



SURVEY FUTURES

**SURVEY DATA COLLECTION
METHODS COLLABORATION**

Working Paper 2:

Live Video Interviewing as a Complementary Mode to In-Person Interviews: Evidence from the European Social Survey

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Abstract

Live video interviewing emerged as a method for collecting survey data during the COVID-19 pandemic, having rarely been used for survey data collection prior to this. There is now a need to assess experiences and outcomes from studies that utilised video interviewing, partly with a view to informing the future feasibility of the method in different contexts. This paper reports on the experience of the European Social Survey (ESS) with video interviewing, having used this approach as a complementary method to in-person interviewing at its 10th round (2020-2022). The ESS can provide a unique perspective, being the first cross-national survey to use video interviews. In total, 17 countries offered video interviewing alongside in-person interviewing at ESS Round 10. In this paper, we present a range of results based on ESS Round 10 in two main categories. We first look at the effectiveness of the implementation of video interviewing and then compare quality between video interviews and in-person interviews across various indicators, including interviewer effects. The results show that the prevalence of video interviews varied widely between countries, likely relating to national contextual factors. However, in countries where a large share of video interviews was carried out, we found that the interview experience was rated positively, and quality indicators were closely comparable with in-person interviews. These results suggest that future use of video interviewing may be more feasible in some countries than others, but in certain contexts it has the potential to offer an effective complementary option to in-person interviewing.

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1. Introduction

The COVID-19 pandemic prompted several surveys to use live video interviewing for quantitative survey data collection for the first time. This included the European Social Survey (ESS), which used live video interviews as a complementary method to in-person interviewing in several countries for its 10th Round, carried out between 2020 and 2022. This paper reports on the experiences and outcomes of live video interviews for ESS¹.

1.1 Video interviewing for surveys

While use of video interviewing for surveys was rare prior to the pandemic, it had long been foreseen as a potentially promising method. Anderson (2008) considered the potential of video-mediated surveys as a future approach and saw several benefits. These included the scope for greater rapport and engagement with respondents compared with telephone and web surveys, and the potential to appeal to certain population sub-groups that are sometimes underrepresented in surveys (for example, younger people). However, challenges were also foreseen. These included the risk that the presence of an interviewer, even remotely, may reduce candour in reporting sensitive behaviours, and challenges with some population groups accessing video platforms, including older people and those less technologically experienced. Anderson concluded that “research on [video’s] detailed impacts on real survey interviews is urgently needed. Pilot studies of this kind should be undertaken before any widespread adoption is planned” (2008, p. 115).

While video platforms have been used for qualitative research for some time (e.g. Irani, 2019), they were rarely used for quantitative survey data collection prior to the pandemic. This resulted in some studies adopting video interviewing as an approach at speed, and sometimes without the extensive piloting that Anderson (2008) recommended. While publications relating to video interviewing are still rare, there are now several examples of its use that provide early indicators of experiences and outcomes associated with the method.

There is some evidence of a good take-up rate of video interviews in some contexts, particularly for longitudinal studies (Dulaney et al., 2023; Sanchez et al., 2023). A study by Conrad et al. (2023) found live video respondents were less likely to give non-differentiated responses and reported higher satisfaction than web respondents, suggesting the presence of a (remote) interviewer can keep respondents motivated and conscientious. Carr et al. (2023) also reported positive feedback on the experience of video interviews from both respondents and interviewers, with technical issues with the video platform being quite rare. Some studies have observed sample composition differences between video and in-person modes, which may point to the potential for this mode to bring in underrepresented groups (e.g. Dulaney et al., 2023; Þórólfsson et al., 2023).

There are so far relatively few studies that compare measurement between in-person and video modes, but there are some encouraging early findings. Kelley et al. (2022) found no

¹ In the remainder of this paper, we generally use ‘video interviews’ when referring to ‘live video interviews’ for brevity. In a few places we refer to ‘live video interviews’ to differentiate from pre-recorded video interviews.

measurement effects from introducing video interviewing as a mode of data collection, while Zavala-Rojas et al. (2023) looked at two concepts measured in the European Social Survey and found generally consistent relationships between variables for video and in-person modes.

Regarding interviewer-respondent interactions, Sun et al. (2021) found no significant difference in respondents' rapport ratings between video-mediated and in-person interviews, suggesting that rapport is just as well established through remote video interviewing. A study by Kelley et al. (2023) found that video interviewing was akin to in-person interviewing, with video interviewers being adept at maintaining the meaning of questions. West et al. (2022) found little evidence of significant interviewer effects for either live or pre-recorded video interviews. They recommended that future studies should compare interviewer effects between video interviews and in-person interviews.

Endres et al. (2023) randomised respondents to either interviewer-administered video or interviewer-administered in-person modes after completing a self-administered online survey wave. They found that video interviewing is more comparable to in-person interviewing than online interviewing across multiple measures of satisficing, social desirability and respondent satisfaction. This is of particular relevance to this paper, since ESS used video interviewing as a complementary mode to in-person interviewing, and combined interviews from each approach in its published data set.

While the above examples provide reassurance and support for use of video interviewing, other studies raise some concerns and limitations. Despite different sample compositions between video and in-person interviewing, video may not lead to a better response rate or improved sample composition compared with a solely in-person approach (Þórólfsson et al., 2023). Take-up of video interviews, when offered alongside other modes, can sometimes be low (Sanchez et al., 2023). Some groups of respondents or households may be less open to video interviewing, while technical aspects of administering video interviews can be more challenging for interviewers (Centeno et al., 2023). A study by Carr et al. (2023) found examples of differential reporting between video and other modes. And Conrad et al. (2023) found higher levels of rounding for numerical questions and more socially desirable answers for live video respondents compared with web respondents.

It's clear from the studies completed to date that evidence is mixed, and that there are different ways that the success, or otherwise, of video interviewing can be assessed. We aim to make an important contribution to this evidence in this paper.

2. Contributing to the existing evidence

This paper aims to investigate the potential use of video interviewing as a complementary mode to in-person interviewing by analysing data from the 10th Round of the European Social Survey.

The ESS is conducted as a cross-sectional biennial survey across over 30 countries. Until Round 10, all countries were required to collect fully in-person samples based on a central specification. As with other surveys that rely on in-person data collection, the COVID-19 pandemic posed several challenges to the ESS's usual approach. This resulted in some modifications being made to the specification for ESS Round 10 (carried out in 2020-2022, Hanson et al., 2022), including, for the first time in the ESS's history, allowing video interviewing as a complementary mode to in-person interviewing.

There are good reasons why the combination of video and in-person interviewing may present a suitable complementary approach. The sampling design, contact and cooperation processes can remain unchanged. Both modes require interviewers to read out questions and record responses as given by the respondent. The in-person ESS interviews use showcards that display response lists to respondents throughout the interview, and these can be shared with the respondent through the video interview platform. But there are also differences; rather than sharing the same physical space, the interviewer and respondent engage in a remote online platform.

The relative cost-effectiveness of video interviewing compared with in-person interviewing makes it a potentially attractive option. If a large share of interviews that took part in-person can move to a remote video approach, this will save significantly on travel costs. Video interviewing may therefore offer significant potential for surveys that traditionally rely on in-person interviewing beyond the pandemic. To inform this, more evidence is needed on the experience of video interviewing, and its comparability with in-person interviewing. The ESS was one of the first studies to introduce video interviewing as a complementary approach to in-person interviewing in a full production survey, and so can provide important evidence on this point.

To our knowledge, the ESS is also the only cross-national study that has used video interviewing. The challenge of achieving equivalence is greatly magnified for cross-national surveys (Jowell et al., 2007). Adding a new data collection mode may present particular challenges and share new insight in this context. For example, there may be differences in the take-up of video interviewing between countries, which may be linked to contextual factors (e.g. sample frames, contact methods, levels of internet use). Experiences of video interviewing may differ due to variations in approaches used. It's also crucial to understand how video and in-person interviewing compare across quality indicators between countries. If, for example, there are differences in the comparability of modes between countries, and different rates of video interviews are achieved between countries, this may compromise the comparability of the cross-national data produced.

3. Expectations for video interviewing as a complementary approach to in-person interviewing

Determining the effectiveness and worth of introducing a complementary mode in a cross-national survey context requires reflection on several key aspects. A good complementary mode must meet certain minimum requirements to be considered beneficial for implementation. These considerations include understanding the characteristics that define a successful complementary mode and identifying the essential criteria it must fulfil to enhance the survey process effectively across different countries. We consider the two central criteria as an approach to our analysis: (I) the effectiveness of implementations, and (II) the quality and comparability of measurements.

For the implementation of complementary video interviews to be effective, it needs to (1) have a substantial use and/or enhance survey response. (2) provide a comparable interview experience to respondents. and, (3) address contextual limitations that would be a limiting factor for in-person interviews, such as geographical barriers or health concerns that prevent in-person contact.

For measurement quality to be comparable between video and in-person interviews, the two methods need to (1) provide similar interviewing conditions, (2) generate similar behaviours to answering the questionnaire by the target respondent, and (3) produce similar interviewer effects on answers. The expectation is that the platform of communication should not significantly influence respondents' answers or the integrity of the data collected.

4. Approach and research questions

The analyses presented in this paper is divided into two parts, both of which are crucial in understanding the effectiveness and suitability of video interviewing.

We first look at the **implementation and experience of video interviewing**. Here we share the prevalence of video interviews achieved in each country, present results from respondent and interviewer 'interview experience' questions, and share findings on technical issues reported. We also assess the flow of video interviews in relation to the spread of the COVID-19 pandemic.

We then look at the **quality and comparability of video and in-person interviews** across modes. Here we will make comparisons across three quality metrics: interview length, indicators of satisficing, and interviewer effects.

Cross-country comparability is a dimension that goes across both analytical focuses of the paper. This third dimension allows to provide a more relative perspective on the findings of video interview as complementary mode across multiple country-specific contexts and survey conditions.

Through this analysis, our paper seeks to answer the following research questions:

1. How effective is video interviewing in complementing in-person interviewing for large cross-national surveys like the ESS?
2. How did the quality of the interviewing process via video compare to the interviewing process via in-person communication in the ESS?
3. How does the assessment of video interviewing vary between countries in regard to implementation and interviewing process?

5. Data

We use data from the European Social Survey Round 10 (ESS ERIC, 2023), carried out between 2020 and 2022. This was the first ESS round in which video interviewing was offered as a complementary method to in-person interviewing. This reflected concerns that even after in-person interviewing was possible, some target respondents would be unable or unwilling to take part in an in-person interview due to the COVID-19 pandemic. This may be due to needing to shield themselves for health reasons, for concerns over being infected, or for other reasons.

Since the video interviewing approach was offered as an ‘emergency’ measure for Round 10, limited development work was carried out to test the method in the ESS context. A small level of user testing was carried out among ESS team members and in some countries to assess and refine the approach. The approach was informed by best practice guidance based on experience from other studies (e.g. Schober et al., 2020).

In total, 17 countries offered video interviewing. When describing the prevalence of video interviews, we include all 17 countries in our analysis. However, for the remaining analysis, we focus only the six countries that achieved the largest number of video interviews (Estonia, Finland, Iceland, Italy, Netherlands and Norway). In these countries, between 240 and 491 video interviews were conducted. In all other countries, the number of video interviews was below 100.

5.1 ESS’s approach to video interviewing

ESS’s data collection model is based on decentralised fieldwork contracting and data collection. National teams are appointed in each country, and they either organise fieldwork in-house (where they have an interviewer fieldforce) or contract this activity to a survey agency. For the Round 10 video interviewing approach, each national team was asked to describe their approach, in response to the centrally-produced guidelines, for review by the central coordination team. Their approach was then reviewed and, once agreed, approved prior to fieldwork.

The main process for contacting target respondents was unchanged from the usual fully in-person interviewing approach. In the majority of countries, interviewers attempted in-person contact, sometimes following delivery of an advance letter. A video interview could then be offered as an alternative to an in-person interview. A small number of countries had access to named person samples that included telephone numbers for sample members. In these cases, they could attempt first contact by telephone and offer a video interview at that point (meaning in these cases a video interview could be achieved without any in-person contact).

National teams were allowed to either a) establish a small specialist team of video interviewers, or b) allow all of their in-person interviewers to also carry out video interviews. There were pros and cons with each approach. Option a) allowed for more central control and management, but led to a more complex flow of steps between the in-person interviewer and the video interviewer. There may also be concerns with interviewer effects if a small number of interviewers were carrying out a large number of interviews. Option b) was a more seamless process as the same interviewer was responsible for both the face-to-face contact and the

video interview. However, there were challenges with training, equipping and monitoring a large interviewer fieldforce to take on the video interviewing task. In the event, most countries adopted option a): establishing a small specialist team of video interviewers.

National teams were advised to use Microsoft Teams or Zoom to carry out the video interviews. They were required to use a licensed version of the platforms. Respondents were not required to have a Teams/Zoom account in order to take part, or to download any software. In a small number of cases, countries used alternative platforms, subject to these platforms meeting GDPR requirements and tested with respondents in advance of fieldwork.

Interviewers were instructed to use two screens to carry out the video interviews. One screen included the CAPI questionnaire, which was not shared with the respondent. This allowed the interviewer to read the questions and enter responses. The other screen featured the video call, including the interviewer and respondent videos. This screen also included showcards, which are used throughout the ESS questionnaire and were screen-shared with the respondent. The interviewer moved on to the correct card as required throughout the interview.

Respondents could take part using any internet-enabled device, including smartphones. It was recommended that they used a larger screen device, if available, to allow for clearer display of the video questionnaire and showcards.

Other features and requirements regarding ESS's video interviewing are described in Appendix 1.

6. Methods

We conduct the analysis in two stages: (I) an assessment of the effectiveness of the implementation of the video interviews as complementary approach to in-person interviewing, and (II) an assessment of the comparability of interview quality between in-person and video modes.

We assess the **effectiveness** of video interviewing ESS (stage I) in three main steps.

- (1) Prevalence of video interviews: The first step to assessing the effectiveness of video interviews is to establish the level of demand for them (as opposed to in-person interviews) across ESS countries. If only a small number of video interviews are carried out, it may not be worthwhile to offer this approach in future as impact on the data and potential cost savings would be limited. We look at the proportion of video interviews carried out in each of the 17 countries that offered this approach. Through this, we assess the different contexts and factors present in each country, and consider how this may have impacted on the prevalence of video interviews achieved.
- (2) Experience of video interviews: It is important to gain feedback from both interviewers and respondents on the experience of taking part in a video interview, and assess how this compares to in-person interviews. If the experience of a video interview is judged to be worse than an in-person interview, this may point to underlying issues with the video approach in the context of ESS, or perhaps a need for future improvements in how it is provided. To measure this, we compare responses to an 'interview experience' question that was asked of both respondents and interviewers in video and in-person modes ("*How would you rate the overall experience of taking part in this survey? Please answer on a scale from 0 to 10 where 0 is very negative and 10 is very positive*"). The same question was included for both in-person and video interviews, to allow for a comparison of the experience between modes. Clearly, there may be interviewer and respondent level effects that influence the interview experience beyond the mode difference. However, by including these questions we intended to gain a broad impression of whether taking part in a video interview seemed to represent a worse (or improved) interviewing experience compared with in-person interviewing. For video interviews, both respondents and interviewers were asked to report any technical issues experienced during the interview. We also present these results.
- (3) Flow of interviews in relation to the spread of the COVID-19 pandemic: The option of video interviewing was offered at ESS Round 10 due to the pandemic. One way to judge its effectiveness is to see how the rate of video interviews carried out mapped against the spread of the pandemic in countries. If the video approach was acting as an effective alternative in this context, we would expect the rate of video interviews to be higher at points where the spread of the pandemic across countries was highest. This has been measured using World Health Organisation (WHO) data on virus deaths, which are compared with the flow of video interviews during the same period. COVID deaths have been chosen as the most reliable indicator of the spread of the virus because there can be large methodological differences in the recording of infection numbers.

Similarly, we will compare video and in-person interviews in different ways, with the objective of assessing the **quality and comparability** of the new video method in comparison to ESS's long-standing in-person interviewing approach.

- (1) Interview duration: Interview duration is one possible indicator that marks differences between different data collection modes. Differences in duration could emerge due to interviewer effects, technical problems, differences in respondent profiles, or for other reasons linked to the speed of administration for each mode. As a proxy for multiple factors that can affect the quality of the data, we assume that interview durations should be similar across platforms for the resulting data to be comparable. The length of the survey interview depends on the person's social status, number of family members and age. To compensate for the differences between interviewees, we use only data of persons with a relatively similar background to compare the length of the interviews: a person living with a partner who has at least a secondary or higher education and who younger than 60 years old. This allows for in-person sample sizes between 302 and 1,283 per country, and video interviewing sample sizes between 214 and 421 per country².
- (2) Satisficing behaviour: Satisficing response behaviour is typical in situations when the respondent is fatigued or unmotivated to answer truthfully. As part of our analysis, we looked at two metrics relating to satisficing behaviour: item non-response and straightlining. Respondents who are less engaged in the interview or less motivated are likely to have higher rates of item non-response and straightlining. Through assessing these measures, we can see if these indicators of satisficing differ between in-person and video interviews. For both item non-response and straightlining, we analysed the 21-item Schwartz Human Values Scale. This scale is located at the end of the ESS questionnaire and has been deliberately chosen, since we might expect satisficing behaviours to be more common in the latter part of a long (approx. 1 hour) interview.
- (3) Interviewer effects: We inspect how interviewers can affect responses in video interviews compared to in-person interviews. Interviewers can intentionally or unintentionally affect respondents' answers. Adherence to standardized protocols of interviewing aims to keep consistency and reliability in data collection across modes. However, the shift to a digital communication format inherently presents unique challenges and differences. It raises questions about how the dynamics of video communication, as opposed to in-person interaction, might affect the interviewer's influence on respondents' answers. To assess possible differences in interviewer effects, we estimate how much of the variance from all responses of each single item can be explained by the clustering within interviewers from in-person interviews versus video interviews. Interviewer effects on single items are estimated by taking the average of the intra-interviewer correlations (ICC) of numeric and ordinal items in the questionnaire. ICCs are estimated from linear models with an interviewer-level random effect for all numeric and ordinal items measured on a at least 4-point scale in the ESS Round 10 questionnaire. A total of 195 items from the ESS questionnaire were selected as suitable for the analysis. To control for similarities between

² This also applies to the measurement of satisficing behaviour (see below).

respondents arising from area effects rather than interviewer effects, the geographical region and self-reported degree of urbanization of respondents' domicile are included in the models³.

A high ICC indicates that responses from respondents interviewed by the same interviewer are more similar than otherwise would be expected and are suggestive of differences between interviewers in the way they interact with or affect respondents during the interview. Large difference between in-person and video interview in the ICCs would suggest that interviewer effects are different depending on the interview mode. ICCs are also expected to correlate with other indicators of interviewer behavior, like speed of interviews (Vandenplas et al., 2019). Due to the small sample size of video interviews and the low number of interviewers conducting video interviews across participating countries, estimates were suppressed for items administered in video interviews if they had fewer than 10 interviewers (cluster units) and ratio lowers than 4 interviews to interviewers (instead of the recommended ratio of 5)⁴. It should be noted that this reduced number of clusters might affect the accuracy of the estimates and these results should be read with the necessary caution.

³ Given the lack of random assignment, interviewer and area effects cannot be fully disentangled, and some (presumably small) portion of the intra-interviewer correlations may be attributable to area effects.

⁴ This is below the typically recommended number of above 30 clusters (Hox, 2010) but within the parameters considered by other authors as the minimum (Hadler, 2004).

7. Results I: Effectiveness of implementing video interviewing

7.1 Prevalence of video interviews

The number and proportion of video interviews achieved varied substantially between countries. Table 1 shows the prevalence of interviews across countries, alongside other information on national approaches to video interviewing and contextual details.

Table 1: Prevalence of interviews across countries and other contextual information

Country	Number of video interviews	Proportion of all interviews done by video	Use internet at least most days (ESS Round 10)	Who carried out video interviews?	Type of sample	Contact approach with target respondents
Iceland	333	37.0%	95.3%	All face-to-face interviewers	Individual	Telephone, in-person
Norway	491	34.8%	94.3%	Subset of face-to-face interviewers	Individual	Telephone, in-person
Italy	457	17.3%	69.9%	All face-to-face interviewers	Individual	In-person
Netherlands	248	16.9%	94.1%	Unknown	Individual	In-person
Estonia	240	15.6%	80.5%	Small specialist team	Individual	In-person
Finland	240	15.2%	87.0%	Small specialist team	Individual	Telephone, in-person
Croatia	95	6.0%	69.7%	Small specialist team	Individual	In-person
United Kingdom	55	4.8%	88.5%	Small specialist team	Address	In-person
Switzerland	50	3.3%	88.0%	Small specialist team	Individual	In-person
France	46	2.3%	79.3%	All face-to-face interviewers	Individual	In-person
Belgium	16	1.2%	84.1%	Small specialist team	Individual	In-person
Greece	23	0.8%	70.9%	Unknown	Address	In-person
Portugal	8	0.4%	66.7%	Subset of face-to-face interviewers	Address	In-person
Ireland	6	0.3%	85.5%	Unknown	Address	In-person
North Macedonia	4	0.3%	71.9%	Small specialist team	Address	In-person
Slovakia	0	0.0%	61.9%	Small specialist team	Address	In-person
Slovenia	0	0.0%	73.4%	Small specialist team	Individual	In-person

The countries can broadly be split into three groups based on their prevalence of video interviews. In the first group, two countries – Iceland and Norway – achieved more than a third of all their interviews by video. In the second group, four countries – Italy, Netherlands, Estonia and Finland – achieved around 1 in 6 of their interviews by video (between 15% and 17%). And finally, the remaining 11 countries achieved a much smaller share of video interviews. This last group ranges from Croatia, where 6% of interviews were done by video, to Slovakia and Slovenia, where no video interviews were carried out despite this option being offered.

A few features stand out among the countries more and less likely to have carried out a large share of video interviews.

First, the countries with the highest share of video interviews include those with the highest level of internet use (daily or most days): Iceland, Norway, and the Netherlands. In contrast, levels of internet use were markedly lower among most countries where video interviewing was less productive (Greece, Portugal, North Macedonia, Slovakia, Slovenia).

Second, all of the countries that carried out a relatively high share of video interviews used individual based samples. This meant they could contact the target respondent by name in advance of an interviewer visiting – in an advance letter and/or, in some cases, a telephone call. Other countries used address-based samples, which required the interviewer to visit the address and make a person selection to identify the target respondent. It might be hypothesised that by being able to identify and contact the target respondent earlier in the process, it is easier to establish the option of a video interview.

Third, and expanding on the last point, the two countries with the largest proportion of video interviews, Iceland and Norway, were able to make initial contact with sample members by telephone. It seems logical that the video interviewing option is more productive in such cases as it can be offered without needing to send an interviewer to make any in-person contact. Where an interviewer visit is required, there may be a greater tendency among both the interviewer and respondent to agree to an in-person interview, since the interviewer is already there.

We should also note that there are likely to be other factors behind different rates of video interviewing between countries. Italy, for example, has a relatively low level of internet use and did not have the option of making telephone contact, but had one of the highest shares of video interviews. It was evident in discussions with national teams that some were more positive about the video option and put in place resources to support it on a significant scale. Other national teams were more neutral (sometimes sceptical) about video interviewing and set it up on a much smaller scale, as a last-resort option. Such differences in expectations and operational planning may also partly explain some of the differences between countries.

7.2 Sample composition

Appendix 2 includes a comparison of sample compositions between the in-person and video interviewing approaches in the six countries where the highest number of video interviews

were achieved. We found that respondents of video interviews tend to be younger, from smaller households, were more likely to be currently in paid work than in-person respondents, and tended to have higher levels of education. There is no clear trend regarding difference in sex, legal partnership status, or immigration background.

7.3 Experience of interviews and technical issues

Table 2 shows the mean scores given by respondents and interviews to the experience question between in-person and video interviews.

Table 2: Experience of in-person and video interviews (0 – very negative ... 10 very positive).

Country	Respondent		Interviewer	
	In-person interviews	Video interviews	In-person interviews	Video interviews
Estonia	8.04 (1,301)	8.22 (240)	8.75* (1,302)	8.95* (240)
Finland	8.51*** (1,332)	8.05*** (240)	8.76 (1,335)	8.88 (240)
Iceland	8.54 (563)	8.36 (332)	8.55** (551)	8.82** (325)
Italy	7.75** (2,163)	7.97** (457)	7.84*** (2,136)	8.37*** (456)
Netherlands	8.37 (1,215)	8.40 (247)	8.44* (1,220)	8.26* (247)
Norway	8.51* (918)	8.34* (491)	9.11*** (914)	8.85*** (491)
All 6 countries	8.19 (7,492)	8.22 (2,007)	8.47*** (7,458)	8.68*** (1,999)

Two sample t-tests were performed to compare respondent and interviewer experience scores in the in-person interviewing and video-interviewing groups.

** $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$*

Respondent experience scores were broadly consistent between the two modes. Those interviewed in-person in Finland and Norway had a higher mean experience score compared with those interviewed by video, while the reverse was true in the Italy. In the other three countries, there was no significant difference between the scores. There was also no difference when the experience scores were combined across all six countries.

Based on interviewer-reported experience scores, there were significant differences between modes in five of the six countries. In three countries – Estonia, Iceland and Italy – the mean experience score was higher for video interviews. In two countries – Netherlands and Norway – it was higher for in-person interviews. Across all six countries, the mean interviewer experience score for video interviewing was significantly higher compared with in-person interviewing.

While there were some differences between modes, these may partly reflect the differences in respondents and interviewers included for each mode. What is evident from these results is that the interview experience scores are fairly high for both modes among respondents and

interviewers (averaging at more than 8 out of 10), and there is no consistent evidence that the experience of video interviews is worse compared with in-person interviewing.

Respondents and interviewers were also asked to report experiences of any technical issues with the video interviews. Tables 3 (respondents) and 4 (interviewer) show these results broken down by country.

Table 3: % of technical issues experienced (reported by respondents)

Technical issue	Estonia	Finland	Iceland	Italy	Netherlands	Norway	All 6 countries
Issues with starting video call	14.6%	7.5%	6.6%	2.2%	9.3%	5.3%	6.7%
Issues with internet connection affecting video call	12.1%	7.9%	5.4%	2.8%	8.1%	4.7%	6.1%
Issues with seeing/reading showcards on screen	2.9%	0.8%	0.6%	2.4%	1.2%	1.8%	1.7%
Audio not being clear	9.2%	13.3%	9.3%	1.5%	4.8%	9.6%	7.5%
Video display not being clear	1.3%	2.1%	0.9%	1.5%	2.4%	0.8%	1.4%
Other issues	1.3%	1.7%	5.1%	1.5%	5.6%	5.3%	3.5%
No technical issues	65.0%	70.0%	74.5%	89.7%	73.4%	75.6%	76.4%

Table 4: % of technical issues experienced (reported by interviewers)

Technical issue	Estonia	Finland	Iceland	Italy	Netherlands	Norway	All 6 countries
Issues with starting video call	10.8%	10.8%	6.9%	2.2%	8.1%	7.9%	7.2%
Issues with internet connection affecting video call	10.4%	6.7%	4.2%	2.8%	6.9%	4.5%	5.3%
Issues with displaying showcards on screen	2.9%	1.3%	0.9%	2.6%	2.0%	1.8%	1.9%
Audio not being clear	5.8%	7.9%	6.6%	1.5%	4.0%	9.0%	5.8%
Video display not being clear	1.3%	2.1%	2.1%	2.0%	2.8%	1.6%	1.9%
Other issues	5.0%	5.4%	4.8%	2.0%	5.6%	5.7%	4.6%
No technical issues	70.8%	72.9%	77.8%	89.1%	75.4%	74.7%	77.9%

In the majority of cases, both respondents and interviewers reported no technical issues with video interviews. Taking all countries together, the most commonly reported issues were problems starting the video call (reported by respondents in 6.7% of interviews, and interviewers in 7.2% of interviews), with internet connections (6.1%/5.3%), and with audio being unclear (7.5%/5.8%).

The results did vary somewhat between countries. The most notable differences were between Estonia and Italy; respondents reported at least one technical issue in 35% of interviews in Estonia compared with 10% of interviews in Italy.

It was noted earlier that respondents were advised, where possible, to use a larger screen device to optimise display of the showcards. However, even among those completed on smartphones (n=450), only 2.2% of respondents reported issues with seeing or reading the showcards (compared with 1.5% using a desktop or laptop PC and 1.9% using a tablet).

The above findings show that technical issues only occurred in a minority of cases, which may be seen as a positive outcome for video interviewing. Furthermore, since this data is based on complete interviews, the issues could be resolved by the respondent or interviewer to the extent that the interview could be completed. But equally, there were other cases where video interviews could not be started or finished due to technical challenges. We do not have any

data on the scale of these problems, but have received anecdotal feedback from national teams that this did occur on occasions.

7.4 Timing of video interviews in relation to the spread of the pandemic

Video interviewing was primarily introduced for ESS Round 10 to allow an alternative way to participate for those unable and unwilling to be interviewed in person due to the pandemic.

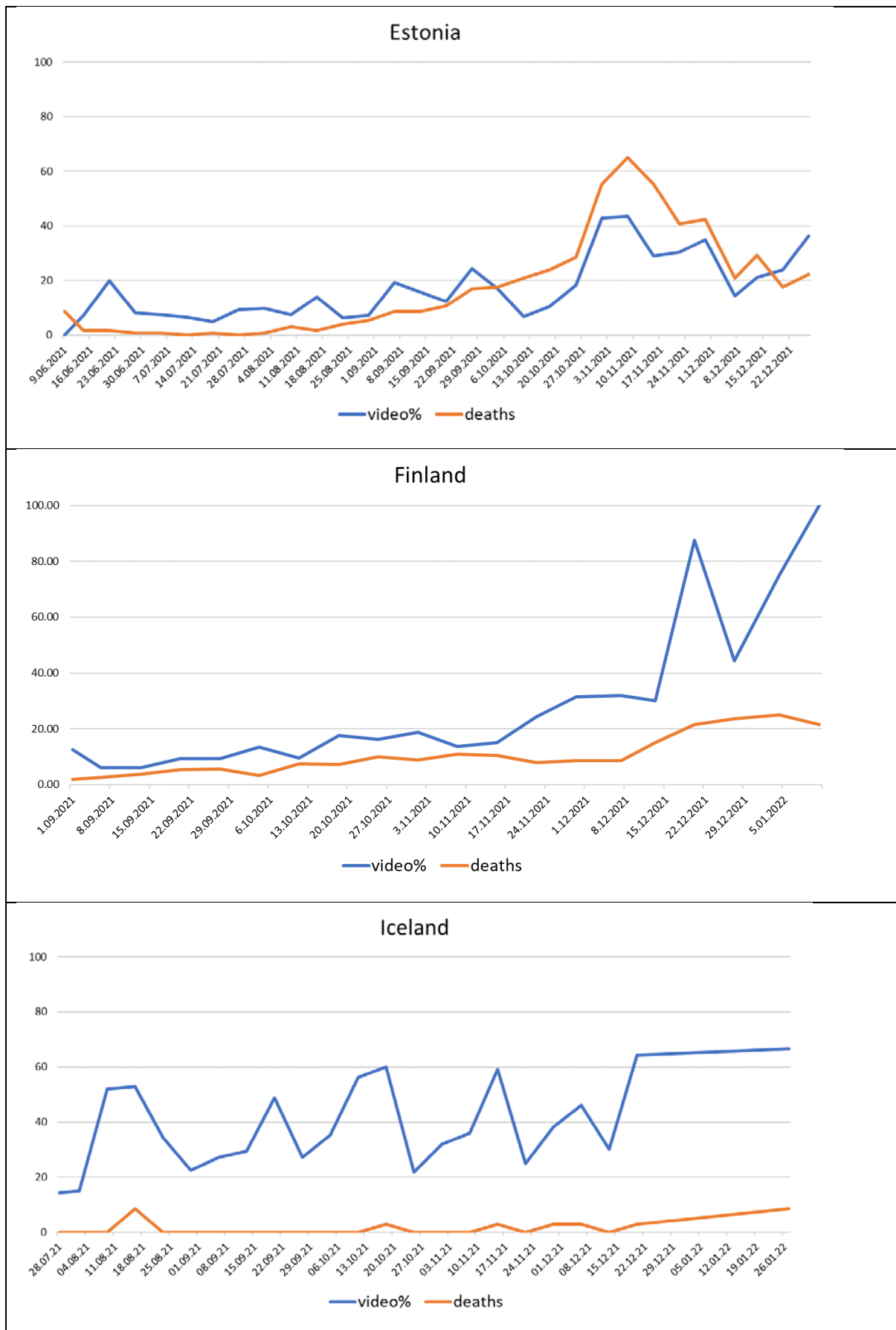
We therefore expect the timing of video interviews to be in correlation with the spread of the pandemic (based on World Health Organisation data on COVID deaths) in the countries in the six countries that achieved the most video interviews.

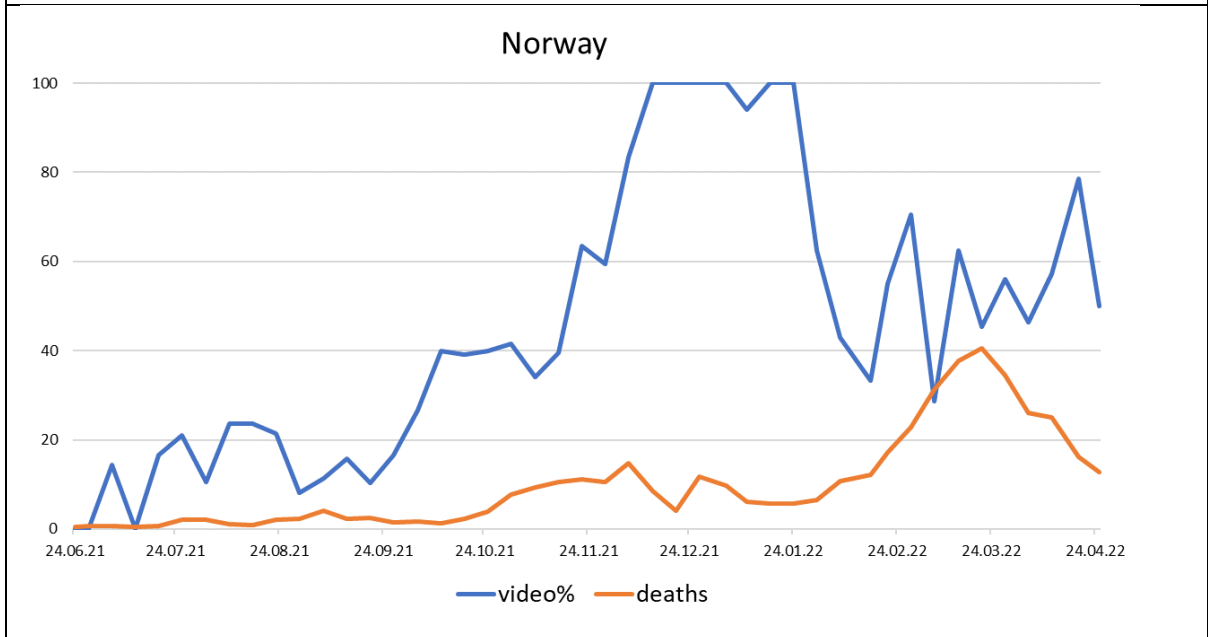
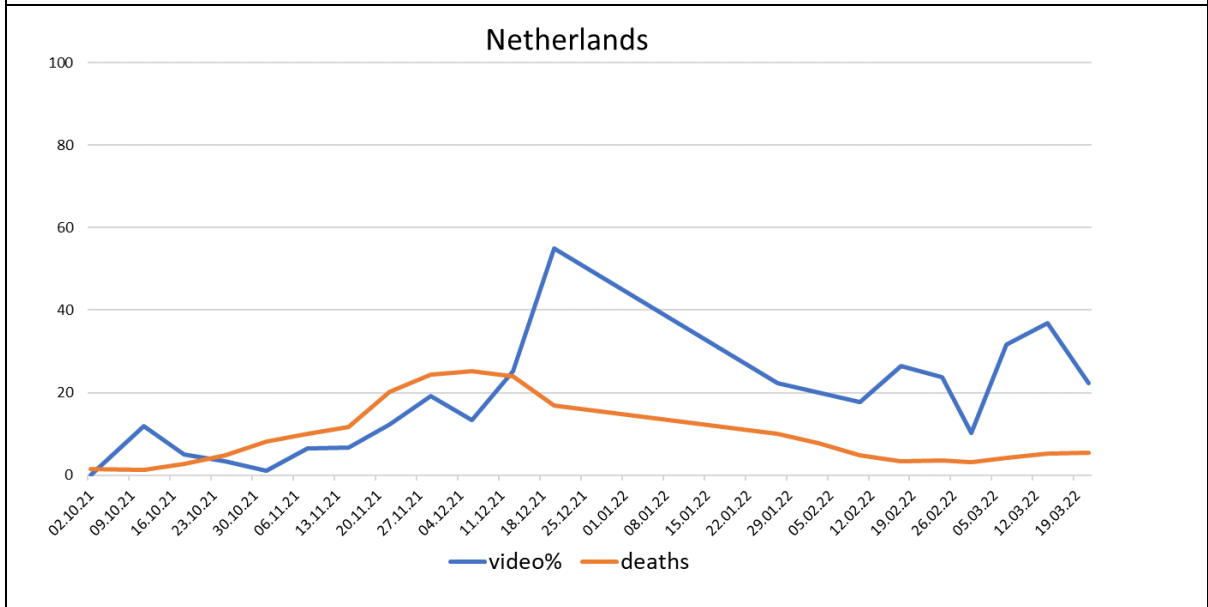
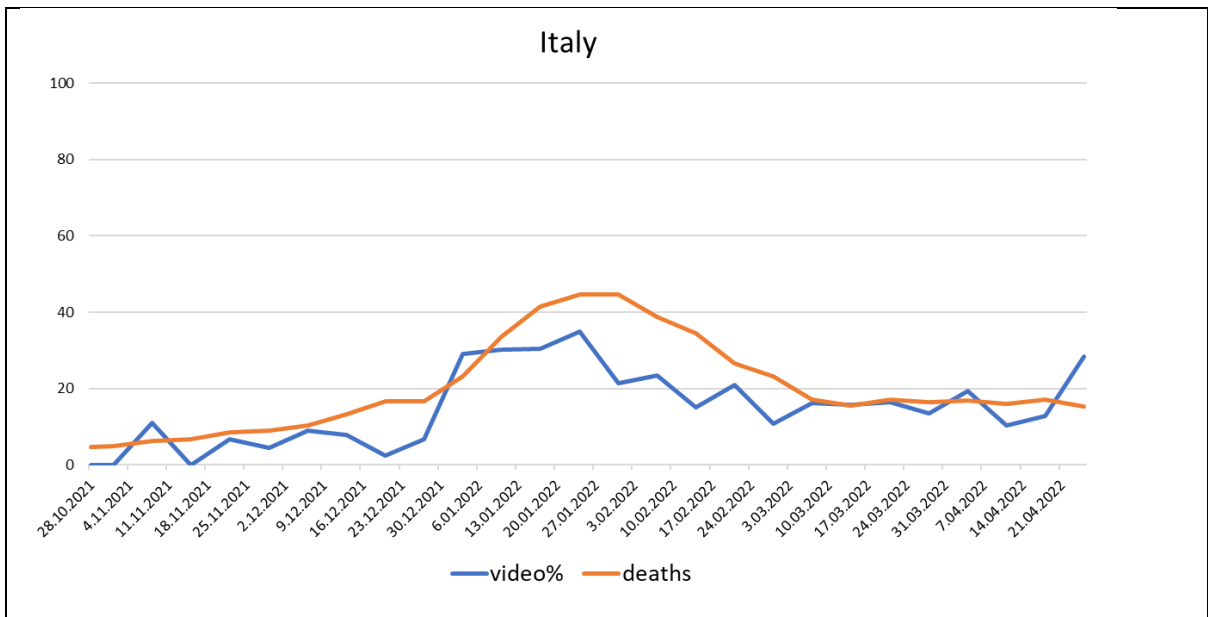
Since the interviewing period and process had different timing and intensity in different countries, we use the share of video interviews out of all interviews to measure the importance of video interviews. Figure 1 compares the relationship of video interviews with the situation of the virus in the country. The interview and infection data are aggregated into one-week averages and indicated in the figures in one-month increments.

The data collection period was of different length in different countries. In all countries, at the beginning of the data collection period, video interviews had a relatively low importance of all interviews, but this increased as the data collection period progressed. In Norway and Finland there were periods where 100% of the data was collected only as video interviews.

However, we also see a connection between the spread of the virus and the use of video interviews. This was especially clear in Estonia, Finland, and Italy, but also in other countries the importance of video interviews was greater during periods of higher spread of the virus. Thus, it can be argued that video interviews were in use and indeed suitable for the viral period.

Figure 1: flow of video interviews versus spread of pandemic (based on COVID deaths)





8. Results I: Comparison of video interviews and in-person interviews across different quality metrics

8.1 Interview duration

Table 5 shows the average interview duration between in-person and video interviews in each of the six countries.

Table 5: Length of the main interview (in minutes) by different modes (person living with a partner, who has at least a secondary or higher education and who is younger than 60 years old)

Country	In-person	Video	Total
Estonia	57.6*	66.8*	60.2
Finland	61.6	64.3	62.2
Iceland	60.5	61.0	60.7
Italy	48.2*	60.0*	51.0
Netherlands	66.7	68.9	67.2
Norway	65.2	64.6	64.9

* $p \leq .05$

In most countries, there was no difference between the length of video and in-person interviews. The only exceptions are Estonia and Italy, where the video interviews on average had longer durations than in-person interviews.

8.2 Satisficing

Table 6 shows the proportion of missing responses per country and between modes for the human values items at the end of the ESS questionnaire. The rate of missing values is fairly low for both in-person and video modes. Where there are differences, in most cases the rate of missing values was higher for in-person interviews compared with video interviews.

Table 6: % of missing responses in 21 questions across countries and interview modes. (missing values = do not know, refusal, other missing answer)

	In-person	Video	Total
Estonia	0.09%	0.32%	0.12%
Finland	1.10%	0.08%	0.95%
Iceland	2.54%	0.71%	1.86%
Italy	2.44%	0.89%	2.17%
Netherlands	0.45%	0.52%	0.46%
Norway	0.74%	0.48%	0.65%

Now turning to straightlining, Table 7 shows the proportion of respondents to select the same answer for at least 15 of the human values items (out of 21), broken down by country and mode. The same approach has been previously used by Ainsaar et al. (2013). As these questions ask about the respondent’s level of similarity to many different contradicting values, it is not natural that the respondent would identify with the vast majority of values to the same degree.

Across countries, a difference in straightlining between modes is only present in Estonia. Also, in the sum of all six countries a statistically significant variance exists – there is less straightlining in video mode.

Table 7: Straightlining behaviour across countries and modes (Schwartz basic human value question) and chi-squared test results

Country	In-person	Video	Total	Chi-squared	p-value
Estonia	52 (4%)	1 (0.4%)	53 (3.4%)	7.8	0.005
Finland	19 (1.4%)	0 (0%)	19 (1.2%)	3.45	0.06
Iceland	8 (1.4%)	2 (0.6%)	10 (1.1%)	1.25	0.26
Italy	229 (10.5%)	53 (11.6%)	282 (10.7%)	0.49	0.486
Netherlands	38 (3.1%)	4 (1.6%)	42 (2.9%)	1.66	0.196
Norway	9 (1%)	3 (0.6%)	12 (0.9%)	0.51	0.47
Total	355 (4.7%)	63 (3.1%)	418 (4.4%)	9.43	0.002

8.3 Interviewer effects

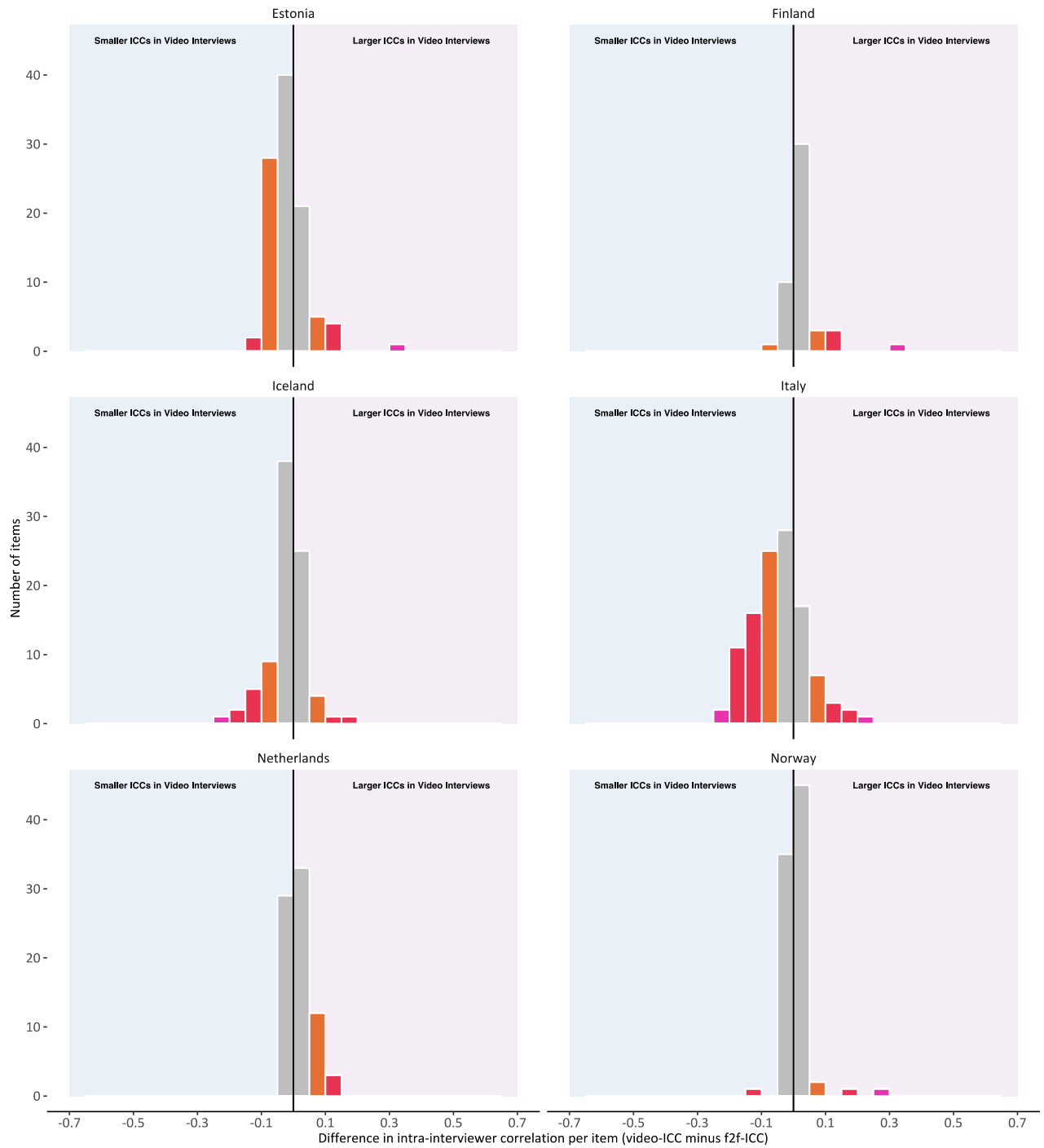
Across all six countries, it was possible to conduct a total of 509 comparisons of intra-interviewer correlations (ICCs) between video and in-person interviews corresponding to a total of 175 items from the ESS questionnaire. For each country, Figure 2 presents the distribution of the differences in size of the intra-interviewer correlations estimates per item between video and in-person interviews. The x-axis shows the differences of the ICCs in video interviews minus the ICCs for in-person interviews, while the y-axis shows the number of items in each bracket of difference. Each figure has been centered at zero, which represents no difference between the ICCs from video and in-person interview. Items with differences in their ICCs of plus/minus 0.05 points (a range of +-5% explained variance from zero) are colored in gray and are considered to be practically equal; while difference larger than 0.05 are in different colors and are considered substantial. Differences ranging from +-5% to +-10% (orange bars) are considered substantial but small differences. While difference larger than +-10% or +-20% explained variance (red and magenta bars) can be considered as showing large and very large differences respectively. Bars with positive values on the x-axis (right side) indicate larger interviewer effects in video interviews compared to in-person interview for those items.

Firstly, we focus on the extent that ICCs differ between communication platforms, and secondly, we interpret the results regarding the direction of the observed differences.

On average across all countries, 72% of the items have ICCs for video and in-person interviewer that are less than 0.05 points from each other (less than 5% difference in variance explained). This indicates a general tendency of interviewer effects across these communication platforms to be more similar than dissimilar to each other. There are also differences in the interviewer effects across countries. In Norway, Finland, and the Netherlands, only a small number of items had difference in the ICCs larger than ± 0.05 points of explained variance (respectively 6%, 17%, and 19% of the total items). The lowest was Norway with only 5 items outside the 0.05 range around zero. For these countries, the observed differences between video and in-person interview can be considered as negligible. In Iceland and Estonia, we observe a higher number of items with differences above the 5% range around zero. However, most of the differences observed are within the 5% to 10% range around zero difference in ICCs. The largest differences are observed in Italy, where more than half of the items have an ICC difference larger than ± 0.05 points. In Italy, a total of 67 items have an ICC difference larger than ± 0.05 (59.8% of all items in the analysis), from which 35 items (about one third of all items) have a difference larger than ± 0.1 points. It should be noted this analysis is not focused on the absolute sizes of the ICCs. This means that interviewer effects similarly large or small would still be considered equal in their size difference. It is not a measure of how large the interviewer effects are in video or in-person interview for these countries, but how largely they differ by their communication platform.

Focusing on the direction of the differences in the ICCs, we observed that in countries with larger differences (like Italy, Iceland and Estonia) there are more items with larger interviewer effects in in-person interview than in video interviews. In relative terms, the interviewer effects in Italy, Estonia and Iceland tend to be smaller in video interviews, while in Finland, the Netherlands, and Norway, the distribution skews towards higher ICCs in video interviews. If we focus only on the right side of the figure (larger ICCs in video interviewers), we observe that the distributions are very similar across all countries. All countries have a small number of items with ICCs larger in video interview, which are mainly 5% or 10% above their in-person counterpart. Iceland and Norway show the smallest number of items with larger ICCs in video interviews.

Figure 2: Difference in interviewer effects between video and in-person interviews per item by country (size of ICC for video minus size of ICC for in-person), centered at zero, ESS Round 10



9. Conclusions

This paper has taken a first look the use of video interviewing as a complementary mode to in-person interviewing at Round 10 of the European Social Survey. This has enabled, for the first time, a comparison of the experiences of video interviewing between countries in a cross-national survey. We sought to evaluate both experience of the implementation of video interviewing, and assess its comparability versus in-person interviewing.

Regarding implementation, experiences varied widely between countries. Of the 17 countries to offer video interviewing, the proportion of respondents participating by video only exceeded 6% of the total achieved sample in six countries: Iceland, Norway, Italy, Netherlands, Estonia and Finland. Nevertheless, in these six countries a substantial proportion of video interviews were achieved, resulting in cost savings from fewer in-person visits and the possible inclusion of some respondents who may not have taken part in an in-person interview. The reasons for differences in prevalence between countries are not fully known. However, our results suggest that high internet penetration in a country, access to individual named samples, and the ability to make telephone contact with target respondents, may contribute to higher yields of video interviews. Countries with some or all of those characteristics may therefore be especially well suited to video interviewing.

In those six countries where a substantial share of video interviews was achieved, we also observed positive interview experience ratings from respondents and interviewers, in most cases at least as good as those reported for in-person interviews. Based on cases where interviews were completed, relatively few technical problems were experienced, though there were some differences between countries. These experience results broadly suggest that in countries where there is demand for video interviews, it can be implemented effectively and result in a comparable experience versus in-person interviewing.

Regarding response quality, the findings for video interviewing provide some reassurance about its comparability with in-person interviewing. Only small differences between modes were observed for interview length and measures of satisficing. The interviewer effects in video and in-person interviews tend to be more similar than dissimilar to each other; the intra-interviewer correlations for most single items of video interviews are within a plus/minus 5% range of the correlation of the same items for in-person interviews.

Overall, taking into account all measures, our results suggest that the interviewing process is equally good for video interviewing compared with in-person interviewing. However, it does not necessarily follow that video interviewing should be introduced as standard as a complementary option to in-person interviewing across all surveys. There are costs and practical concerns with the set up and implementation of video interviewing that may not always be justified if the number of interviews conducted by video may be very small. This is a decision that will need to be taken based on national and survey contexts.

The primary objective with ESS's video approach was to support the implementation of ESS Round 10 in challenging circumstances due to the pandemic. This meant that the video approach was not designed experimentally to compare with in-person interviewing in the way

that would usually be done for a relatively untested method. Future research should therefore seek to randomly allocate cases to video or in-person modes. The same interviewers could also be used for both modes, with random assignment of cases to them, to reveal more about any differences in interviewer effects between modes. Where possible, sample sizes should be increased to allow scope for greater comparisons between modes.

The nature of Round 10 data collection during the pandemic may have also presented a non-typical picture. For example, demand for video interviews may have been higher at that point than might be the case in 'normal' circumstances. It will be important to continue to assess the effectiveness and comparability of video interviewing beyond the pandemic. ESS will be able to provide more insight in this regard, since several countries are also implementing video interviewing, alongside in-person interviewing, for the 11th Round of the survey in 2023-24.

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Appendix 1 – key features of ESS’s video interviewing approach

Design element	ESS’s approach
Contact with target respondents	<p>The process for contacting target respondents was unchanged from the usual fully in-person interviewing approach. In the majority of countries, interviewers would attempt in-person contact, sometimes following delivery of an advance letter. A video interview could then be offered based on the requirements at that stage of fieldwork (see below). A small number of countries had access to named person samples that included telephone numbers for a large majority of the sample members. In these cases, they could attempt first contact by telephone and offer a video interview at that point (meaning in these cases a video interview could be achieved without any in-person contact).</p>
Structure of video interviewing team	<p>National teams were allowed whether to either a) establish a small specialist team of video interviewers, or b) allow all of their in-person interviewers to also carry out video interviews. There were pros and cons with each approach. Option a) allowed for more central control and management, but led to a more complex flow of steps between the in-person interviewer and the video interviewer. There may also be concerns with interviewer effects if a small number of interviewers were carrying out a large number of interviews. Option b) was a more seamless process as the same interviewer was responsible for both the face-to-face contact and the video interview. However, there were challenges with training, equipping and monitoring a large interviewer fieldforce to take on the video interviewing task. In the event, most countries adopted option a): establishing a small specialist team of video interviewers.</p>
When to offer video interviews	<p>The approach changed over the round. Initially, interviewers were instructed to only offer a video interview in cases where a face-to-face interview was refused. However, feedback was received that it was very hard to convert people to take part in any way after this refusal. Subsequently, interviewers could offer a video interview if they noticed any reluctance to take part in-person. Finally, towards the end of the round, interviewers could offer a video interview from first contact, as an equal option to the in-person interview. This last approach reflected both a need to assist national teams to complete fieldwork in an extremely challenging round, and positive feedback being received based on experiences of video interviews to that point.</p>

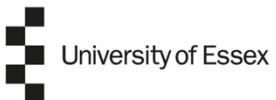
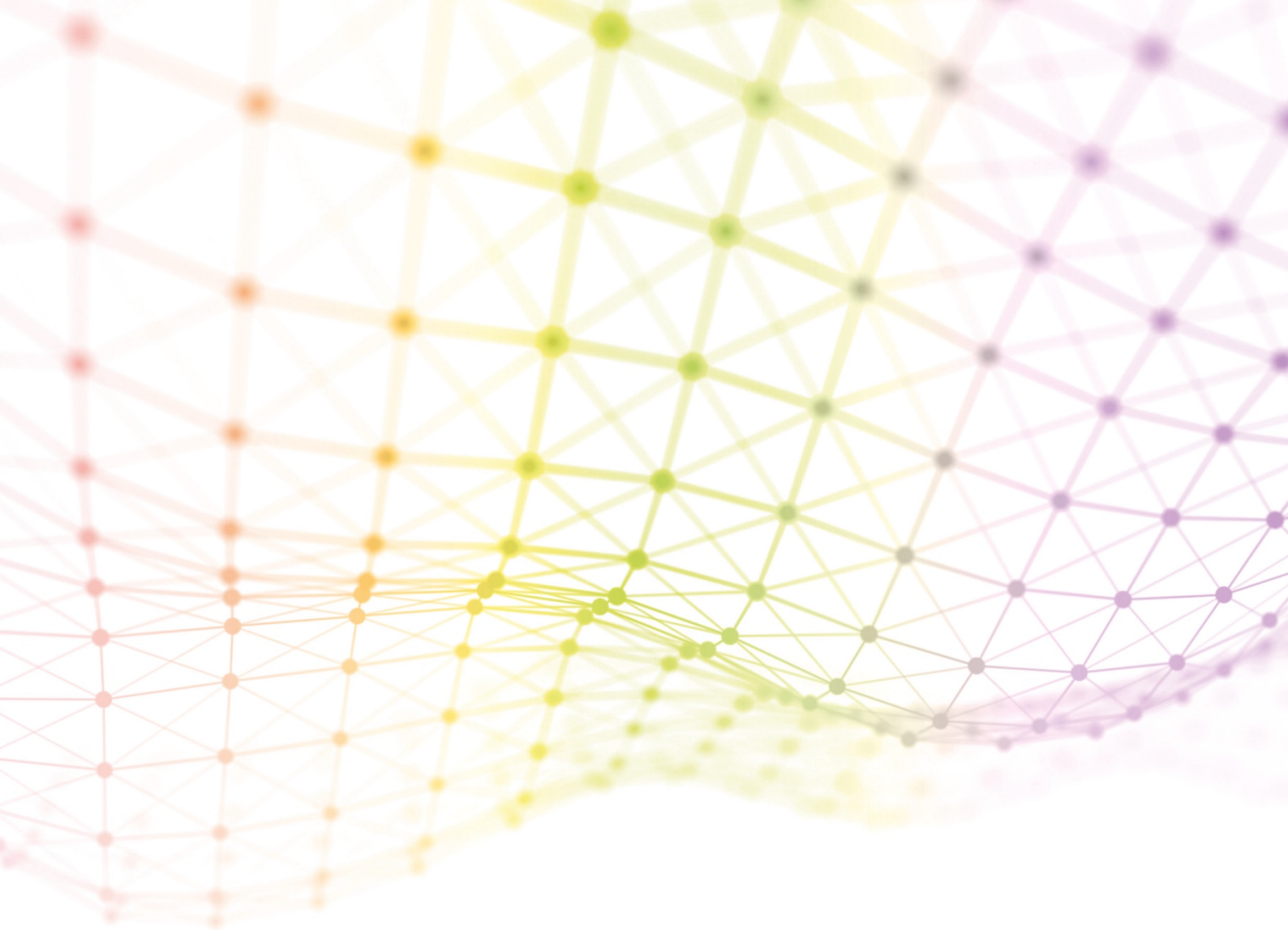
Design element	ESS's approach
Video interviewing platforms	National teams were advised to use Microsoft Teams or Zoom. They were required to use a licensed version of the platforms. Respondents would not be required to have a Teams/Zoom account in order to take part, or to download any software. In a small number of cases, countries were permitted to use alternative platforms, subject to these platforms meeting GDPR requirements and tested with respondents in advance of fieldwork.
Devices – interviewer and respondent	<p>Interviewers should have access to two devices or screen. One would include the CAPI questionnaire, which was not shared with the respondent. This would allow the interviewer to read the questions and enter responses. The other screen would feature the video call, including the interviewer and respondent videos. This screen also included showcards, which would be screen-shared with the respondent. The showcards include response lists for many survey questions and are presented to respondents throughout ESS interviews. The interviewer moved on to the correct card as required throughout the interview.</p> <p>Respondents could take part using any internet-enabled device, including smartphones. It was recommended that they used a larger screen device, if available, to allow for clearer display of the video questionnaire and showcards.</p>
Pre-testing	All countries were required to carry out at least 10 video interviews as part of a pre-test before their main stage fieldwork.
Interviewer briefings	All interviewers engaged in the video interviewing task needed to be briefed by national teams prior to fieldwork. Briefing materials were prepared by the central ESS coordinating team. National teams would need to adapt these materials in some cases to reflect their national approach.

Appendix 2 – sample composition comparison of in-person and video interviews

	Mode of data collection	Age	% of men	% legal partnership	% University education	% at work	Not born in country	Household size
Estonia	CAPI	53.9**	44.9	40.5	15.4**	59.2**	14.9**	2.4**
	Video	39.5**	45.4	41.2	34.2**	82.1**	7.1**	3**
Finland	CAPI	54.7**	50.2	48.1	12.1**	49.1**	3.7	2.2**
	Video	40.9**	45.4	41.7	23.8**	72.9**	2.9	2.6**
Iceland	CAPI	54.8**	48.7	50.3	14.8**	57.0**	8.5	2.6**
	Video	42.2**	47.4	49.7	20.2**	82.3**	7.2	3.3**
Italy	CAPI	52.4**	47.1	50.1	9.4**	46.7**	7.5	2.5**
	Video	47.9**	49.5%	54.7	15.6**	58.6**	6.8	2.9**
Netherlands	CAPI	50.2**	51.8%	52.8	12.0**	62.8**	8.4	2.6**
	Video	40.9**	46.8%	49.5	20.2**	80.2**	6.9	3.1**
Norway	CAPI	50.3**	52.5%	48.3	11.8**	62.1**	10.7	2.6**
	Video	41.8**	48.3%	42.1	14.7**	77.4**	10.2	2.9**

Appendix 3 – variables names of items included in intra-interviewer correlation

<p>Items compared for ICCs in at least one country</p>	<p>ACTROLGA, AESFDRK, AGEPNT, ANCTRY2, ATCHCTR, ATCHERP, C19MCO12, C19MCPNT, C19SPWRK, C19WHACC, C19WHOME, CHLDO12, CHPLDMC, CHPLDMI, CLOSEPNT, COLCOM, COLHLP, COLPHONE, COLPROP, COLSCRN, COLSPEAK, COMO12, COMPNT, CPTPPOLA, CTTRESA, CTTRESAC, DCSFWRKA, DFPRTAL, DFPRTALC, EDULVLB, EDULVLFB, EDULVLMB, EDULVLPB, EDUYRS, ESTSZ, EUFTF, FAIRELC, FAIRELCC, FAMADVS, FAMPDF, FAMPREF, FREEHMS, GINCDIF, GOVMONPB, GOVPRIPH, GPTPELC, GPTPELCC, GRDFINC, GRDFINCC, GVBALC19, GVCONC19, GVCTZPV, GVCTZPVC, GVELDC19, GVFAMC19, GVHANC19, GVIMPC19, GVJOB19, HAPPY, HEALTH, HHLIO12, HHMMB, HINCFEL, HINCTNTA, HMSACLD, HMSFMLSH, HSCOPC19, IMBGECO, IMDFETN, IMPCNTR, IMPDIFF, IMPENV, IMPFREE, IMPFUN, IMPRICH, IMPSAFE, IMPTRAD, IMSMETN, IMUECLT, IMWBCNT, INPRDSC, IORGACT, IPADVNT, IPBHPRP, IPCRTIV, IPEQOPT, IPFRULE, IPGDTIM, IPHLPPL, IPLYLFR, IPMODST, IPRSPOT, IPSHABT, IPSTRGV, IPSUCES, IPUDRST, ISCO08, JBPRTFP, KEYDEC, KEYDECC, LRSCALE, MANCOM, MANHLP, MANSCRN, MANSPEAK, MANSUPP, MANWRKPL, MCCLOSE, MCCOORD, MCINTER, MCMSINF, MCPRIV, MCWRKHOM, MEDCRGV, MEDCRGVC, NETUSOFT, NETUSTM, NJBSPV, NWSPOL, PANCLOBO, PANFOLRU, PANMONPB, PANPRIPH, PANRESMO, PFMFDJBA, POLINTR, PPLFAIR, PPLHLP, PPLTRST, PRAY, PRTDGCL, PSPPIPLA, PSPPSGVA, RGHMGPR, RGHMGPRC, RLGATND, RLGDR, SCIDECPB, SCLACT, SCLMEET, SCRNO12, SECGRDEC, SPEAKO12, SPEAKPNT, STFDEM, STFECO, STFEDU, STFEOV, STFHLTH, STFLIFE, STFMJOB, TEAMFEEL, TRDAWRK, TRSTEP, TRSTLGL, TRSTPLC, TRSTPLT, TRSTPRL, TRSTPRT, TRSTUN, TTMINO12, VIEPOL, VIEPOLC, VOTEDIR, VOTEDIRC, WKDCORGA, WKHCT, WKHTOT, WKHTOTP, WPESTOP, WPESTOPC, WRKEXTRA, WRKHOME, WRKLONG, YRBRN</p>
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