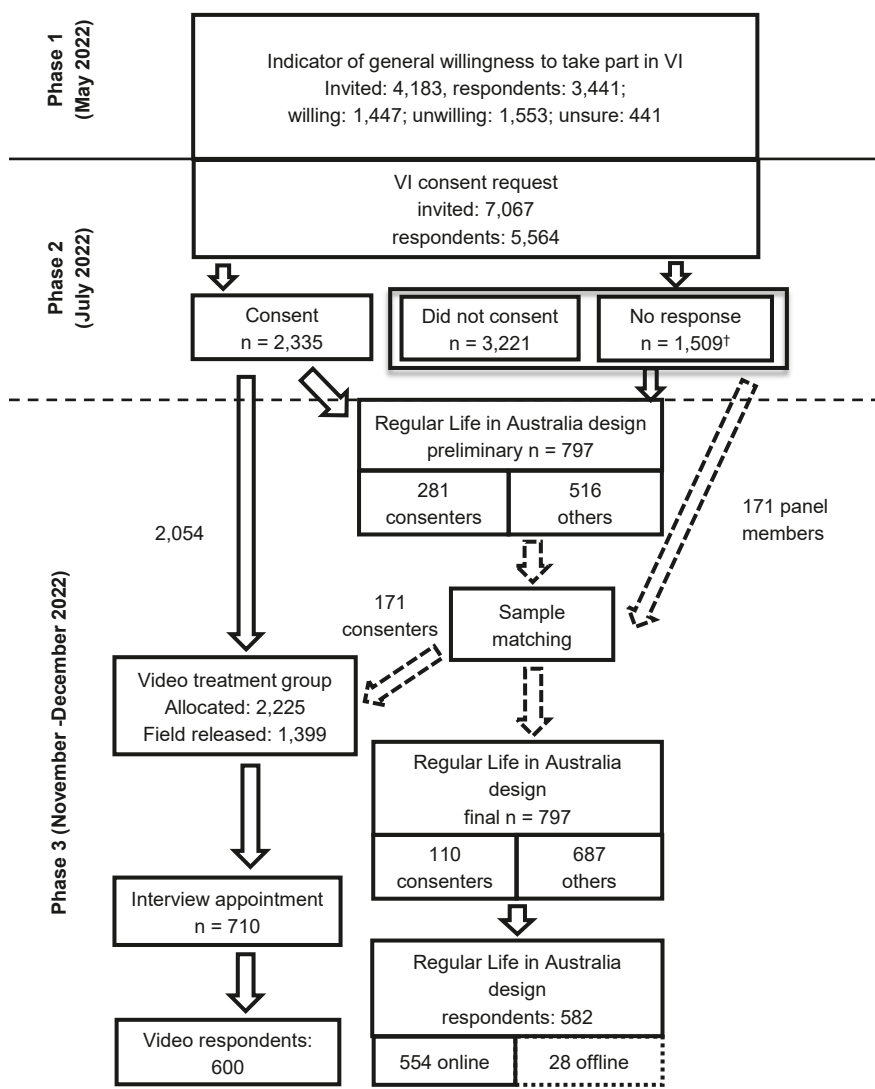
VI Study Setup and Sample Allocation

Our VI study consists of three phases, with the first one exploring general willingness to take part in VI, phase 2 asking about consent to take part in VI, and phase 3 VI implementation (treatment) and parallel data collection phases. Figure 1 schematically depicts key outcomes and sample allocation at each phase. At phase 1, we explored the general potential of VI in our panel by asking for general willingness to participate in the new mode. At phase 2, we asked a subset of panel participants to consent to participate in a VI study, which we then conducted at phase 3. In the following, we describe each study phase in more detail. Key variables of interest that are later used as dependent variables in our models are indicated as DV.

Study Phase 1

To understand the potential of offering VI (study phase 1), we implemented a question on general willingness to be video interviewed as part of the panel's May 2022 data collection wave, which was introduced for a random subsample of panel participants. Offliners (i.e., panel participants unwilling or unable to participate in the panel online) were excluded from this question, the actual VI treatment later that year, and hence from our analyses. Of the 4,183 invited panel members, 3,441 responded to this VI willingness indicator. In total, 1,447

(42%) were in principle willing to participate, 1,553 (45%) were unwilling, and 441 (13%) were unsure.



Notes: [†] Includes 3 partial respondents who did not reach the consent question.

Figure 1 Schematic depiction of the Life in Australia™ VI study in 2022 (numbers refer to observed sample cases at each phase)

Study Phase 2

The results from the willingness indicator variable were sufficiently encouraging to subsequently trial VI in Life in Australia™. To be able to do so, all online respondents of the July 2022 wave were asked for VI consent (study phase 2). Of the 7,067 online Life in Australia™ members, 1,506 (21%) did not complete the July 2022 survey and 3 (< 1%) were partial interviews that did not reach the consent question. Of the remaining respondents, 2,335 (42%) provided consent, 3,221 (58%) did not consent.

Study Phase 3

Study phase 3 started with dividing the panel sample into two groups to be surveyed between November and December 2022. The first is a comparison group, which consists of a random draw of 797 Life in Australia™ active panel members stratified by age, education, and gender. This group was supposed to be surveyed using the regular Life in Australia™ study design, which consists predominantly of online self-completion questionnaires while non-internet users are interviewed via telephone.

By chance, however, a relatively high number, 281 people (35%), in the comparison group were VI consenters. Since it was unclear how many cases would have to be released into field to be able to meet the target number of 600 VIs, keeping 281 consenters from the VI group was deemed too risky. Therefore, the decision was taken to substitute a certain number of these cases from the randomly drawn comparison group. Through sample matching based on a VI consent propensity model, 171 (61% of consenters in the comparison group) were substituted by other active panel members who had not consented (see Table 1). This procedure maximized the pool of consenters that could be invited to VI but also ensured that both groups still contained VI consenters for comparative analyses.

To ensure that not all VI consenters would be removed from the comparison group, 600 cases were held out of the sample replacement but were still used in the propensity modeling.

Propensity modeling variables in the sample matching procedure included location (state $\times$ capital city/rest of state), area-level socio-economic status quintile, remoteness, gender, citizenship status, using a language other than English at home, Indigenous status, country of birth groupings, number of adults in the household, household type, household tenure, marital status, employment status, income, education, television viewing, digital affinity, Big Five personality indicators, self-assessed health, life satisfaction, alcohol and tobacco consumption, internal migration, concession card status, and telephony status. Characteristics that were highly correlated were excluded from the propensity model to avoid multicollinearity. There were a total of 480 combinations of propensity classes and selection strata (40 classes $\times$ 12 strata). Matched panel members

were defined as being in the same propensity class and selection stratum combination as the selected panel members. Each panel member who consented to VI and was included in the regular Life in Australia™ design was then replaced with one of the matched panel members who had not consented to VI. When there were multiple matched panel members available, one was selected at random. Robustness analyses comparing substitute cases with their substitutes show no differences with the exception that the cases brought in from the remaining panel sample into the comparison group to replace 171 VI consenters had significantly lower prior survey completion rates than VI consenters (see the additional model Add. M1 in Appendix B).

Table 1 Selection into comparison group before and after sample matching case substitution

	Selected	Not selected	Total
Before substitution:			
VI consenters	281	2,054	2,335
Remaining panel members ^a	516	4,414	4,930
Total	797	6,468	7,265
After substitution:			
VI consenters	110	2,225	2,335
Remaining panel members ^a	687	4,243	4,930
Total	797	6,468	7,265

Notes: ^aRemaining panel members include non-consenters, nonrespondents to the VI request, and offliners not asked for their consent

In the end, 797 panel members were invited to the survey in their accustomed mode design, with 110 of them (14%) being VI consenters. The invitation was sent via email, followed by three reminders and a mop-up call the week before fieldwork ended. In total, 582 people completed the survey, with 554 of them participating online and 28 via telephone. The latter are excluded from our analyses to focus on the comparison between online self-completion versus VI.

The second group in this study is the VI treatment group. It consists of all panel members who consented to VI in study phase 2 except for the 110 cases randomly drawn into the regular Life in Australia™ design comparison group and not replaced in the sample matching procedure. These 2,225 cases in total were released into field in batches of approximately 200 cases until the target of 600 completed video interviews was reached. In each batch, invitations to make an appointment for the video interview were sent via email, followed by three reminders and a mop-up call the week before fieldwork ended. Only 1,399 cases (63%) had to be released into field to achieve the target number of video inter-

views, meaning that our expectations about how many panel members would participate in the VI were exceeded. Of those cases released into field, 128 had initially been drawn into the comparison group but then re-assigned to the VI group as a result of the sample matching procedure. Of all cases released into field, 710 people made a VI appointment and 600 completed the interview via video.

VI Implementation

We describe briefly the VI implementation, guided by prior work conducted by Schober et al. (2020) and Hanson (2021). First, we selected our treatment sample as described above and sent out invitations and reminders asking participants to schedule an appointment. To support panel members for whom VI was likely to be a new concept, a microsite was created on the Social Research Centre (SRC) website to explain what was being asked of them (see Supplementary Document 1 for all VI communication).

Appointment-Setting

Scheduling an interview appointment was necessary because maintaining a group of interviewers available to complete interviews without appointments (i.e., on-demand) was deemed infeasible in terms of costs and logistics due to lack of prior experience with VI in Life in Australia™. Study participants set and, as necessary, canceled and rescheduled appointments using the commercial booking website OnceHub. The OnceHub site look and feel was customized for Life in Australia™. Confirmation emails (and optionally SMS) were sent for appointments, cancelations and reschedules. Reminders were sent 24 hours, 1 hour and 10 minutes before the scheduled time of the appointment.

Conducting VIs

Interviews were conducted on MS Teams. A typical interviewing set-up consisted of a desktop computer with keyboard, mouse, and two screens. On the first screen, the interviewer would see the interview software (UNICOM Intelligence computer-assisted interviewing interface) with the survey questionnaire as well as the respondent video window on MS Teams. On the second screen, the interviewer would see the showcards, which they shared with the respondent via MS Teams. Interviewers were instructed to have the survey questionnaire on the screen where the camera was facing, so that the interviewer was looking in the respondent's direction when questions were being asked. A neutral, standardized background was used via the MS Teams' background function.

The interviewers were selected from the SRC established interviewing staff, who usually conducted telephone interviews for Life in Australia™. Altogether,

six interviewers were trained. VI interviewer training included an overview of VI, how appointments were made, how to access appointments, computer set-up and use of software (calendar, showcards, CATI software), being present on Teams two minutes before the scheduled interview start, interviewer etiquette (relaxed and friendly rapport-building introduction including greetings and thanks, neutral and unbiased manner during interview, relaxing one's face and gently smiling, maintaining eye contact with the camera, good posture), identifying signs of distress, and interviewer welfare (see the Supplementary Document 2 for our video interviewer manual).

Analysis Strategy

In our analyses, we investigate the characteristics of panel respondents who are generally willing to participate in video interviews, consent to it for our VI experiment, make an appointment, and actually participate. Moreover, we explore differences in data quality between respondents in the VI group and respondents in the online self-completion mode control group.

Dependent Variables

In total, we estimate 16 regression models (M1 to M16; see Table 2). The first four focus on the group of panel members invited to VI. Key dependent variables are general VI willingness (M1) and actual consent (M2), making a video interview appointment (given consent and inclusion in the VI group; M3), and completing VI (given having an appointment; M4). The remaining models (M5 to M16) focus on data quality of responses in the VI group versus the comparison group. We calculate three separate models to examine satisficing (M5 to M7) and nine models to examine social desirability indicators (M8 to M16). In the data quality models, the dependent variables are the responses to survey questions supposedly attracting satisficing behavior (number of selected health conditions, rounded numeric punch, reported payments) or social desirability (support for multiculturalism, life satisfaction, general health, psychological distress, generalized trust, smoking, alcohol consumption, exercise frequency, unpaid care; for a full overview of the dependent variables and models see Table 2).

Table 2 Models and variable types across study phases (DV = dependent variable, study phases: 1 = May, 2 = July, 3 = November to December)

Model	Regression model type	Study phase	DV type	DV (categories)
M1	Multinomial logistic	1	Nominal	General willingness to use VI (unwilling, unsure, willing)
M2	Binomial logistic	2	Binary	Consent to participate in VI study (no consent, consent)
M3	Binomial logistic	3	Binary	Made VI appointment (no, yes)
M4	Binomial logistic	3	Binary	Completed VI (no, yes)
M5	Poisson	3	Count	Number of selected health conditions (0–7)
M6	Binomial logistic	3	Binary	Rounded punches (no, yes)
M7	Poisson	3	Count	Number of reported payments (0–5)
M8	Ordinal logistic	3	Ordinal	Support for multiculturalism (Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree)
M9	Ordinary least squares	3	Continuous	Square of life satisfaction (0–100)
M10	Poisson	3	Count	General health (Poor, Fair, Good, Very good, Excellent)
M11	Ordinary least squares	3	Continuous	Psychological distress ²
M12	Ordinal logistic	3	Ordinal	Generalized trust (Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree)
M13	Binomial logistic	3	Binary	Smoking behavior (no, yes)
M14	Ordinal logistic	3	Ordinal	Alcohol consumption frequency (Do not drink alcohol, Less often than 1 day a month, About 1 day a month, 2–3 days a month, 1–2 days a week, 3–4 days a week, 5–6 days a week, Every day)
M15	Ordinary least squares	3	Ordinal	Exercise frequency (Not at all, Less than once a week, 1 to 2 times a week, 3 times a week, More than 3 times a week (but not every day), Every day)
M16	Binomial logistic	3	Binary	Provides unpaid care (no, yes)

We analyze our video interview study data using multivariate regression analyses. To analyze general VI willingness (3-category nominal variable; study phase 1), we apply a multinomial logistic regression model. For the analyses of the VI experiment (study phases 2 and 3) analyzing the different stages of taking part in VI and our data quality indicators, we use - depending on the dependent vari-

² Kessler scores 6–30 (Kessler et al., 2010)

able type - binomial logistic regression models, Poisson models, ordinal logistic models, and Ordinary Least Square models.

Independent Explanatory Variables

Independent variables that may explain effects on uptake of VI were selected based on our hypotheses for direction of effects outlined in the section above. The variables include: degree of area remoteness (H1), age (H2), education (H3), gender (H4), frequency of internet use (H5), amount of daily social media use (H6), completion rate across the surveys in the four months prior to the video interview study (H7), and the survey mode (video vs. online self-completion; H8 and H9). As control variables, we also include panel recruitment year, state of residence as well as country of birth and indigenous status (see Table A1 in Appendix A for a full overview of the independent variables and rationale for selection).

Robustness Analyses for Group Selection Effects

As described above, in the VI group, only panel members who had previously consented to VI could be invited while the regular survey comparison group contained VI consenters, non-consenters, and panel members who did not answer the consent question (e.g., because they skipped the phase 2 survey). This difference between the groups is of no consequence for M1 to M4, which focus exclusively on the group invited for video interviews. However, this potential selection effect may impact the data quality comparisons between the VI respondents and the web self-completion respondents in M5 to M16. We, therefore, examined to what extent the invited and responding samples across these two groups differed (see Table B1). Results show that panel members invited to (see additional model Add. M2) as well as participating in the video interviews (see additional model Add. M3) were significantly more likely to have higher education, higher internet use frequency, and higher survey completion rates than the online self-completion comparison group invitees and respondents. Panel members invited to the video interviews were also more likely to be in the oldest age group (75 years and older; reference category: 18 to 24 years) and use social media less than 30 minutes a day (reference category: not at all). Women were less likely to respond to the video interview than the online self-completion survey. All differences are accounted for through inclusion of the relevant characteristics in the set of analyses variables applied throughout all models.

Results

First, we model uptake of VI (models M1-M4) and focus on understanding the influence of the key variables of interest (relating to hypotheses H1 to H7) across all three study phases. We then examine the data quality indicators (satisficing [H8] and socially desirable responding [H9]) of the actual responses on key variables of interest, comparing the VI group with the comparison group.

Uptake of VI: Willingness, Consent, Appointment-Making, and Survey Completion

To summarize the earlier overview described above, we asked an initial question on general willingness to participate in VI in May 2022, where 42% of panel members agreed in principle to participate, 13% were unsure, and 45% were unwilling. Actual VI consent was asked in July 2022, again with 42% consenting. Only a subset of panel members who consented were selected for the VI arm of the trial. Of the 2,225 panel members assigned to the VI group, 1,399 were released into field in batches until the target number 600 VIs was reached. Among the 1,399 panel members who were invited, attrition occurred at appointment setting (51% invited did not set an appointment) and appointment keeping (8% invited set an appointment but did not complete an interview), with 43% of panel members invited being interviewed. By contrast, 73% of panel members invited to the regular arm completed the survey in their usual mode of interview.

Higher VI participation was expected in major cities as compared to regional and remote areas (H1). No support for this hypothesis was found for general willingness to participate (M1) or at any of the three study phases (M2-M4).

Table 3 Analysis of VI uptake: estimated regression outcomes for models M1-M4, for key explanatory variables (as they relate to our hypotheses)

Variable	M1: General willingness			M2: Consent		M3: Appointment		M4: Completed	
Category	Yes	Maybe		Yes		Yes		Yes	
Reference category	No	No		No		No		No	
Estimate	RR (SE)	RR (SE)		OR (SE)		OR (SE)		OR (SE)	
Remoteness (reference = Major Cities) (H1)									
Inner Regional	0.94 (0.10)	1.09 (0.16)		0.98 (0.08)		1.13 (0.17)		1.34 (0.41)	
Outer Regional	0.86 (0.14)	0.87 (0.20)		0.79 (0.10)		0.80 (0.20)		0.78 (0.35)	
(Very) Remote	0.82 (0.35)	0.47 (0.36)		0.82 (0.27)		0.58 (0.39)		0.35 (0.40)	
Age group (reference = 18–24 years) (H2)									
25–34 years	1.52 (0.34)	1.61 (0.61)		1.75** (0.30)		1.11 (0.46)		2.07 (1.66)	
35–44 years	1.46 (0.32)	2.10* (0.77)		1.54* (0.26)		1.16 (0.48)		1.14 (0.88)	
45–54 years	1.72* (0.39)	2.42* (0.89)		1.58** (0.27)		1.30 (0.54)		3.33 (2.70)	
55–64 years	2.14** (0.48)	1.95 (0.72)		2.06*** (0.35)		1.38 (0.57)		2.36 (1.86)	
65–74 years	2.12** (0.49)	2.24* (0.84)		2.17*** (0.38)		1.65 (0.69)		2.77 (2.18)	
75 or more years	1.79* (0.45)	2.67* (1.05)		2.37*** (0.45)		1.13 (0.50)		3.26 (2.78)	
Highest educational attainment (reference = less than Year 12) (H3)									
Year 12	1.22 (0.22)	0.67 (0.15)		1.27 (0.16)		0.74 (0.21)		1.45 (0.79)	
Advanced certificate	1.99*** (0.30)	0.92 (0.16)		1.71*** (0.19)		0.72 (0.18)		1.13 (0.49)	
Bachelor's degree	2.36*** (0.37)	0.69 (0.13)		1.86*** (0.21)		0.91 (0.23)		1.51 (0.69)	
Graduate degree	2.53*** (0.39)	0.61* (0.12)		2.41** (0.27)		0.90 (0.22)		1.58 (0.70)	
Unable to establish	1.65 (0.49)	0.51 (0.20)		1.26* (0.25)		0.95 (0.45)		0.92 (0.73)	
Gender (reference = male) (H4)									
Female	0.71*** (0.06)	0.99 (0.12)		0.80*** (0.05)		0.82 (0.10)		0.74 (0.18)	
Non-binary	0.89 (0.48)	1.27 (1.05)		1.01 (0.45)		0.27 (0.32)		–	

Table 1 (continued)

Variable	M1: General willingness			M2: Consent		M3: Appointment		M4: Completed	
Category	Yes	Maybe		Yes		Yes		Yes	
Reference category	No	No		No		No		No	
Estimate	RR (SE)	RR (SE)		OR (SE)		OR (SE)		OR (SE)	
Frequency of internet use (reference = less than once a day) (H5)									
About once a day	1.36 (0.38)	0.76 (0.23)		1.25 (0.25)		1.82 (0.79)		2.61 (1.91)	
Several times a day	1.96** (0.47)	0.89 (0.23)		1.64** (0.27)		2.24* (0.84)		4.12 (2.63)	
Almost constantly	2.46*** (0.61)	0.81 (0.22)		1.90*** (0.33)		2.35* (0.91)		8.15** (5.53)	
Amount of daily social media use (reference = Not at all) (H6)									
< 30 minutes	1.14 (0.13)	1.23 (0.19)		1.42*** (0.12)		1.03 (0.17)		1.04 (0.33)	
30 to 59 minutes	1.29* (0.16)	0.96 (0.18)		1.48*** (0.14)		0.72 (0.14)		0.98 (0.36)	
1 to < 2 hours	1.12 (0.15)	1.05 (0.20)		1.31** (0.13)		0.66* (0.14)		1.45 (0.65)	
2 to 4 hours	1.40* (0.20)	1.03 (0.22)		1.43** (0.16)		1.02 (0.22)		1.32 (0.57)	
Over 4 hours	0.97 (0.17)	1.02 (0.26)		1.40* (0.18)		1.01 (0.29)		0.40 (0.19)	
Completion rate × 100 (H7)	1.01** (0.00)	1.01** (0.01)		1.01** (0.00)		1.03*** (0.00)		1.03** (0.01)	
N	3,420			5,523		1,388		710	
X ²	270.27			233.87		127.10		69.23	
D.F.	76			38		33		37	
P	< .001			< .001		< .001		< .001	
Mcfadden's R ²	0.04			0.03		0.07		0.11	
Log-likelihood	-3,232.67			-3,641.71		-898.17		-278.22	

Notes: Relative risk ratios (RR), odds ratios (OR), and standard errors (SE); controls and intercept not shown. **p* < .05; ***p* < .01; ****p* < .001.

Higher participation from younger adults was expected (H2). For general willingness to participate (M1), contrary to expectations, older adults were more willing to participate in VI than younger adults (highest odds ratios for those aged 55 to 74 years). Moreover, older panel members, particularly those 75 years and older, are more likely to be undecided than unwilling to participate. Similarly, H2 was rejected for consent to participate in VI (M2), where older adults were also more likely to consent to a VI than younger adults. Among those who consented, however, older adults were not significantly more likely to make an appointment for (M3) or complete the VI (M4) than younger adults³.

Higher participation in VI for more highly educated adults was expected (H3). Results were consistent with H3 for general willingness (M1) and actual consent (M2) to participate. However, no differences were found for scheduling an appointment (M3) or completing the survey (M4).

Women were expected to be more likely to participate in VI than men (H4). Contrary to H4, women were generally less willing to try VI (M1) and to consent to it (M2) than men. There was no statistically significant gender difference, however, regarding appointment making (M3) or survey completion (M4).

More frequent internet users were expected to be more likely to participate in VI than those who used the internet less frequently (H5). Consistent with H5, frequent internet users were more likely to generally be willing to try VI (M1), consent to participate in VI (M2), schedule an appointment (M3), and complete the survey (M4) than less frequent internet users.

More frequent users of social media were expected to be more likely to participate than less frequent users (H6). In partial alignment with H6, panel members reporting 30 to 59 minutes per day of social media use and those reporting 2 to 4 hours are more likely to be generally willing to participate in video interviews than those who did not use social media (M1). Moreover, panel members who used social media were more likely to consent to VI than those who did not (M2). However, users with higher levels of social media use were not more likely to make an appointment (M3) or complete VI (M4).

Panel members with high prior wave completion rates were expected to be more likely to participate in VI than panel members with lower completion rates (H7). In line with H7, panel members with higher completion rates were more likely to be willing to participate in VI (M1), consent to VI (M2), make an appointment (M3), and complete the VI (M4) than panel members with lower prior survey wave completion rates.

Regarding our control variables, we find that panel members born overseas are less likely to be willing to agree and to consent to VI than panel members

³ A potential post hoc explanation for these findings is that older panel members may be drawn to VI due to a desire for interviewer assistance and a more conversational survey environment. However, they may lack confidence in their digital skills or equipment perceived as necessary to master the task.

born in Australia (see Appendix B). Moreover, panel members recruited in 2018 are more likely to be willing to try video interviews or be undecided about it than panel members recruited in 2016. We find no significant association with state of residence (except a lower likelihood of Queensland panel members to complete the video interviews) or Indigenous status.

The explanatory power of all results reported in this section is small with McFadden's McFadden's R2 statistics between 0.03 and 0.11.

Data Quality of Survey Responses: Satisficing and Social Desirability

This section reports the results for the data quality indicators on satisficing and social desirability in survey responses, comparing VI and online response modes.

Satisficing (H8)

We expected that satisficing would be lower for VI mode (H8). Our regression models reveal no support for H8 (see Table 4 for results and Table 2 for details on the satisficing variables). There were no significant differences between the modes regarding the number of selected health conditions and rounding numeric punches. In M7, the coefficient was significant, albeit only at the $p < .05$ level, but in the opposite direction to H8 (i.e., VI had fewer reported payments, from which we infer more satisficing).

Table 4 Regression model coefficients comparing satisficing indicators in the video and online self-completion group (key independent variable: survey mode, controlling for sample composition)

Dependent variable of interest (survey response variable)	Model	Coefficient for VI mode (reference: online mode): b (SE)	N
Number of selected health conditions	M5	0.07 (0.06)	1,176
Rounded punches	M6	0.13 (0.16)	1,168
Number of reported payments	M7	-0.27* (0.11)	1,176

Notes: Model type: Poisson (M5, M7) or logit (M6). Controls (not shown; all dummy variables except completion rate): year of recruitment to panel, completion rate in four prior waves, state, remoteness, gender, age group, place of birth (Australia, overseas), Indigenous status (Indigenous, not Indigenous), and frequency of internet use, frequency of social media use.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Social Desirability (H9)

We find evidence of higher socially desirable responding (SDR) for VI (see results in table 5) supporting our hypothesis H9. Table 5 shows the coefficient for mode of interview (VI, where online is the reference), controlling for sample composition. The results are consistent with the hypothesized (H9) higher SDR for VI in seven of nine variables tested (i.e., significant at the $p < .01$ level in the hypothesized direction of effect): higher support for multiculturalism, higher life satisfaction, better general health, higher generalized trust, higher exercise frequency, higher reported provision of unpaid care, and lower psychological distress after controlling for sample composition differences across the two groups (see Table 2 for details). The only results inconsistent with higher SDR for VI are for substance use: smoking and alcohol consumption were not significantly different between VI and online mode at the $p < .05$ level.

Table 5 Regression model coefficients comparing social desirability indicators in the VI and online self-completion sample (key independent variable: survey mode, controlling for sample composition)

Dependent variable of interest (hypothesized direction of SDR)	Coefficient of VI mode (reference: online mode): b (SE)	N
M8: Support for multiculturalism (+)	1.07*** (0.12)	1,174
M9: Square of life satisfaction (+)	5.25*** (1.30)	1,176
M10: General health (+)	0.39** (0.11)	1,176
M11: Psychological distress (-)	-0.89*** (0.23)	1,175
M12: Generalized trust (+)	0.39** (0.12)	1,176
M13: Smoking behavior (-)	-0.25 (0.26)	1,174
M14: Alcohol consumption frequency (-)	0.06 (0.11)	1,174
M15: Exercise frequency (+)	0.41*** (0.11)	1,176
M16: Provides unpaid care (+)	0.50** (0.17)	1,143

Notes: Model type: ordinal logit (M8, M12, M14, M15), OLS (M9, M11), Poisson (M10), binomial logit (M13, M16). Controls (not shown; all dummy variables except completion rate): year of recruitment to panel, completion rate in four prior waves, state, remoteness, gender, age group, place of birth (Australia, overseas), Indigenous status (Indigenous, not Indigenous), and frequency of internet use, frequency of social media use. * $p < .05$; ** $p < .01$; *** $p < .001$.

Summary and Conclusion

We assessed the feasibility of conducting live VI in Australia using the probability-based online panel Life in Australia™. We investigated the factors predicting uptake of VI and data quality of resulting survey responses. We found that VI attracted frequent internet users with a history of high panel survey completion rates. When compared to a subsample surveyed in the regular Life in Australia™ online self-completion mode, we found that VI seems to lead to more socially desirable responses while not helping to reduce satisficing behavior. Some of these results were expected while others were not (see Table 6 for an overview of which of our hypotheses were supported or had to be rejected).

Table 6 Summary of influencing factors on uptake of VI and the data quality of survey responses: our hypotheses and to what extent they are supported by the findings

Hypothesis	Supported?
Respondents used to online self-completion surveys will be more likely to take up video interviews if ...	
... they live in urban rather than remote areas (H1).	No
... they are younger (H2)	No
... they are more highly educated (H3)	Partially
... they are female (H4).	No
... they are more frequent internet users (H5).	Yes
... they use social media (H6).	Partially
... they have a history of high panel survey completion rates (H7).	Yes
The presence of the interviewer in the video interviews will reduce satisficing behavior (H8).	No
The presence of the interviewer in the video interviews will increase social desirability (H9).	Yes

There may be multiple explanations for our findings. For example, Life in Australia™ panel members are used to and seem to be comfortable with online self-completion (or telephone interviews without appointments) and may, therefore, not see any reason to switch to other modes. In addition, having to schedule an appointment rather than participating ‘spontaneously’ may not have appealed to the respondents. Our results thus indicate that in the context of an already established online panel, it may have very limited benefits to offer respondents VI as a new survey mode option as respondents already routinely participate in a more cost-efficient and flexible survey mode. Results may be different in studies on cross-sectional surveys or panel recruitment, warranting further research.

When interpreting these findings, it is important to consider that results may differ in research settings with longer and more complex questionnaires, dif-

ferent topics, or interviewers with prior experience in face-to-face interviewing (rather than telephone interviewing). Furthermore, one could speculate that the finding that older panel members expressed higher willingness and consent for video interviews than younger panel members but then did not participate in the video interviews at higher rates suggests that some people may want interviewer assistance but face digital skill or equipment barriers preventing them from seizing the opportunity. A crucial barrier may have been the necessity to make an appointment before they could complete the survey.

We expect our results to be generalizable to other panels with online self-completion as the only or dominant data collection mode, although more research from other panels is needed to confirm this. However, we expect limited generalizability to cross-sectional surveys, where respondents do not have a survey mode history. We do not expect our results to be generalizable to panel surveys where respondents have an interviewer-administered survey mode history, especially face-to-face surveys. It is possible that respondents from those surveys may perceive video interviews as a more flexible and convenient mode option compared to what they are used to. Moreover, fieldwork costs for the survey agency can be expected to be lower in VI than face-to-face interviewing. Furthermore, our analyses are limited by the fact that in the data quality analyses we compare panel members who consented to VI to panel members who mostly did not do so, either due to consent refusal, nonresponse, or ineligibility.

Since our study did not indicate much added value of offering VI in an established online panel, future research should focus on other survey design settings in which VI may have a greater impact, for example panel recruitment or cross-sectional surveys. Future research with fully randomized experimental design allocation may show to what extent our findings hold and are causally attributable to the VI mode. Future studies should also consider finding ways to avoid the necessity to make an appointment to the VI and instead offer on-demand VI. In addition, it may be useful to collect interview paradata through the interviewers, for example on the extent to which technical problems occurred during an interview and whether the respondents seemed comfortable with the interview situation as such aspects may influence the quality of the provided data. All in all, more research into various aspects of VI and its optimal implementation is necessary if this mode is to establish itself as part of the survey mode toolbox.

Funding

We gratefully acknowledge the funding of this study provided by the Australian Bureau of Statistics and The Social Research Centre (SRC).

References

- Al Baghal, T., & Lynn, P. (2015). Using Motivational Statements in Web-Instrument Design to Reduce Item-Missing Rates in a Mixed-Mode Context. *Public Opinion Quarterly*, 79(2), 568–579. <https://doi.org/10.1093/poq/nfv023>
- Australian Bureau of Statistics. (2012). *Information paper: Use of the Kessler Psychological Distress Scale in ABS health surveys, Australia, 2007-08* (cat. no. 4817.0.55.001). <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4817.0.55.001Chapter192007-08>
- Australian Bureau of Statistics. (2021a). *Remoteness Areas: Australian Statistical Geography Standard (ASGS) edition 3*. <https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/remoteness-structure/remoteness-areas>
- Australian Bureau of Statistics. (2021b). *Standard for sex, gender, variations of sex characteristics and sexual orientation variables*. <https://www.abs.gov.au/statistics/standards/standard-sex-gender-variations-sex-characteristics-and-sexual-orientation-variables/latest-release>
- Australian Communications and Media Authority. (2023). *How we communicate* (Communications and media in Australia). <https://www.acma.gov.au/publications/2023-12/report/communications-and-media-australia-how-we-communicate>
- Australian Communications and Media Authority. (2024). *How we use the internet. Executive summary and key findings* (Communications and media in Australia). <https://www.acma.gov.au/sites/default/files/2024-12/How%20we%20use%20the%20internet%20-%20Executive%20summary%20and%20key%20findings.pdf>
- Australian Government Department of Education. (2019). *International Standard Classification of Education 2011 (ISCED 2011) to Australian Standard Classification of Education (ASCED) Concordance*. <https://www.tcsisupport.gov.au/sites/default/files/2019-12/isced-asced-concordance.pdf>
- Bach, R. L., Cornesse, C., & Daikeler, J. (2024). Equipping the Offline Population with Internet Access in an Online Panel: Does It Make a Difference? *Journal of Survey Statistics and Methodology*, 12(1), 80–93. <https://doi.org/10.1093/jssam/smad003>
- Bianchi, A., Biffignandi, S., & Lynn, P. (2017). Web-Face-to-Face Mixed-Mode Design in a Longitudinal Survey: Effects on Participation Rates, Sample Composition, and Costs. *Journal of Official Statistics*, 33(2), 385–408. <https://doi.org/10.1515/jos-2017-0019>
- Burton, J., Lynn, P., & Benzeval, M. (2020). How Understanding Society: The UK Household Longitudinal Study adapted to the COVID-19 pandemic. *Survey Research Methods*, 14(2), 235–239. <https://doi.org/10.18148/srm/2020.v14i2.7746>
- Callegaro, M., & DiSogra, C. (2008). Computing response metrics for online panels. *Public Opinion Quarterly*, 72(5), 1008–1032. <https://doi.org/10.1093/poq/nfn065>
- Cernat, A., & Revilla, M. (2021). Moving from Face-to-Face to a Web Panel: Impacts on Measurement Quality. *Journal of Survey Statistics and Methodology*, 9(4), 745–763. <https://doi.org/10.1093/jssam/smaa007>
- Conrad, F. G., Schober, M. F., Hupp, A. L., West, B. T., Larsen, K. M., Ong, A. R., & Wang, T. (2023). Video in Survey Interviews: Effects on Data Quality and Respondent Experience. *Methods, Data, Analyses*, 17(2), 135–170. <https://doi.org/10.12758/mda.2022.13>
- Cornesse, C., Blom, A. G., Dutwin, D., Krosnick, J. A., de Leeuw, E. D., Legleye, S., Pasek, J., Pennay, D., Phillips, B., Sakshaug, J. W., Struminskaya, B., & Wenz, A. (2020). A review of conceptual approaches and empirical evidence on probability and non-probability sample survey research. *Journal of Survey Statistics and Methodology*, 8(1), 4–36. <https://doi.org/10.1093/jssam/smz041>

- Cornesse, C., & Schaurer, I. (2021). The Long-Term Impact of Different Offline Population Inclusion Strategies in Probability-Based Online Panels: Evidence From the German Internet Panel and the GESIS Panel. *Social Science Computer Review*, 39(4), 687–704. <https://doi.org/10.1177/0894439320984131>
- Daikeler, J., Bošnjak, M., & Lozar Manfreda, K. (2020). Web Versus Other Survey Modes: An Updated and Extended Meta-Analysis Comparing Response Rates. *Journal of Survey Statistics and Methodology*, 8(3), 513–539. <https://doi.org/10.1093/jssam/smz008>
- de Leeuw, E., Hox, J., & Luiten, A. (2018). International Nonresponse Trends across Countries and Years: An analysis of 36 years of Labour Force Survey data. *Survey Methods: Insights from the Field*, 1–11. <https://doi.org/10.13094/SMIF-2018-00008>
- Destatis (2024). *Informations- und Kommunikationstechnologien privater Haushalte (Mikrozensus-Unterstichprobe) – Endergebnis 2024* https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Einkommen-Konsum-Lebensbedingungen/IT-Nutzung/Publikationen/Downloads-IT-Nutzung/statistischer-bericht-ikt-privater-haushalte-2150400247005.xlsx?__blob=publicationFile&v=5.
- Dulaney, R., Kelley, J., Arrue, J., & Edwards, B. (2023, July 17-21). *Who is Choosing Video Interviewing? A Look into Respondent Characteristics of Video Adopters* [Conference presentation]. European Survey Research Association Conference 2023, Milan, Italy.
- Dutwin, D., & Lavrakas, P. (2016). Trends in telephone outcomes, 2008-2015. *Survey Practice*, 9(3). <https://doi.org/10.29115/SP-2016-0017>
- Endres, K., Hillygus, D. S., DeBell, M., & Iyengar, S. (2023). A randomized experiment evaluating survey mode effects for video interviewing. *Political Science Research and Methods*, 11(1), 144–159. <https://doi.org/10.1017/psrm.2022.30>
- Engward, H., Goldspink, S., Iancu, M., Kersey, T., & Wood, A. (2022). Togetherness in Separation: Practical Considerations for Doing Remote Qualitative Interviews Ethically. *International Journal of Qualitative Methods*, 21, 16094069211073212. <https://doi.org/10.1177/16094069211073212>
- Eurostat. (2022, August 22). *Increase in high-speed internet coverage in 2021*. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220822-1>
- Fuchs, M. (2009). Gender-of-Interviewer Effects in a Video-Enhanced Web Survey: Results from a Randomized Field Experiment. *Social Psychology*, 40(1), 37–42. <https://doi.org/10.1027/1864-9335.40.1.37>
- Haan, M. (2015). *Mode matters: Effects of survey modes on participation and answering behavior* [Doctoral dissertation]. University of Groningen. <https://research.rug.nl/en/publications/mode-matters-effects-of-survey-modes-on-participation-and-answeri/>
- Haan, M., Ongena, Y. P., Vannieuwenhuyze, J. T. A., & de Gloppe, K. (2017). Response Behavior in a Video-Web Survey: A Mode Comparison Study. *Journal of Survey Statistics and Methodology*, 5(1), 48–69. <https://doi.org/10.1093/jssam/smw023>
- Hanson, T. (2021, May 11). *The European Social Survey during COVID-19: using video interviews and other innovations* [conference paper]. American Association for Public Opinion Research Annual Conference, online.
- Heerwegh, D., & Loosveldt, G. (2008). Face-to-Face versus Web Surveying in a High-Internet-Coverage Population: Differences in Response Quality. *Public Opinion Quarterly*, 72(5), 836–846. <https://doi.org/10.1093/poq/nfn045>
- Helsper, E. (2021). *The Digital Disconnect: The Social Causes and Consequences of Digital Inequalities*. SAGE Publications. <https://doi.org/10.4135/9781526492982>
- Höhne, J. K., Ziller, C., & Lenzner, T. (2024). Investigating respondents' willingness to participate in video-based web surveys. *International Journal of Market Research*, 66(1), 3–13. <https://doi.org/10.1177/14707853231198788>

- Jäckle, A., Cornesse, C., Wenz, A., & Couper, M. P. (2024). Measuring Expenditure with a Mobile App: Do Probability-Based and Nonprobability Panels Differ? *Journal of Survey Statistics and Methodology*, 12(5), 1224–1253. <https://doi.org/10.1093/jssam/smae026>
- Jeannis, M., Terry, T., Heman-Ackah, R., & Price, M. (2013). Video Interviewing: An exploration of the feasibility as a mode of survey application. *Survey Practice*, 6(1). <https://doi.org/10.29115/SP-2013-0001>
- Kaczmirek, L., Phillips, B., Pennay, D., Lavrakas, P. J., & Neiger, D. (2019). *Building a probability-based online panel: Life in Australia™* (CSRM and SRC Methods Paper No. 2/2019). Social Research Centre of the Australian National University. <https://polis.cass.anu.edu.au/research/publications/building-probability-based-online-panel-life-australia>
- Kessler, R. C., Green, J. G., Gruber, M. J., Sampson, N. A., Bromet, E., Cuitan, M., Furukawa, T. A., Gureje, O., Hinkov, H., Hu, C.-Y., Lara, C., Lee, S., Mneimneh, Z., Myer, L., Oakley-Browne, M., Posada-Villa, J., Sagar, R., Viana, M. C., & Zaslavsky, A.M. (2010). Screening for serious mental illness in the general population with the K6 screening scale: Results from the WHO World Mental Health (WMH) survey initiative. *International Journal of Methods in Psychiatric Research*, 19(S1), 4–22. <https://doi.org/10.1002/mpr.310>
- Kocar, S., Brown, M., Sanchez, C., Ploubidis, G. B., & Durrant, G (2025) Measurement Mode Effects in Live Video Interviewing: Evidence from a Mixed-Mode Quasi-Experimental Survey. Survey Futures Working Paper no. 11. Colchester, UK: University of Essex. Available at <https://surveyfutures.net/working-papers/>
- Kreuter, F., Presser, S., & Tourangeau, R. (2008). Social Desirability Bias in CATI, IVR, and Web Surveys: The Effects of Mode and Question Sensitivity. *Public Opinion Quarterly*, 72(5), 847–865. <https://doi.org/10.1093/poq/nfn063>
- Lavrakas, P. J., Pennay, D., Neiger, D., & Phillips, B. (2022). Comparing probability-based surveys and nonprobability online panel surveys in Australia: a total survey error perspective. *Survey Research Methods*, 16(2), 241–266. <http://dx.doi.org/10.18148/srm/2022.v16i2.7907>
- Martin, L., & Fradier, Y. (2023, July 17-21). *ESS + CAVIsio* [Conference presentation]. European Survey Research Association Conference 2023, Milan, Italy.
- Maslovskaya, O., & Lugtig, P. (2022). Representativeness in Six Waves of Cross-National Online Survey (CRONOS) Panel. *Journal of the Royal Statistical Society Series A: Statistics in Society*, 185(3), 851–871. <https://doi.org/10.1111/rssa.12801>
- McClain, C., Vogels, E. A., Perrin, A., Sechopoulos, S., & Rainie, L. (2021). *The Internet and Technology During the COVID-19 Pandemic: April 2021 Survey*. Pew Research Center. <https://policycommons.net/artifacts/1811100/the-internet-and-the-pandemic/2547007/>
- Oates, M., Crichton, K., Cranor, L., Budwig, S., Weston, E. J. L., Bernagozzi, B. M., & Pagaduan, J. (2022). Audio, video, chat, email, or survey: How much does online interview mode matter? *PLOS ONE*, 17(2), e0263876. <https://doi.org/10.1371/journal.pone.0263876>
- Pennay, D. W., Neiger, D., Lavrakas, P. J., & Borg, K. (2018). *The Online Panels Benchmarking Study: a total survey error comparison of findings from probability-based surveys and non-probability online panel surveys in Australia* (CSRM and SRC Methods Paper No. 2/2018). Social Research Centre of the Australian National University. <https://polis.cass.anu.edu.au/research/publications/online-panels-benchmarking-study-total-survey-error-comparison-findings>

- Pennay, D. Phillips, B., Neiger, D., Ward, A., Slamowicz, S., & Lethborg, A. (2023). *Results from the 2022 Australian Comparative Study of Survey Methods*. Social Research Centre of the Australian National University. <https://srcentre.com.au/wp-content/uploads/2023/12/ACSSM-Analytical-Report-20231005.pdf>
- Pew Research Center. (2019). *Response rates in telephone surveys have resumed their decline*. <https://www.pewresearch.org/fact-tank/2019/02/27/response-rates-in-telephone-surveys-have-resumed-their-decline/>
- Peytchev, A. (2009). Survey Breakoff. *Public Opinion Quarterly*, 73(1), 74–97. <https://doi.org/10.1093/poq/nfp014>
- Phillips, B., Neiger, D., Ward, A., Slamowicz, S., & Lethborg, A. (2023). *Australian Comparative Study of Survey Methods: Technical Report*. Social Research Centre of the Australian National University. <https://srcentre.com.au/wp-content/uploads/2024/01/ACSSM-Technical-Report-with-Appendices.pdf>
- Revilla, M., & Ochoa, C. (2015). What are the Links in a Web Survey Among Response Time, Quality, and Auto-Evaluation of the Efforts Done? *Social Science Computer Review*, 33(1), 97–114. <https://doi.org/10.1177/0894439314531214>
- Schober, M. F. (2018). The future of face-to-face interviewing. *Quality Assurance in Education*, 26(2), 290–302. <https://doi.org/10.1108/QAE-06-2017-0033>
- Schober, M. F., Conrad, F. G., Hupp, A. L., Larsen, K. M., Ong, A. R., & West, B. T. (2020). Design considerations for live video survey interviews. *Survey Practice*, 13(1). <https://doi.org/10.29115/SP-2020-0014>
- Schober, M. F., Okon, S., Conrad, F. G., Hupp, A. L., Ong, A. R., & Larsen, K. M. (2023). Predictors of Willingness to Participate in Survey Interviews Conducted by Live Video. *Technology, Mind, and Behavior*, 4(2), 215–229. <https://doi.org/10.1037/tmb0000100>
- Smith, T. W. (1995). Trends in non-response rates. *International Journal of Public Opinion Research*, 7(2), 157–171. <https://doi.org/10.1093/ijpor/7.2.157>
- Smyth, J. D., Olson, K., & Millar, M. M. (2014). Identifying predictors of survey mode preference. *Social Science Research*, 48, 135–144. <https://doi.org/10.1016/j.ssresearch.2014.06.002>
- Thomas, J., McCosker, A., Parkinson, S., Hegarty, K., Featherstone, D., Kennedy, J., Holcombe-James, I., Ormond-Parker, L., & Ganley, L. (2023). *Measuring Australia's digital divide: The Australian digital inclusion index 2023*. ARC Centre of Excellence for Automated Decision-Making and Society, RMIT University, Swinburne University of Technology, & Telstra. <https://doi.org/10.25916/528S-NY91>
- Thorolfsson, A., Hjaltason, A. B., Jonsdottir, G. A., & Gudmundsson, H. (2023, July 17-21). *Mode effects of video interviewing as a proxy of face to face interviewing in R10 of ESS in Iceland* [Conference presentation]. European Survey Research Association Conference 2023, Milan, Italy.
- Weller, S. (2017). Using internet video calls in qualitative (longitudinal) interviews: Some implications for rapport. *International Journal of Social Research Methodology*, 20(6), 613–625. <https://doi.org/10.1080/13645579.2016.1269505>
- West, B. T., & Blom, A. G. (2017). Explaining Interviewer Effects: A Research Synthesis. *Journal of Survey Statistics and Methodology*, 5(2), 175–211. <https://doi.org/10.1093/jssam/smw024>
- West, B. T., Ong, A. R., Conrad, F. G., Schober, M. F., Larsen, K. M., & Hupp, A. L. (2022). Interviewer Effects in Live Video and Prerecorded Video Interviewing. *Journal of Survey Statistics and Methodology*, 10(2), 317–336. <https://doi.org/10.1093/jssam/sma040>

- Williams, D., & Brick, J. M. (2018). Trends in US face-to-face household survey nonresponse and level of effort. *Journal of Survey Statistics and Methodology*, 6(2), 186–211. <https://doi.org/10.1093/jssam/smx019>
- Zhang, C., & Conrad, F. (2014). Speeding in Web Surveys: The tendency to answer very fast and its association with straightlining. *Survey Research Methods*, 8(2), 127–135. <https://doi.org/10.18148/srm/2014.v8i2.5453>

Appendix A. Models and Variables

Table A1 Independent variables of interest with rationale for inclusion and control variables

Hypothesis	Variable	Description	Categories / range
H1	Remoteness	Remoteness Index of Australia plus area of residence (Australian Bureau of Statistics, 2021b), Remote and Very Remote Australia were collapsed due to small cell sizes	Major Cities of Australia, Inner Regional Australia, Outer Regional Australia, Remote or Very Remote Australia
H2	Age group	Respondent age in ranges. Older adults are generally overrepresented in Life in Australia™	18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+
H3	Highest educational attainment	Educational attainment (Australian Government Department of Education, 2019), cells were collapsed due to small sample size. Highly educated adults are generally overrepresented in Life in Australia™	Less than Year 12, Year 12, Certificate III/IV or Diploma or Advanced Diploma, Bachelor's Degree, Graduate Certificate or Graduate Diploma or Postgraduate Degree
H4	Gender	Respondent gender (Australian Bureau of Statistics, 2021a), non-binary and self-described were collapsed due to small cell sizes. Women are overrepresented in Life in Australia™	man or male, woman or female, non-binary/self-described
H5	Frequency of internet use	Self-reported frequency of using the internet	Less than once a day, about once a day, several times a day, almost constantly
H6	Amount of daily social media use	Self-reported frequency of social media use	Not at all, less than 30 mins, 30 to 59 mins, 1 to less than 2 hours, 2 to 4 hours, over 4 hours
H7	Completion rate	Proportion of waves completed between August and November 2022 out of waves invited to, multiplied by 100	0 (i.e., no completed waves) to 100 (i.e. all waves completed)
H8 and H9	survey mode	operationalizes the experimental and control group to examine mode differences in responses	Online self-completion, video interview

Table A1 (continued)

Hypothesis	Variable	Description	Categories / range
Controls	Recruitment year	Year of recruitment into panel, control for differential attrition due to time in panel and method of recruitment	2016 to 2021
	State of residence	State/territory of residence, control for small degree of over- and under-representation on Life in Australia™ by state	NSW, VIC, QLD, SA, WA, TAS, NT, ACT
	Born overseas	Australian analogue of race/ethnicity together with indigenous status	born in Australia, born overseas
	Indigenous status	Australian analogue of race/ethnicity, in combination with nativity	Not Indigenous, Aboriginal or Torres Strait Islander

Appendix B. Full Sample Composition Analyses Including Sensitivity Analyses

Table B1 Regression outcomes in multivariate analyses across VI selection steps including control variables and results for additional robustness analysis models

Variable	M1: General willingness				M2: Consent		M3: Appointment		M4: Completed		Add. M1: Substituted		Add. M2: Invited		Add. M3: Respondents	
Category Reference	Yes	Maybe	Yes	No	Yes	No	Yes	No	Yes	No	Substitute	Substituted	Video	Online	Video	Online
	<i>RR (SE)</i>	<i>RR (SE)</i>	<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>	
Remoteness (reference = Major Cities)																
Inner Regional	0.94 (0.10)	1.09 (0.16)	0.98 (0.08)		1.13 (0.17)		1.34 (0.41)		1.30 (0.42)		0.99 (0.13)		1.05 (0.17)			
Outer Regional	0.86 (0.14)	0.87 (0.20)	0.79 (0.10)		0.80 (0.20)		0.78 (0.35)		2.03 (0.94)		0.71 (0.14)		0.65 (0.18)			
(Very) Remote	0.824 (0.35)	0.47 (0.36)	0.82 (0.27)		0.58 (0.39)		0.35 (0.40)		0.55 (0.74)		0.70 (0.39)		0.99 (0.94)			
Age group (reference = 18–24 years)																
25–34 years	1.52 (0.34)	1.61 (0.61)	1.75** (0.30)		1.11 (0.46)		2.07 (1.66)		0.62 (0.59)		1.55 (0.46)		1.69 (0.77)			
35–44 years	1.46 (0.32)	2.10* (0.77)	1.54* (0.26)		1.16 (0.48)		1.14 (0.88)		0.67 (0.65)		1.38 (0.45)		1.53 (0.62)			
45–54 years	1.72* (0.39)	2.42* (0.89)	1.58** (0.27)		1.30 (0.54)		3.33 (2.70)		1.05 (1.01)		1.36 (0.40)		1.50 (0.67)			
55–64 years	2.14** (0.48)	1.95 (0.72)	2.06*** (0.35)		1.38 (0.57)		2.36 (1.86)		0.52 (0.51)		1.69 (0.50)		1.92 (0.86)			
65–74 years	2.12** (0.49)	2.24* (0.84)	2.17*** (0.38)		1.65 (0.69)		2.77 (2.18)		0.73 (0.72)		1.66 (0.50)		1.99 (0.90)			
75 or more	1.79* (0.45)	2.67* (1.05)	2.37*** (0.45)		1.13 (0.50)		3.26 (2.78)		0.56 (0.58)		1.98* (0.65)		2.15 (1.04)			
Highest educational attainment (reference = less than Year 12)																
Year 12	1.22 (0.22)	0.67 (0.15)	1.27 (0.16)		0.74 (0.21)		1.45 (0.79)		0.51 (0.29)		1.53 (0.35)		1.61 (0.48)			
Advanced certificate	1.99*** (0.30)	0.92 (0.16)	1.71*** (0.19)		0.72 (0.18)		1.13 (0.49)		0.58 (0.27)		1.60* (0.30)		1.49 (0.37)			
Bachelor's degree	2.36*** (0.37)	0.69 (0.13)	1.86*** (0.21)		0.91 (0.23)		1.51 (0.69)		0.66 (0.30)		1.66*** (0.46)		1.84* (0.32)			

Table B1 (continued)

Variable		M1: General willingness		M2: Consent		M3: Appointment		M4: Completed		Add. M1: Substituted		Add. M2: Invited		Add. M3: Respondents	
Category Reference	Estimate	RR (SE)		OR (SE)		OR (SE)		OR (SE)		OR (SE)		OR (SE)		OR (SE)	
		Yes	No	Yes	No	Yes	No	Yes	No	Substitute Substituted		Video Online		Video Online	
Graduate degree		2.53*** (0.39)	0.61* (0.12)	2.41** (0.27)		0.90 (0.22)		1.58 (0.70)		0.59 (0.28)		2.03*** (0.56)		2.28** (0.39)	
Unknown		1.65 (0.46)	0.51 (0.20)	1.26* (0.25)		0.95 (0.45)		0.92 (0.73)		0.96 (0.86)		0.97 (0.33)		1.04 (0.48)	
Gender (reference = male)															
Female		0.71*** (0.06)	0.99 (0.12)	0.79*** (0.05)		0.82 (0.10)		0.74 (0.18)		1.07 (0.27)		0.95 (0.10)		0.77* (0.10)	
Non-binary		0.89 (0.48)	1.27 (1.05)	1.01 (0.45)		0.27 (0.32)		-		-		1.60 (1.37)		0.49 (0.70)	
Frequency of internet use per day (reference = less than once a day)															
About once		1.36 (0.38)	0.76 (0.23)	1.25 (0.25)		1.82 (0.79)		2.61 (1.91)		1.89 (1.43)		2.34** (0.71)		5.02** (2.49)	
Several times a day		1.96** (0.47)	0.89 (0.23)	1.64** (0.27)		2.24* (0.84)		4.12 (2.63)		0.89 (0.56)		2.42*** (0.59)		5.66*** (2.45)	
Almost always		2.46*** (0.61)	0.81 (0.22)	1.90*** (0.33)		2.35* (0.91)		8.15** (5.53)		0.74 (0.48)		2.58*** (0.67)		6.62*** (2.95)	
Amount of daily social media use (reference = Not at all)															
< 30 minutes		1.14 (0.13)	1.23 (0.19)	1.42*** (0.12)		1.03 (0.17)		1.04 (0.33)		1.22 (0.43)		1.33* (0.19)		1.35 (0.24)	
30 to 59 minutes		1.29* (0.16)	0.96 (0.18)	1.48*** (0.14)		0.72 (0.14)		0.98 (0.36)		1.25 (0.52)		1.23 (0.20)		1.05 (0.21)	
1 to less than 2 hours		1.12 (0.15)	1.05 (0.20)	1.31** (0.14)		0.66* (0.20)		1.45 (0.65)		1.35 (0.54)		1.06 (0.18)		0.90 (0.20)	
2 to 4 hours		1.40* (0.20)	1.03 (0.22)	1.43** (0.16)		1.02 (0.22)		1.32 (0.57)		1.66 (0.74)		1.25 (0.23)		1.28 (0.31)	
Over 4 hours		0.97 (0.17)	1.02 (0.26)	1.40* (0.18)		1.01 (0.29)		0.40 (0.19)		1.34 (0.74)		1.05 (0.24)		0.84 (0.26)	

Table B1 (continued)

Variable	M1: General willingness				M2: Consent		M3: Appointment		M4: Completed		Add. M1: Substituted		Add. M2: Invited		Add. M3: Respondents	
Category Reference	Yes	Maybe	Yes	No	Yes	No	Yes	No	Yes	No	Substitute	Substituted	Video	Online	Video	Online
	<i>RR (SE)</i>	<i>RR (SE)</i>	<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>		<i>OR (SE)</i>	
Completion rate																
× 100	1.01** (0.00)	1.01** (0.01)	1.01** (0.01)		1.03*** (0.00)		1.03** (0.01)		1.02*** (0.00)		0.97*** (0.01)		1.02*** (0.00)		1.03*** (0.01)	
Recruitment year (reference = 2016)																
2018	1.83* (0.47)	2.14* (0.77)	1.18 (0.25)		0.53 (0.23)		-		0.12 (0.16)		1.54 (0.62)		1.07 (0.53)		1.07 (0.53)	
2019	0.85 (0.09)	1.07 (0.16)	0.96 (0.08)		0.85 (0.15)		-		0.64 (0.23)		0.97 (0.14)		0.88 (0.17)		0.88 (0.17)	
2020	1.24 (0.24)	0.90 (0.28)	0.10 (0.12)		0.89 (0.22)		-		1.20 (0.60)		0.93 (0.19)		0.82 (0.22)		0.82 (0.22)	
2021	0.94 (0.09)	1.04 (0.16)	1.08 (0.08)		0.77 (0.11)		-		0.73 (0.21)		1.10 (0.13)		1.03 (0.16)		1.03 (0.16)	
State (reference = New South Wales)																
Victoria	0.89 (0.09)	0.96 (0.14)	0.89 (0.07)		1.34 (0.20)		0.84 (0.26)		1.08 (0.34)		0.97 (0.12)		1.10 (0.18)		1.10 (0.18)	
Queensland	0.96 (0.11)	1.25 (0.20)	0.86 (0.07)		1.05 (0.17)		0.35** (0.11)		1.03 (0.36)		1.00 (0.14)		0.88 (0.17)		0.88 (0.17)	
South Australia	1.09 (0.16)	1.37 (0.28)	1.10 (0.12)		1.04 (0.24)		0.61 (0.27)		1.07 (0.57)		1.10 (0.22)		1.15 (0.28)		1.15 (0.28)	
Western Australia	0.85 (0.12)	1.02 (0.21)	1.06 (0.11)		1.19 (0.25)		0.62 (0.25)		1.09 (0.49)		1.05 (0.19)		1.04 (0.24)		1.04 (0.24)	
Tasmania	0.94 (0.25)	1.00 (0.39)	0.94 (0.19)		0.99 (0.41)		0.91 (0.80)		1.28 (0.91)		0.77 (0.26)		0.64 (0.28)		0.64 (0.28)	
Northern Territory	1.18 (0.55)	0.92 (0.75)	1.15 (0.43)		1.01 (0.66)		0.29 (0.32)		1.63 (2.58)		2.38 (1.60)		3.43 (3.76)		3.43 (3.76)	
Australian Capital	1.19 (0.29)	1.54 (0.55)	1.06 (0.20)		0.74 (0.26)		2.27 (2.45)		1.26 (0.82)		0.89 (0.27)		0.83 (0.33)		0.83 (0.33)	
Born overseas (reference = born in Australia)																
Born overseas	0.72*** (0.06)	1.06 (0.13)	0.76*** (0.05)		0.90 (0.12)		0.94 (0.24)		1.07 (0.30)		0.84 (0.09)		0.86 (0.12)		0.86 (0.12)	

Table B1 (continued)

Variable	M1: General willingness		M2: Consent	M3: Appointment	M4: Completed	Add. M1: Substituted	Add. M2: Invited	Add. M3: Respondents
Category	Yes	Maybe	Yes	Yes	Yes	Substitute	Video	Video
Reference	No	No	No	No	No	Substituted	Online	Online
Estimate	RR (SE)	RR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)
Indigenous status (reference = non-Indigenous)								
Indigenous	1.32 (0.43)	1.40 (0.64)	1.17 (0.28)	0.80 (0.36)	0.35 (0.26)	1.16 (1.29)	2.42 (1.20)	2.82 (2.00)
Intercept	0.08*** (0.04)	0.06*** (0.03)	0.09*** (0.03)	0.04*** (0.03)	0.05* (0.06)	20.50 (26.86)	0.04*** (0.02)	0.00*** (0.00)
N	3,420		5,523	1,388	710	342	2,179	1,154
χ²	270.27		233.87	127.11	69.23	60.78	139.10	139.10
D.F.	76		38	38	33	37	38	38
p	< .001		< .001	< .001	< .001	.008	< .001	< .001
McFadden R²	0.04		0.03	0.07	0.11	0.12	0.10	0.09
Log-likelihood	-3,232.67		-3,641.71	-898.17	-278.22	-224.24	-1,280.10	-745.45

Notes: Odds ratios (OR), relative risk ratios (RR), and standard errors (SE).
*p < .05; **p < .01; ***p < .001.