

Increasing response rate and representation of elderly respondents

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Abstract.

In 2025, Statistics Norway conducted an experiment in the Quality of Life Survey among elderly. They have a low response rate and a greater dropout bias over time than other age groups. The purpose of the experiment was to investigate whether alternative response modes and contact strategies could provide higher participation and better representativeness, and whether a combination of web and paper surveys would produce measurement differences.

The Experiment shows the response rates are higher for paper than web questionnaires. Paper respondents are more representative for the elderly population, and include to a greater extent the very oldest, women, people living alone and people with low education and low income. Older people with poorer health and less social contact responded to a larger extent on paper compared to web.

Telephone recruitment and postal mail appear to enhance participation, especially when these contact strategies are combined with paper surveys. When more contact strategies are combined with web surveys, the participation is increased, but not the representativeness of the respondents. It is important to reduce the digital thresholds for participation.

When it comes to measurement differences, the analyses find no differences for most question types. There are systematic differences in questions about subjective quality of life with longer response scales. If web and paper are to be combined, the forms should therefore be designed as similarly as possible.

Overall, the experiment shows that it is possible to achieve both a higher response rate and better representativeness among people 80 years of age and older by offering paper surveys and using several high-quality contact strategies. The results also suggest that better representation provides a more comprehensive picture of the health, social contact and quality of life of older people.

Keywords: Respondents 80 years and older, Non-digital respondents, Response Rates, Quality of Life, Mode Effects

1. Experiment among people aged 80 and older

In 2025, Statistics Norway conducted an experiment in the Quality of Life Survey¹ among people aged 80 and older. The participants were randomly assigned to 12 experimental groups. The groups differed from each other by response mode (web or paper) and contact strategy (digital letter in Altinn, letter by post and telephone recruitment), and by whether digital contact information from the Norwegian Contact and Reservation Register² (CRR) could be used or not. Table 1 gives an overview over the experimental design.

Table 1 Overview of the experimental groups. Experiment in the Quality of Life Survey 2025 for persons aged 80 and older. Total. Gross sample and response rate.

	First contact strategy	Second contact strategy	Mode	Gross sample	Response-rate
Digitally contactable					
Experimental group 1 (Control group)	Digital letter	No	Web ³	514	20,6
Experimental group 2	Digital letter & Letter by post	No	Web	538	24,3
Experimental group 3	Digital letter	Telephone ⁴	Web	245	21,2
Experimental group 4	Digital letter & Letter by post	Telephone	Web	244	27,5
Experimental group 5	Digital letter & Letter by post	Telephone	Paper ⁵	489	53,8
Experimental group 6	Telephone	Digital Letter	Web	244	19,7
Experimental group 7	Telephone	Digital letter & Letter by post	Web	243	32,1
Experimental group 8	Telephone	Letter by post	Paper	246	52,4
Experimental group 9	Telephone	Digital letter & Letter by post	Paper	246	58,1
Non-digitally contactable					
Experimental group 10 (Control group)	Letter by post	No	Web	1042	1,7
Experimental group 11	Letter by post	Telephone	Paper	475	22,7
Experimental group 12	Telephone	Letter by post	Paper	470	23,6
Total				4996	25,1

Source: Experiment in the Quality of Life Survey for 2025 for persons 80 years and older, Statistics Norway

1 In Statistics Norway the Quality of Life Survey normally is conducted as a web only survey.

2 The Contact and Reservation Register (CRR) is a Norwegian registry containing residents' digital contact information (email address and mobile phone number) as well as their reservation status. It is more difficult to send information to individuals who do not have contact information registered in the CRR.

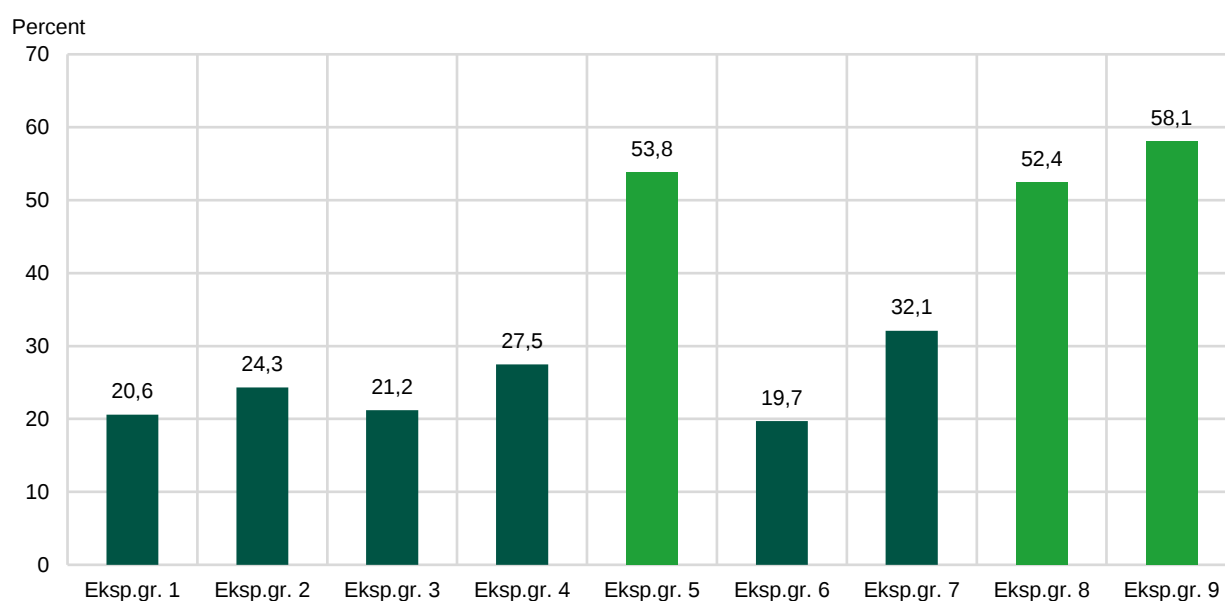
³ Web questionnaire via link and two-factor authentication.

4 Interviewers attempted to recruit respondents to participate in the survey.

⁵ Paper questionnaire, invitation letter to participate in the survey and a prepaid return envelope.

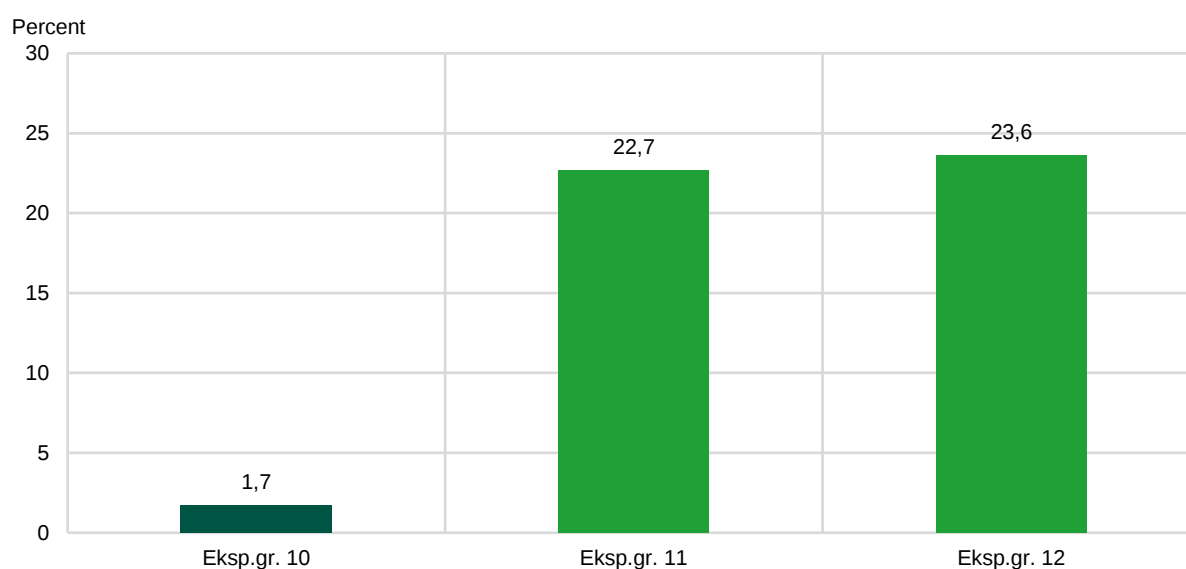
The overall response rate in the experiment was 25.1 percent, but varied greatly between the groups: from 1.7 percent in the group that could not be contacted digitally and who received a letter by postal mail and were supposed to respond online, to 58.1 percent in the group that is digitally contactable who received a paper survey and was contacted by telephone, digitally in Altinn and by postal mail.

Figure 1 Response rates in experimental groups of individuals who are digitally contactable. Percent



Source: Experiment in the Quality of Life Survey for 2025 for persons 80 years and older, Statistics Norway

Figure 2 Response rates in experimental groups of individuals who are not digitally contactable. Percent



Source: Experiment in the Quality of Life Survey for 2025 for persons 80 years and older, Statistics Norway

The analyses show that paper surveys give a clearly higher response rate than web surveys among people 80 years of age and older. This applies especially to people who are not digitally contactable, but also among those who can be contacted digitally. Telephone recruitment works best in combination with physical letters. With web as the response mode and without a physical letter, telephone recruitment does not appear to be effective. With web as the response mode, multiple stimuli in particular seem to increase participation among men and younger older individuals, and thus appear to reinforce bias. Web generally leads to greater bias than paper. The paper groups generally show less bias in the net sample by gender and age. For individuals who are not digitally contactable, the current data collection design in the Quality of Life Survey is very weak.

2. Mode effects for items with long response scales

When it comes to measurement differences, the analyses don't find systematic mode differences between web and paper for most question types. No mode effects are observed for neither simple or complex yes/no questions, sensitive questions, or questions with short response scales.

However, systematic differences have been demonstrated in questions about subjective quality of life with longer response scales (0-10, with labels only at the first and last value). Respondents on paper respond somewhat more positively here than respondents on the web. This is unexpected when paper respondents are older, and report poorer health and more loneliness in the survey compared to web respondents (described in the next section).

The analyses suggest that the mode difference in these survey questions are largely due to different visual presentations of these longer response scales in the two modes. In the web survey the response scale is presented in a vertical list (negative pole at the top), while on paper they were presented horizontally (negative pole to the left) to keep the paper survey to a reasonable length/number of pages.

If web and paper are to be combined in future surveys, the forms should therefore be designed as similarly as possible, especially for questions with long response scales.

3. Paper surveys reach older people with poorer health and less social contact

a. Paper respondents have poorer health than web respondents

Older people who respond on paper have poorer health than older people who respond online. We mainly see a difference in the proportion with reduced functional capacity. There are more who experience limitations in normal everyday activities, and more who experience major limitations. In particular, there are more respondents on paper who have problems with vision/hearing/speech, or reduced mobility or problems with the back, arms, hands, legs or feet. The physical activity level is also lower among the respondents on paper.

b. Paper respondents are lonelier than web respondents

The respondents on paper also score somewhat more negatively on indicators of social contact. Older people who respond on paper have fewer people they can count on, are lonelier, and participate less in cultural activities and activities in a club/association/organization.

c. Paper surveys reach more non-digital elders, but also more elders with poor health among the more digital elders

Part of the reason we get responses from more people with reduced functional ability and who are lonelier when we offer paper forms is that we get responses from more elders who cannot be contacted digitally (they do not have digital contact information in the Contact and Reservation Register). Comparing survey responses, older people who cannot be contacted digitally have somewhat poorer health compared to the digitally contactable older people. The

non-digital elderly to a greater extent experience pain, health conditions that cause major limitations in everyday activities, and they are less physically active. Those who cannot be contacted digitally are also somewhat lonelier and participate less in activities.

However, also when we narrow it down to compare web and paper respondents among only digitally contactable older people, we see that we get more responses from older people with poor health through paper forms.

This suggests that paper forms include both more non-digital elders and elders with poorer health more generally.

4. Recommendations for surveys of the elderly population

a. Paper questionnaires

The results of the experiment clearly show that elderly we cannot contact digitally (who do not have digital contact information in the Contact and Reservation Register) should not be asked to respond to a web questionnaire. The response rate in this group is very low, and many are unable to complete the digital process associated with responding to a web questionnaire.

Paper questionnaire combined with telephone recruitment, on the other hand, provides high response rates and a more representative sample of the elderly. This should be the main approach for the non-digital and those who are reserved from digital communication. Paper questionnaire lower the thresholds for participation.

b. Multiple contact strategies

The experiment shows that the use of multiple contact strategies pays off, and that the contact strategies reinforce each other when combined. Sending out paper letters helps. And once we have sent out paper letters, telephone recruitment works particularly well to get the oldest people to participate in the survey. Having an interviewer call to inform and explain that it is safe to

answer the survey helps the person feel safe and thus increases the chance that the person will respond.

In terms of resources, the combination of paper forms and telephone recruitment is efficient. Even with postage costs and telephone recruitment, it is cheaper than pure telephone interviewing. At the same time, interview resources are well utilized by using them in recruitment instead of conducting the entire interview. In addition, in this case, it has also been efficient in terms of collecting additional information about barriers and other things that help us to develop better and more user-friendly solutions for future surveys.

a. Findings regarding telephone interviews

Experience from the data collection also shows that many older people would have problems participating in surveys conducted as telephone interviews, partly due to impaired hearing and limited concentration over time. Several of the oldest people experienced paper forms as the most accessible way to participate. At the same time, the experiment shows that telephone recruitment works well as support. It helps to inform, create security and increase participation. Using interviewers for recruitment, instead of conducting the entire interview, appears to be an efficient use of resources.

5. Appendix: List of references

Falnes-Dalheim, E. & Støren, K. S. (2026). Eksperiment blant respondenter 80 år og eldre i Livskvalitetsundersøkelsen 2025. (Experiment among respondents 80 years and older in the Quality of Life Survey 2025). Report 2026/10. Statistics Norway. <https://www.ssb.no/sosiale-forhold-og-kriminalitet/levekra/artikler/eksperiment-blant-responder-80-ar-og-eldre-i-livskvalitetsundersokelsen-2025>