What motivates or discourages young adults from participating in population-based surveys?



Report

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Preface

The Norwegian Mother, Father and Child Cohort Study (MoBa) celebrated its 25th anniversary in 2024. MoBa is one of the world's largest population-based studies, with 114,000 children, 95,000 mothers, and 75,000 fathers participating. MoBa recruited its first participants in 1999, when the mothers were pregnant. In 2024, the oldest children in MoBa turned 25 years old. MoBa aims to continue following this new generation of young adults. However, like many other population-based studies, MoBa faces challenges in engaging young adult participants. The response rate to recently sent questionnaires to 18- and 19-year-olds has been very low.

This report presents results from work carried out by the MoBa ambassadors in 2024. The MoBa ambassadors were recruited in connection with MoBa's 25th anniversary in 2024 to represent the study. Among other things, the ambassadors' task tasked was to be the public face of MoBa and helping to highlight the value of participating in research.

From June to September 2024, four MoBa ambassadors assumed the role as co-researchers and conducted seven interviews with young adults aged 20–25. The goal was to explore what motivates or discourages this age group from participating in population-based studies. The interview data were shared with a research team at the Norwegian Institute of Public Health, which, together with the MoBa ambassadors, summarized the findings. This report provides an overview of the results from this work, which was carried out with support from Biobank Norway (https://bbmri.no/) and the Norwegian Institute of Public Health (NIPH).

We thank the MoBa ambassadors for their fantastic efforts. We also thank MoBa for recruiting the ambassadors and Ragnhild Eek Brandlistuen for her input and support.

Oslo, November 2025

Isabelle Budin-Ljøsne, project leader & Rebecca Bruu Carver, project team member

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Key messages

Population-based studies are essential for understanding what promotes health and causes disease in society. They provide researchers with access to large amounts of data over time – something that is necessary to draw reliable conclusions. However, such studies are entirely dependent on participation – including from young adults. In the Norwegian Mother, Father and Child Cohort Study (MoBa), participation among the so-called second generation (young people over 18) is limited.

In connection with MoBa's 25th anniversary in 2024, a group of young ambassadors was recruited to represent the study. Among other things, their role was to be the public face of MoBa and help highlight the value of participating in research. In April 2024, four of these ambassadors took part as co-researchers in an interview study. The aim was to explore what factors motivate or discourage young adults aged 18–25 from participating in population-based studies like MoBa.

The MoBa ambassadors were actively involved throughout the research process: from designing interview questions and recruiting participants, to conducting the interviews, interpreting the findings, and writing this report. The results provide valuable insight into how future population-based studies can become more relevant and engaging for young adults.

A key finding is that young adults are generally positive about contributing to research – but only if the invitation feels relevant, understandable, and safe. The information must come from credible sources, clearly explain what the study is about, and why their participation is important. Simplicity and time commitment are crucial: everything from questionnaires to sample collection must be easily accessible, quick to complete, and free of technical barriers.

Many young people also appreciate receiving something in return for their participation — whether in the form of knowledge, results, or small incentives. Equally important is the feeling that their contributions are being used and make a difference. This creates a sense of meaning and social value, which is far more motivating than general appeals to "supporting research."

Another important point is the need for flexibility. Many young adults want the option to choose between active and passive participation – for example, by simply giving consent to the use of previously collected data. Young people's needs and capacities vary, and flexible solutions can make it easier to say yes.

MoBa and similar studies must be better adapted to young people's life situations, habits, and values to succeed in engaging future generations. This report provides an important contribution to how that can be achieved.

Hovedbudskap (norsk)

Befolkningsundersøkelser er avgjørende for å forstå hva som fremmer helse og forårsaker sykdom i samfunnet. De gir forskere tilgang til store mengder data over tid – noe som er nødvendig for å kunne trekke pålitelige konklusjoner. Men slike studier er helt avhengige av deltakelse – også fra unge voksne. I Den norske mor, far og barn-undersøkelsen (MoBa) har deltakelsen blant den såkalte 2. generasjonen (unge over 18 år) vært lav.

I forbindelse med MoBas 25-årsjubileum i 2024 ble en gruppe unge ambassadører rekruttert for å representere undersøkelsen. Ambassadørenes oppdrag var blant annet å være MoBas ansikt utad og bidra til å synliggjøre verdien av forskningsdeltakelse. I april 2024 deltok fire av disse ambassadørene som medforskere i en intervjustudie. Målet var å undersøke hvilke faktorer som motiverer eller demotiverer unge voksne i alderen 18–25 år til å delta i befolkningsundersøkelser som MoBa.

MoBa-ambassadørene deltok aktivt i hele forskningsprosessen: fra utforming av intervjuspørsmål og rekruttering av deltakere, til gjennomføring av intervjuene, tolkning av funnene og skriving av denne rapporten. Resultatene gir verdifull innsikt i hvordan fremtidige befolkningsundersøkelser kan bli mer relevante og engasjerende for unge voksne.

Et sentralt funn er at unge voksne i utgangspunktet er positive til å bidra til forskning – men bare dersom invitasjonen oppleves som relevant, forståelig og trygg. Informasjonen må komme fra troverdige kilder, være tydelig på hva undersøkelsen handler om, og forklare hvorfor akkurat deres deltakelse er viktig. Enkelhet og tidsbruk er avgjørende: alt fra spørreskjemaer til prøvetaking må være lett tilgjengelig, raskt å gjennomføre og uten tekniske hindringer.

Mange unge setter også pris på å få noe tilbake for deltakelsen – enten i form av kunnskap, resultater eller små insentiver. Like viktig er følelsen av at deres bidrag faktisk blir brukt og gjør en forskjell. Dette gir mening og en opplevelse av samfunnsnytte, som motiverer langt mer enn generelle oppfordringer om å "bidra til forskningen".

Et annet viktig poeng er behovet for fleksibilitet. Flere unge voksne ønsker muligheten til å velge mellom aktiv og passiv deltakelse – for eksempel ved kun å gi samtykke til bruk av tidligere innsamlede data. Behov og kapasitet varierer, og fleksible løsninger kan gjøre det lettere å si ja.

For at MoBa og lignende undersøkelser skal lykkes med å engasjere fremtidige generasjoner, må de i større grad tilpasses unges livssituasjon, vaner og verdier. Denne rapporten gir et viktig bidrag til hvordan det kan gjøres

1 Introduction

1.1 Background

The Norwegian Mother, Father and Child Cohort Study (MoBa) is one of the world's largest population-based studies, with over 114,000 children, 95,000 mothers, and 75,000 fathers participating. The goal of MoBa is to generate new knowledge about causes, risk factors, development, and consequences related to health and disease – so that we can better prevent and treat diseases.

MoBa began data collection in 1999, when the mothers were pregnant. Now, 25 years later, the children from the first generation have become young adults and represent the second generation in the study. Long-term research requires many years of data collection and analysis, and only now can research questions posed 25 years ago begin to be answered. At the same time, MoBa faces a significant challenge: participation among young adults is often very low. For the questionnaires sent to 18- and 19-year-olds, participation so far has been between 19–24% (Brandlistuen et al. 2025). Low response rates in this age group can lead to skewed representation in the data, which in turn can weaken the quality and reliability of the research.

This study was conducted to gain insight into what motivates – or discourages – young adults aged 18–25 to participate in population-based studies like MoBa.

2 Method

2.1 Recruitment

To mark MoBa's 25th anniversary in 2024, MoBa recruited 15 young ambassadors to represent the study. Among other tasks, the ambassadors acted as the public face of MoBa and helped highlight the value of participating in research.

In April 2024, the MoBa ambassadors were invited to take part as co-researchers in this study. A co-researcher is someone who actively participates in the research process alongside professional researchers, often drawing on own experiences or perspectives. Six ambassadors agreed to contribute as co-researchers and were invited to a kick-off meeting on June 17 2024, where three attended. To give more ambassadors the opportunity to join, an additional kick-off meeting was held on June 26. Two new ambassadors were invited, and one participated.

In total, four MoBa ambassadors (three women and one man) took part in the study. They actively contributed to data collection and played a central role in carrying out the project.

2.2 Data collection

The MoBa ambassadors were invited to interview at least two other young adults aged 18–25 each to understand what motivates or discourages participation in population-based studies. The ambassadors were encouraged to speak with people they don't usually interact with to ensure sufficient representativeness, and these individuals did not need to be MoBa

participants. The ambassadors themselves recruited people and conducted interviews during the summer of 2024.

At the kick-off meeting in June 2024, the MoBa ambassadors received information about the study's goals and how it would be carried out. A draft of the interview questions (the "interview guide") was shared with the ambassadors ahead of the meeting and discussed during the session, to ensure that the questions aligned with the study's purpose and were understandable. The interview guide was revised after the meeting and sent back to the MoBa ambassadors for approval.

The main topics to be explored in the interviews included:

- Interest in participating in a study like MoBa.
- What young adults are willing to do, e.g., complete questionnaires, submit urine samples, take a blood test.
- What motivates and discourages young adults from participating in a population-based study.
- How a study should be designed to be appealing to young adults.
- Which research questions/topics might be interesting for young adults.
- Interest in participating in a population-based study as a passive participant, meaning allowing researchers to use previously collected samples and questionnaires for research.

See the full interview guide in the appendix.

The MoBa ambassadors also received brief training in interview techniques. For example, they were instructed to use the interview guide as a general framework, but were encouraged to use their own wording, ask follow-up questions where appropriate, or rearrange the questions if it felt more logical. The main point was that the topics covered by the questions had to be addressed in the conversation. Along with the interview guide, the ambassadors received a list of keywords/prompts they could use as support during the interviews if needed.

The MoBa ambassadors used the Nettskjema Diktafon app (University of Oslo, 2024), installed on their phones, to record the conversations. The Diktafon app is a mobile application developed to make audio recordings in a secure and efficient way. The recordings were immediately encrypted on the phone and transferred to Nettskjema. The interviews were transcribed using Nettskjema's transcription service and reviewed by the research team. Only the research team has access to the recordings in Nettskjema. The interview data were coded and analyzed using the NVivo software for qualitative data analysis (Lumivero Pty Ltd., version 14, 2024). A preliminary codebook was created based on interview questions. The interviews were then reviewed to identify subcategories and codes, and the text within each category was condensed to its main content. The MoBa ambassadors who conducted the interviews participated in a webinar in June 2025 after the analysis was completed to review a draft of the report. Their comments were included in a revised version of the report.

2.3 Ethics and data privacy

Interview participants were asked to read and sign a consent form for this study before the conversation was recorded, which was also signed by the MoBa ambassadors. In addition, the MoBa ambassadors were required to sign a confidentiality agreement.

Before data collection took place, the project was pre-assessed by the Department for Research and Administrative Support (FAS) at the Norwegian Institute of Public Health, in consultation with the institute's Data Protection Officer. The processing of personal data in the study was considered to involve low privacy risk, and therefore a full data protection impact assessment was not deemed necessary.

3 Results

The results are presented under the main themes below and ultimately summarized with recommendations.

3.1 Participation

The MoBa ambassadors conducted seven interviews with participants aged 20–25 between June and September 2024. Three of the ambassadors interviewed two participants each, while one ambassador interviewed one person. The average duration of the interviews was 20 minutes. Among the seven participants, one was male, and six were students, while one was employed. The MoBa ambassadors recruited people they knew somewhat beforehand and who were interested in discussing this topic.

3.2 Willingness to participate in a population-based survey

Participants were asked whether they would be interested if they received an invitation to take part in a study like MoBa. Most (6) were unsure whether they would be willing to participate in a population-based study. Only one was directly positive. Participants said that their willingness to participate would depend on several factors, such as:

- What the invitation text says, what kind of study it is, and whether it seems interesting.
- Whether they have heard about the study beforehand, for example through media.
- How much time and energy participation requires.

3.3 Preferences for contact

Participants were asked how a population-based study should be designed to be appealing to young adults. Factors that would motivate young adults to participate — and those that would discourage participation — were also discussed.

3.3.1 Communication channels

Participants were uncertain about which communication channel would be best to reach them. Two participants mentioned that regular mail could be appropriate because it's fun to

receive something physical. One participant suggested that SMS might work, although there's a risk it could be overlooked. Several mentioned that they never read emails and would likely consider them spam.

Participant: "If you send an email, I'll never read it. I have like 7,000 unread emails. [...] If I'm not expecting an email, I'll never see it."

One participant also would wonder "how they got hold of my email address."

Two participants mentioned that trying to reach them on the street was not a good method because it didn't build trust. Reaching out by phone would be perceived as telemarketing.

Several participants (3) explained that information about the study should come through safe and familiar channels, such as friends, family, doctors, or teachers at school. One participant gave the example of a poster being put up at school to inform about the study.

Participant: "If it was, for example, at schools — because usually... the school has looked into what it is and confirmed in advance, okay, this is something they can stand behind. If it was on the street, I probably wouldn't have paid attention to it. But when it's inside a place like a school or university, it means the school has confirmed it in some way and said it's okay to put it up. Then it's much safer to trust it."

The same participant also discussed that being visible online is important, so that the institution inviting people to participate in the study is known, official, and easy to contact. Another participant mentioned that knowing the study comes from the Norwegian Institute of Public Health was reassuring and could be seen as a "stamp of approval." In general, participants were skeptical of senders that seemed unfamiliar.

One participant mentioned that knowing many people are participating in a study could also give an impression of seriousness and credibility and thus motivate contribution.

3.3.2 Information about purpose and use

Several participants emphasized the importance of being clear about the purpose of the study and what is being investigated. One participant explained that if the information feels like "very generic copy-paste text," it will be easy to ignore.

Information about the population-based study should be simple, targeted, and relevant to the individual. It should be easy for the potential participant to understand why they are part of the target group and why they should contribute, so that the study feels useful and relevant. One participant mentioned that personalization usually works well: "If you feel it's directly aimed at you, it's more effective than if it's more general."

Participant: "[...] If it's like, okay, we're looking for menstruating women to find out whether menstruation has become a bigger issue than it used to be. Then it's like, okay, that's concrete, I can relate to being a menstruating woman. I can answer this question. It must be something I can relate to, something I am or have, that makes me think, okay, of course they need me, in a way."

Although information is important, one participant also pointed out that it should be short and concise, with the option to explore more details later if needed. The potential societal benefit of a study was also considered an important factor, and two participants mentioned that they would like to contribute to society to help others.

Several participants (4) reflected that it would be interesting to know whether they would receive results from the study, either general or individual — for example, results from blood tests. One participant said they wouldn't be willing to read research articles filled with academic language and would prefer to receive simple information. However, the participant noted: "It's difficult, because a study produces a lot of information, not just one thing [...]."

One participant mentioned that some people might be skeptical about participating in a population-based study if they don't know how their data — for example, genetic information — is stored. Another said it's important to know that what they contribute will actually be used.

Participant: "I'm afraid that... if you collect a bunch of anonymous blood samples, that they'll be wasted, [...] or that they won't be used to their full potential, and I want what I sacrifice to be worth it..."

3.4 Preferences for the collection of data and biological material

Participants were asked what they would be willing to do if they participated in a population-based study.

3.4.1 Easy participation

There was broad agreement among participants that participation in a population-based study should be easy and not time-consuming. Information about how much effort participation requires should be provided when potential participants are invited. Participation should be simple enough that it doesn't interfere with other activities.

3.4.2 Questionnaires

Participants had several opinions on how questionnaire surveys should be designed to be appealing. In general, answering the survey should not take much time. One participant mentioned under 10 minutes.

Participant: "Between two and ten minutes, that feels very non-intrusive. Then it doesn't really matter if it's two or six minutes. But if it goes over ten minutes, then... I kind of give up halfway because I see that my progress is slow, and I don't feel like answering it now, so I forget."

Several participants mentioned that the questionnaire should include information about how long it will take to complete. It should also be possible to see progress while answering questions, for example, with a progress bar.

Participant: "[...] There's a bar at the bottom that shows how much time you have left, you can jump back and forth between questions. I could do this because then it's not locked, and you don't have to sit and answer for an hour — you can do it in between other things too."

Being transparent about the time required to complete the survey was considered important. If it says it takes 5 minutes, it shouldn't take more than 5 minutes.

One participant mentioned that the questions should be concrete and make sense:

Participant: "If there's a lot that I generally don't see the purpose of — like they ask about age, gender, that's fine — but then they start asking about nationality, and then it's like... Okay, where is this survey coming from, why should I answer it... and then... the more general the questions are, the less likely I am to finish, because it's just... boring, in a way."

Several participants (3) mentioned multiple-choice questions as a good format for surveys, preferably using a Likert scale (e.g., from 1 to 5).

If qualitative data is to be collected, the number of open-text responses should be limited as much as possible. It may also be helpful to indicate how many words can be entered in the text field (e.g., 100 words).

Participant: "Very few text responses, because it tends to go very slowly, and then it's easier to just say, I don't know, write something very short. If you manage to limit these text boxes, I think the value of the responses will be much higher, because people will be more willing to elaborate if there are fewer boxes than if there are many."

One participant explained that if answering open-text questions takes too much time, the respondents may lose their "attention point" and be unable to fully express a thought. This can negatively affect the quality of the responses.

Another participant mentioned that even though they liked writing, they wondered whether anyone would "bother to read all of it."

Another participant said that if qualitative data is desired, it would be better to collect it through a conversation with a doctor at a clinic rather than spending time answering on a screen.

Other types of data collection were mentioned in some interviews. One participant discussed that data collection via phone calls could be relevant because it is easily accessible — if people are informed about it in advance. Another participant considered audio recordings that the participant could make themselves but concluded that it's a process that requires planning and is far too time-consuming.

The use of chatbots was also discussed with a couple of participants, who were skeptical of it because it was unclear whether the chatbot would be able to gather the necessary information about the participant.

Participant: "I'm skeptical... will this chatbot get the information it's supposed to get from me? [...]. You can't just collect my answers, you must collect the whole story. Because you can't just look at how I respond, you must see how the chatbot asks. [...] It kind of feels endless, you don't have any sense of progress. [...] The thing is, you can have an endless conversation with an AI — that's kind of the whole point of an AI, almost."

3.4.3 Login and links

Several participants preferred receiving a direct link to the survey rather than having to log in with a username and password. Two participants mentioned using Bank-ID for login (secure electronic identification system widely used in Norway). It was important that the link appeared trustworthy and came from a known sender (such as the Norwegian Institute of Public Health); otherwise, they would be skeptical to use it.

Participant: "Well, it's become pretty easy to log in with Bank-ID now. It's not that annoying code device anymore, so it's kind of nice. So, I think maybe... I usually hate logging in with Bank-ID, but I feel like when it comes to things like this, it might be okay in terms of privacy."

Participants mentioned that they would be unlikely to participate if the process was too cumbersome — for example, if the system was difficult to log into or required creating an account, entering an email address, or setting up a password.

Participant: "Create a password? That's not happening. That's not happening. I'll just click out of there, sorry. Nothing is that important."

3.4.4 Data collection frequency

Participants recommended limiting how often questionnaires are sent out, with several participants suggesting a frequency of every three to six months. One participant mentioned that a possible solution could be to offer flexibility, allowing the participant to choose how often they want to respond to surveys — for example, once a month or every three months.

However, participants had different preferences. One mentioned that it's important to find the right balance between the number of requests and what each request requires.

Participant: "I'd rather answer 10 very short surveys than two very long ones. So, it's about how you balance it."

Another participant had a different approach and said they preferred receiving a long questionnaire, but infrequently — if it's possible to complete it gradually and save responses along the way.

3.4.5 Collection of biological samples

Several participants (4) said they would be willing to provide blood samples under certain conditions.

One participant mentioned they would only be willing to give a blood sample if it were used to test a wide range of things, because giving a blood sample is demanding — so it has to be worth it. If the blood sample were only used to "test the average population's iron levels, then I wouldn't do it." The same participant also mentioned that receiving results could serve as a "small reward."

Providing a blood sample should not be too time-consuming. For example, one participant preferred to give an extra blood sample if they were already at the doctor's office.

Participants also said they might be willing to provide a urine sample if it was easy to do so and the collection was facilitated — for example, if it was done at the doctor's office. Several participants (4) were negative about collecting a urine sample at home and sending it by mail. That process was considered difficult to carry out independently and time-consuming — for example, if one had to go to the post office to deliver the sample.

Participant: "I wouldn't do it. For me, it's an extremely intimate thing to spend time peeing in a container, packing it up, and then figuring out how to send it safely by mail. [...] If it was like, you can go to this place that's reasonably nearby, like in a city, and it

takes 5 or 10 minutes, then okay. [...]. But I probably would never consider doing it at home, just because it's a whole process."

Participant: "It doesn't feel serious if I'm sitting on the toilet in my own bathroom peeing in a cup. It feels more 'legitimate' when it's done at the doctor's office."

3.4.6 Reminders

Reminders were mentioned by a couple of participants. One felt that repeated reminders could be demotivating.

Participant: "And if they're pushy, that's demotivating. Shockingly enough. If it's like, hey, reminder. Hey, reminder. Hey, by the way, we sent this to you 30 minutes ago, but you haven't responded yet, can you reply? Like, chill out! Not that anyone has done that, but you know... I mean, some days I'm just not in the mood for surveys, I just don't feel like it. There's not much you can do about that."

Another participant said that reminders can work, and that they might complete an activity after receiving a reminder "just to be done with getting reminders."

3.5 Use of incentives

Most participants (5) believed that incentives would motivate young people to participate in population-based studies. Examples of incentives included gift cards, prize draws, money, or discounted doctor consultations. The main reason participants gave for using incentives was that young people don't necessarily respond to arguments like helping society.

Participant: "I think for younger people it's more about, hey, I'm young and healthy, so I'm fine anyway. Then it becomes more about... what can I get out of it... that's what's important to think about."

Participant: "It's money, I think. I don't think a 15-year-old cares about 'you're helping society!' I think they couldn't care less, to be honest."

One participant was negative toward incentives and found them demotivating.

Participant: "Personally, I like it much less... I actually feel it's even more demotivating. For me, giveaways — it feels like a cheap way to get more people to respond. Don't do giveaways, really."

The same participant felt that such incentives might attract people who only complete the survey to win something. The risk is that you might get "false answers" because participants just want to "get through it to be part of the draw."

Another participant said they would be motivated by incentives but acknowledged that using them could be challenging.

Participant: "I'd say, if they paid me, I'd do it. But you know, I understand that it's a bit impractical. You're trying to do a good thing. Now I'm supposed to help society — if you send me money first. That's kind of backwards. But a prize draw is acceptable."

3.6 Attitudes toward passive participation

Participants were asked whether they would consider participating in a population-based study as a passive participant, meaning allowing researchers to use previously collected samples and questionnaires from them for research, without being asked to provide new data or samples.

Most participants (5) were positive toward passive participation, and several felt it was a better solution than active participation because "there's not much you have to do yourself" and "passive requires the least energy." One participant suggested a flexible approach, allowing participants to choose whether they want to be active or passive depending on what suits them best at the time. For example, someone who prefers passive participation might change his/her perspective after a school semester and later feel more motivated to be active.

Participants viewed passive participation as unproblematic because they trust that their data will be used in an ethically responsible way.

Participant: "I think there are a lot of people — like me — who really trust that when I give my data, it will be handled ethically. So, if it doesn't require anything more from me than giving a certain number of hours up front, and then the data is used for research, it doesn't require any extra thought from me about whether it's used or discarded."

3.7 Relevant research topics

Participants were asked which research questions or topics they thought could be interesting for young adults, and several themes were mentioned.

Health and disease, such as hereditary illnesses, body and health, habits in young age that may affect health later in life (e.g., alcohol consumption, sexual health), sexually transmitted infections, effects following the COVID-19 pandemic, cancer among young people, and dementia (due to family experiences), physical health, menstrual pain and women's health, mental health, use of social media and its impact on mental health, violence in social media (e.g., violent videos).

Societal attitudes, such as attitudes toward war, climate, and the environment.

3.8 Other factors that may influence willingness to participate in surveys

Too many inquiries from different sources can make it difficult to distinguish between those that are meaningful and others — for example, distinguishing between a user survey from a private company and a study from the Norwegian Institute of Public Health.

Participant: "[...] A user survey from a company is really quite a bit less valuable compared to a user or personal survey from the Norwegian Institute of Public Health, in a way... But when there are so many forms and so many surveys, it's hard to know that this one matters more than the others... [...] Because you get spam in your email, and you get spam in your messages, and you get tons of ads and user surveys on Instagram, and then it kind of becomes... too much stuff, so it's easier to just ignore everything instead of filtering."

Another participant mentioned that there are so much input and stimulation that it can be difficult to find time to participate in a population-based study.

4 Discussion

Young adults are MoBa's future and therefore a particularly important group to take care of. The MoBa ambassadors made a valuable contribution by gathering more knowledge about what motivates or discourages young adults from participating in population studies like MoBa. Although the sample in this study was limited to only seven participants and cannot be considered representative of this population group, there are several commonalities across the interview data that may indicate what is important to consider when engaging young adults in a longitudinal population-based survey.

Factors that may motivate young adults to participate in population studies include clear and personalized information from reliable sources that explains the importance and societal benefits of participation, as well as simple and quick procedures for participation, and the use of incentives. A previous study among youth also suggested that personalization and the use of financial incentives can positively influence participation (Jong et al. 2023).

Knowing that one's contribution matters to research and society, and receiving information about general and individual results from the research, can also be significant. One way to demonstrate the usefulness is to provide participants with concrete examples of how findings from previous studies have led to important societal changes. Receiving results from the research, whether general or individual, has previously been mentioned as an important motivating factor for young people (Synn et al. 2025). The use of digital solutions can make this easier in future studies (Oakley-Girvan 2022).

Flexibility in how one participates in the study was mentioned by our participants and was also identified as an important factor in a previous study. That study recommended giving young participants the opportunity to decide how much they want to participate based on their abilities, interests, skills, and availability (Rouncefield-Swales 2021). Participants in our study were particularly positive about being able to choose between being active or passive participants.

Factors that may discourage young people from participating in population studies include lack of familiarity with the sender of the invitation, lack of information about the purpose of the study and how the data will be used, use of email as a communication channel, and requirements to complete long and time-consuming surveys. Survey questionnaires that require many text responses or are difficult to log into can hinder participation. The same applies to the use of home tests and too many reminders. Representatives from European population studies had similar experiences and recommended using simple data collection solutions and avoiding the use of emails (Budin-Ljøsne 2024).

4.1 Limitations and opportunities

This study had a limited number of participants, mainly due to capacity challenges among the MoBa ambassadors. There was also a gender imbalance among the interviewees, with only one male participant. Additionally, only one of the participants was employed, while the

others were students. It is possible that young adults who are working experience greater time pressure and therefore might respond differently to the questions.

It is also worth noting that the participants interviewed likely had some prior interest in the topic. Future studies should therefore consider including young adults who are initially less engaged in health research, to obtain a broader and more nuanced picture of attitudes toward research participation.

Methods for engaging young adults in population studies like MoBa remain an area with significant potential for development. Further research is needed to map their needs, preferences, and barriers to participation. This study shows that involving young people as coresearchers is an effective method for gaining valuable insights. This aligns with findings from other studies that have engaged young co-researchers in health research (Fløtten et al. 2023). The MoBa ambassadors contributed to several parts of the research process and found the role meaningful and rewarding.

We encourage future research projects and population-based studies—both in Norway and internationally—to adopt similar models. By involving young people in research, we can better understand how to reach new generations and motivate them to participate in studies like MoBa.

4.2 Experience as co-researchers

In July 2025, the MoBa ambassadors provided feedback on their experiences as co-researchers in the project. They felt that their contributions were important and beneficial to society and expressed satisfaction with their collaboration with the research team at the Norwegian Institute of Public Health (NIPH). They were happy with the guidance and support they received thought the technical solution using the Diktafon app was simple and user-friendly. Being able to follow the project from start to finish and having the opportunity to be coauthors of the report was especially highlighted as positive. The MoBa ambassadors also found it motivating that the project received attention at conferences.

At the same time, the MoBa ambassadors expressed a desire for broader participation and greater diversity in the project—something that could not be realized this time but should be considered in future projects. Among other things, it was suggested to involve more coresearchers and to recruit more broadly both geographically and socially. It was also emphasized that the project has the potential to serve as a pilot for larger initiatives, both nationally and internationally, to make population-based studies more relevant and inclusive for young adults.

5 Factors influencing participation in population studies

Below is a summary of the key points raised by the participants.

Recruitment and information

- The population study should be relevant, beneficial to society, personalized, and have clear objectives.
- Clear information should be provided about what is being studied, how many people are participating, and why. The information should be easy to understand, concise, with the option to elaborate if needed, and relevant to the target group.
- It should be clearly explained why the contribution of young adults is necessary, preferably with concrete examples from previous studies.
- Unknown senders and general, impersonal messages do not motivate participation.
- Recruitment on the street or via phone is not considered trustworthy.
- Some people enjoy receiving something physical in the mail. SMS may be appropriate, but there is a risk it could be overlooked. Email is often seen as spam and not trustworthy.
- Information about the study should come from credible sources such as the
 Norwegian Institute of Public Health, or familiar and trusted sources like friends,
 family, doctors, or teachers. An official online presence creates a sense of security.
 Information about how many participate in the study can enhance the perception of
 seriousness and credibility, especially if the number of participants is high.
- Concise information about how data is stored and used, as well as what general and individual results will be shared with participants (e.g., blood test results), helps build trust.

Simple participation

• Participation should be easy and not time-consuming.

Questionnaires

- Preferences varied regarding how long it should take to complete a questionnaire from short forms that take under 10 minutes to longer ones that are sent less frequently.
- Information about the time required to complete the questionnaire should be clear, and it should not take longer than stated. A progress bar showing completion status during the survey is recommended.
- Questions should be concrete and meaningful. It should be easy to understand why
 demographic questions are asked. The use of multiple-choice questions with a Likert
 scale is preferred. The number of required text responses should be limited, and an
 indication of word limits should be provided. An alternative method could be
 collecting qualitative data through conversations, for example, with a doctor.

Login and links

- Direct links from trusted sources are preferred over usernames and passwords. Ideally, there should be no requirement to create an account with a username and password.
- Use of familiar tools like Bank-ID is preferred to ensure data privacy.

Frequency of data collection

- Questionnaires should be sent as rarely as possible, every three to six months.
- Participants should have the option to choose the frequency themselves. If long questionnaires are used, there should be an option to complete them gradually.

Collection of biological samples

- It may be acceptable to provide blood samples under certain conditions, such as when the sample is used for multiple tests and individual results are given as a "reward." For urine samples, most participants prefer that collection takes place at the doctor's office rather than at home.
- The collection should not be time-consuming.

Reminders

 Repeated reminders can be demotivating, but some participants felt they help motivate completion of the task.

Use of incentives

 Incentives such as gift cards, prize draws, money, or discounted doctor consultations can motivate participation. However, one participant believed that incentives could lead to false answers.

Attitudes toward passive participation

• Most participants were positive about passive participation, as it requires the least effort. Offering a choice between active and passive participation was recommended.

Relevant research topics

- Health and disease: Hereditary diseases, body and health, youth habits, sexually transmitted diseases, COVID-19, cancer, dementia, menstrual pain, women's health, mental health, social media, violence on social media.
- Societal attitudes: Attitudes toward war, climate, and environment.

Other factors

- Too many inquiries can make it difficult to distinguish between important and unimportant surveys.
- Many impressions and stimuli from multiple sources can make it hard to find time for participation.

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Appendices

Interview Guide

- 1. If you received an invitation to participate in a survey like MoBa, would you be interested in participating? (Yes/No, why)
- 2. What would you be willing to do as a participant? For example, complete questionnaires, submit a urine sample, take a blood test (Why/why not)
- 3. What do you think could motivate young adults to participate? Mention the 1–3 most important points (see "prompts" if needed)
- 4. What do you think could discourage young adults from participating? Mention the 1–3 most important points (see "prompts" if you needed)
- 5. How do you think a survey should be designed to be attractive to young adults? For example, practical aspects (how to collect data, how often, etc.)
- 6. Which research questions/topics do you think would raise interest among young adults?
- 7. Would you consider participating in a population-based survey as a passive participant? That means allowing researchers to use previously collected samples and questionnaires from you for research, without asking for anything more.

Also ask participants:

- What are your interests? (in your free time)
- What kind of education do you have? (level + field)
- Age and gender?

PROMPTS

What can motivate participation:

- If participation is easy
- If it doesn't take too much time to answer (e.g., split into small questionnaires)
- Prize draws vs. money If information is given about odds / chances to win
- Selection / information about why we are asking you specifically, how many invited
- If the purpose of the survey/MoBa is understood
- Familiarity with the sender "This is from researchers at NIPH, NIPH is..." Sounds trustworthy.
- Feedback of survey results aggregate statistics or individual results
- If friends also are invited

• Use of flashcards with fun facts between questions - For example: Did you know that X% of 17-year-olds have this sexually transmitted disease/disorder?

What can discourage participants:

- Lack of interest in the topic does the topic matter?
- No time.
- Depends on what it involves too inconvenient.
- Fear of giving samples.
- Scepticism toward research or the sender
- Doesn't understand the purpose of the survey/research. Doesn't know enough about the survey/MoBa beforehand.
- Scepticism about how the data will be used / privacy concerns.
- No friends are participating
- Too cumbersome to log in Does the login method for the questionnaires matter? For example, SMS with a direct link to the questionnaire, or via BankID
- Other things?



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