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Predictors of satisfaction with digital follow-up in Norwegian Labor and Welfare Administration: A sequential mixed-methods study

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Abstract

This study examines predictors of satisfaction with digital follow-up among young people in the Norwegian Labor and Welfare Administration (NAV). A total of 1195 young employment seekers were recruited across Norway. Participants completed a cross-sectional online survey comprising demographic questions, general questions on service quality, digital services, and open-ended questions on their experiences with NAV. Using a mixed-methods approach, we developed hypotheses derived from qualitative open-ended text fields and tested these assumptions with quantitative analyses. Results revealed three themes related to satisfaction (information, response time, and impersonal contact), and multiple linear regression identified perceived response time, language comprehension, and information as predictors. Perceived response time was found to be the strongest predictor. We suggest that clients' perceptions of response time may be influenced by their service expectations, and service expectations may be shaped by the application of digital technologies. Hence, clarification of expectations may be of importance in digital follow-up of young people. Finally, this study underscores the importance of clear and understandable information to reduce

digital exclusion. We suggest that these changes should occur in collaboration with user-panels.

1 | INTRODUCTION

Digital service provision is spreading throughout public sector, including employment services, promising to make services more efficient and user oriented (Løberg, 2022). Citizens are now expected to find information and interact with governments online, shifting both responsibilities and risks to these clients (Jansson & Erlingsson, 2014). Young employment seekers are of particular interest in this context. While these clients often lack experience from both the labour market and in navigating public services, being 'digital natives' might give them an advantage in this new era of digital government.

Young employment seekers are often expected to be digital, as these persons grew up using web sites, chats, and apps. Indeed, research shows that young clients often value digital public services (Liaaen et al., 2021; Mishna et al., 2015). These clients can even put pressure on public services to become more digital, as their extensive use of digital technologies creates new expectations of available services (Mearns et al., 2015). The changes in interactions between clients and frontline workers can also be regarded as 'faceless interactions'. This term refers to the practice where division of responsibilities and user involvement is increasingly unclear, and underscores the necessity of new skills and communication solutions (Fugletveit & Lofthus, 2021).

Research has also identified barriers for digital participation, such as the need for both digital and bureaucratic skills (Ekelund, 2021). These barriers can create a 'digital divide' between clients who are able to navigate digital services and those who are not. Initially, this divide referred to the gap between individuals with and without access to technologies and the internet (Brandtzæg et al., 2011). More broadly, digital division refers to technological disparities related to race and ethnicity, economic inequality, and health disparities (Francis & Weller, 2022; Medero et al., 2022; Philbin et al., 2019), or digital literacy, competence and language skills when accessing digital public services (Barth & Veit, 2011).

In this study, we examine predictors of satisfaction with digital follow-up for young employment seekers in the Norwegian Labour and Welfare Administration (NAV). Norway is among the highest-ranking countries in the use of online public services (OECD, 2017), and NAV is often considered a 'best case' within public sector digitalization, who provides employment services to the Norwegian population. While there is limited research on how young people experience digital follow-up, there are good reasons to focus on this group. Despite several initiatives in the Nordic welfare states the past decade, inclusion of young people in the labour market still seems to pose a challenge. These individuals may risk permanent exclusion, as few enter or return to work, education, or labour market initiatives after being outside of the labour market over time (Pettersen et al., 2022). Tailored and individualised follow-up from employment services has proven effective for young people outside the labour market (Bond et al., 2016, 2023; Sveinsdottir et al., 2020). At the same time, employment services are increasingly becoming digital (OECD, 2022), which can challenge individualization (see, e.g., Bruhn, 2015).

1.1 | Satisfaction with digital public services

The past decades, focus points of administrative reforms have often included user satisfaction and trust in public services. A component of these reforms consists of treating citizens as consumers with an emphasis on client

oriented services (Van de Walle, 2017). This concept of consumer satisfaction is rooted in marketing research and aims to serve as an indicator of success of public services (Fraser & Wu, 2016; Van de Walle, 2017), where satisfaction can be understood as the appeal, acceptability, and approval of a service experience (Nelson & Steele, 2006).

Previous research has examined how digitalization affects user experience and satisfaction. For instance, digital skills, online access, system quality, technology acceptance, user satisfaction, and user experience are commonly explored domains (Heponiemi et al., 2020; Vítor et al., 2022). Conversely, barriers relate to poor self-rated health, financial hardship, low age, lower level of education, and degree of urbanisation (Heponiemi et al., 2021; Vítor et al., 2022). Timely delivery (i.e., perception of acceptable response time) are associated with increased satisfaction (Lamsal & Gupta, 2022), and more broadly, with acceptance of information systems (Saha et al., 2010), and personalised online services, such as saving and storing information (Chan, 2022). This relationship may depend on factors such as technology acceptance and the perceived usefulness and perceived ease of use of services (Balaskas et al., 2022; Sharma et al., 2014), and transparency by the governing institution (Bernhard et al., 2018), such as public discussions or stakeholder engagement through media sites (Bonsón et al., 2015). In countries with generous welfare states and broader unemployment compensation, such as Norway, research suggest that citizens hold more positive views towards technology acceptance (Lim, 2020).

While research on satisfaction with digital follow-up among young people in Norway is limited, Thorgersen (2017) identified positive associations between satisfaction and the experience of being 'well looked after' in NAV. Moreover, digital clients consistently reported slightly better experiences with digital application processes than analog processes. Nyberg et al. (2020) finds that satisfaction with follow-up in NAV seems to increase with age, and those on disability benefits are less satisfied than other clients. In terms of digital follow-up, digital competence, and household income influence satisfaction. Additionally, clients with a higher level of education tend to be less satisfied (Nyberg et al., 2020).

NAVs annual satisfaction survey for 2022 demonstrated that three out of four clients were satisfied with NAV. However, with the increase of digital follow-up, 57% of the respondents said it was difficult to reach NAV when they needed help, and 63% found the information provided by NAV difficult to interpret. Analyses demonstrated that young people have lower levels of 'bureaucratic competence', which is associated with a poorer understanding of information provided from NAV (Norwegian Labor and Welfare Administration, 2022). That is, the ability to obtain and understand information from public authorities (Gordon, 1975). This is also the case with bureaucratic and digital competences among individuals with immigrant backgrounds and long-term health issues (Norwegian Labor and Welfare Administration, 2022).

1.2 | Research context: Digital services in NAV

NAV is a public agency under the Ministry of Labor and Social Affairs, which is responsible for organising and financing labour market measures, social security benefits and social assistance. NAV is one of the largest public agencies in Norway and manages a third of the national budget through several different schemes, such as sickness benefits, unemployment benefits, pensions, cash benefits, work assessment allowances, and social assistance.

Providing a broad range of services to the entire Norwegian population, NAV is often considered to be a prime example of public sector digitalization. The introduction of digital self-service solutions enables clients to solve administrative tasks on their own, such as finding information or sending in applications online. Clients who need help navigating these digital services can call or chat with NAV's call centre or communicate with a chatbot. For more individual follow-up, clients can talk with their counsellors in a digital dialogue or meet them face-to-face. This range of communication channels reflect the internal organisation of work in NAV; while counsellors at the local offices focus on labour-oriented counselling, benefits are for the most part handled in centralised units outside of the local offices. Using the correct channel is supposed to provide clients with 'the right answer at the right time', as their questions are directed to the person who can answer it. This means that clients must understand and use different communication channels to navigate NAV.

To guide both clients and workers' channel choice, NAV launched the Channel strategy. The basic idea is to get more clients to use electronic channels, such as digital chats or phone calls, and to plan meetings in advance. In simple terms, NAV directs clients with less complex needs to electronic channels, which is supposed to free up time in the frontline to follow-up vulnerable clients. Hence, the idea is not that digital communication should replace meetings face-to-face but rather allocate the resources to those who need it the most. Indeed, previous research has shown that the digital communication does not replace meetings in NAV (Hansen et al., 2018). Moreover, clients often use a combination of both traditional and digital channels to communicate with NAV (Hansen et al., 2018), which implies that digital communication supplements rather than replaces meetings.

The main platform for digital interaction between counsellors and clients is the digital activity plan. The digital plan is interactive, allowing both counsellors and clients to suggest relevant activities, set deadlines and update each other on their progress. Within the plan, there is a digital dialogue function. In line with the plan, this dialogue is supposed to be used for labour-oriented matters. Previous research nevertheless shows that is can be difficult to make these conversations labour-oriented (Ekelund, 2021; Hermanrud, 2022), as clients ask about benefits rather than labour-oriented counselling (Ekelund, 2021).

Still, the digital dialogue offers clients new opportunities for direct communication with their counsellors. Before the digital dialogue was introduced, clients often had to contact their counsellors through intermediaries (e.g., workers at the call centre or office reception), meaning that the digital dialogue makes counsellors more available to digital clients (Løberg, 2021). Overall, research shows that both counsellors and clients seem pleased with the digital dialogue (Liaaen et al., 2021). While the digital dialogue provides a direct line of communication, it is asynchronous, meaning that there is a time delay in the interaction. For instance, counsellors might check and respond to messages between meetings, similar to an e-mail.

2 | AIM OF THE STUDY

To facilitate digital follow-up among clients in NAV, more user-centric research is needed to understand barriers and facilitators among young clients. Hence, the aim of this study is to explore predictors of satisfaction with digital follow-up among young employment seekers in NAV, using a sequential mixed-methods design.

3 | DATA AND METHODS

3.1 | Data collection procedure

This is a cross-sectional online study of 1195 young people between the age of 18–25 receiving services from NAV. The study was approved by the Norwegian Center for Research Data (reference number 737672). The survey was developed by the second author in collaboration with NAV and a reference group consisting of 10 young people, aged 16–21 (for more details, see Sadeghi et al., 2023). Those receiving permanent disability pensions are excluded from the sample, as their follow-up differs from the general sample of employment seekers. The survey included information on study participation, anonymity, and the option to withdraw from the study. The online survey was sent out to a random sample of 15,355 young people using Nettskjema, which is a secure and encrypted tool for development and distribution of online questionnaires. The random sample was drawn by NAV from a population consisting of a total of 51,228 individuals. The invitation was sent via a message through the digital platform 'My NAV', with information about the survey and a link to the questionnaire itself. An automatic reminder was sent to those who had not opened this message 7 and 14 days later. Due to privacy concerns, we did not contact potential participants individually. We received valid responses from 1195 of the 15,355 recipients, resulting in an 8% response rate. The questionnaire encompassed a combination of closed-ended traditional survey items, and

TABLE 1 Sample characteristics ($n = 1195$).

	Frequency	Percent	Sample and population
Gender			$pp_{diff} = 15.0$ ($p < 0.001$)
Male	406	34.9	
Female	758	65.1	
Age			$M_{diff} = 0.26$ ($p < 0.001$)
18–20	240	20.4	
21–23	501	42.7	
24–25	434	36.9	
Education			n/a
Primary school	375	32.4	
High school	605	52.3	
Vocational education	25	2.2	
Higher education 1–3 years	122	10.6	
Higher education 4<	29	2.5	
Place of birth			n/a
Norway	1051	88.8	
Nordics	32	2.7	
East Europe	19	1.6	
Asia	46	3.9	
Africa	24	2.0	
South America	8	0.7	
North America	3	0.3	

Note: The number of informants in each table varies due to missing data; population-level (aggregated) data obtained from the Norwegian Labour and Welfare Administration.

Abbreviations: M_{diff}, mean difference between compared groups (difference tested with one-sample *t*-test); n/a, data not available; pp_{diff}, difference in percentage points between compared groups (difference tested with Chi square test).

open-ended questions. We received a total of 708 responses from the two open-ended questions. Responses varied in terms of length and descriptions and included both 'thick descriptions' and one-worded responses (yes or no).

As seen in Table 1, 65% of the participants were female, and almost half of the sample stated that high school is their highest completed education (52%). A smaller number (10%) reported that they have 1–3 years of higher education, and very few (2.5%) stated that they have more than 4 years of higher education. Most of the sample was born in Norway (88%), followed by Asia (3.9%), the Nordics (2.7%), and Africa (2%). In terms of representativeness, Table 1 shows that women were overrepresented in the sample, compared with the population. In terms of age (18–25), minor differences were detected.

3.2 | Mixed-methods design

The research approach adopted in this study is a sequential mixed-methods design, which integrates both qualitative and quantitative components to provide a comprehensive understanding of the research topic (Johnson et al., 2007). The sequencing of data involves the qualitative component being conducted first, followed by the quantitative component, with a 'point of integration' where both components are combined (Schoonenboom & Johnson, 2017). For this study, qualitative data were analysed first to generate initial findings that were used to develop hypotheses, which were then tested using quantitative methods.

3.3 | Measures

The survey was developed to explore young employment seekers' experiences with NAV in three domains, that is, their experiences with services during the covid-19 pandemic, digital services compared to in-person services, and general experiences with NAV. The survey included both open-ended and closed questions.

3.3.1 | Open ended questions

The qualitative data in this study were collected from two open-ended questions in the survey. Open-ended questions allow participants to deviate from standardised categories, which provides richer data and reduces blind spots in the research. Participants were asked the following questions 'Specify how the help you have received from NAV has changed after covid-19', and 'Do you have any further comments regarding your experiences with the help you have received from NAV the past 6 months?'

3.3.2 | Dependent variable

Satisfaction with digital follow-up was measured with a single item. Participants were asked the following question: 'All in all, how satisfied are you with the help you have received from NAV online?' Satisfaction was measured on a 5-point Likert Scale ranging from very dissatisfied to very satisfied. The variable was normally distributed, with a slight right skew (mode = 2.0, std. error of skewness = 0.073). While no relevant validated scales were available for use in this study, we argue that a single item measure is suitable in this study because the construct is clearly defined, narrow in scope and one-dimensional (Fuchs & Diamantopoulos, 2009).

3.3.3 | Independent variables

Selection of independent variables (predictors) was a posteriori based on hypotheses generated from previous research, qualitative analyses, and available survey data. *Perceived response time* was measured by asking respondents 'approximately, how much time do NAV take to answer you about your inquiry?' Six response alternatives were coded as a dummy variable (0 = more than 2 weeks; 2 weeks; 1 = 1 week; 3 days; 1 day; right away). *Information* was measured by asking participants to rate the extent to which they agreed that they have received appropriate information from NAV. Five response alternatives were coded as a dummy variable (0 = strongly disagree, disagree, neither agree nor disagree, 1 = agree and completely agree). Level of *language comprehension* ('how much Norwegian do you understand when you talk with someone?') was dummy coded based on four response categories (0 = understand nothing, understand a little; 1 = understand quite a lot, understand everything).

3.3.4 | Covariates

Gender (0 = women; 1 = men), *age* (continuous variable), and *educational level* (dummy coded: higher education) (higher education 1–3 years; higher education ≥4 years) versus no higher education (lower secondary school; started upper secondary school but not completed; upper secondary school, general studies; upper secondary school, vocational studies; post-secondary vocational school) were used in the analyses. Follow-up through video, phone, and digital activity plan comprised five categories, 'not at all', '1–2 times the past 6 months', '1–2 monthly', 'weekly' and 'multiple times a week'. Independent dummy variables were created for the three types of follow-ups where

those who had not received follow-up and those who received follow-up 1–2 times the past 6 months were coded as '0' and all others were coded as '1'.

3.4 | Qualitative analyses

The qualitative results from this study were used for two purposes. The first was to explore participants opinions and experiences with NAV's digital services beyond the pre-determined quantitative categories. The second was to construct hypotheses that could be tested using quantitative methods, thus allowing for data sequencing. An inductive and semantic thematic analysis (Braun & Clarke, 2006) was chosen to analyse the two open-ended questions. An inductive approach in thematic analysis is considered a 'bottom up' approach, where the analysis follows patterns in the data, meaning that the analysis does not follow a pre-determined frame. The data were analysed in six steps and coded by two separate researchers to ensure rigour of coding procedures, and later compared and discussed in the research group.

The steps included: (1) becoming familiar with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report (Braun & Clarke, 2006). During the first phase, we read through the data and became familiar with the content. An early observation from the material suggested that the respondents' mentions of digitalization or digital follow-up were often unprecise and scattered. One reason for this could be the phrasing of the questions, specifically how the questions do not explicitly ask about digitalization. During the second step, we coded all mentions of digitalization in NVivo 2020 to create initial codes. In the third step, codes were merged into themes. This process resulted in seven preliminary themes, such as 'digital competence', 'lack of communication', and 'social care system strain'. In the fourth step, the themes were reviewed to ensure they accurately reflect the data. This was done by discussion the preliminary themes to assure appropriateness. After reviewing the overall analysis, the themes were too narrow and overlapping. Three themes were merged based on discussions between the researchers, namely 'Navigating digital services', 'Insufficient communication and response time' and 'Impersonal contact'. In the fifth step, the themes were named and written out.

3.5 | Quantitative analyses

All statistical analyses were performed using IBM-SPSS 27 except dominance analysis which was performed used STATA 17 MP. Statistical significance was defined as $p < 0.05$. Descriptive statistics were used for participants' characteristics and frequency tables. Hypotheses regarding predictors of satisfaction with digital follow-up from NAV were tested by means of a multiple linear regression analysis. Missing data were treated with pairwise deletion. Dominance analysis was used to determine the accurate and relative importance of the significant predictors in the regression analysis. Prior to conducting the analyses, data were tested for assumptions, such as multicollinearity and homoscedasticity.

4 | RESULTS

4.1 | Themes identified through qualitative data

4.1.1 | Information

When asked to elaborate on their experience with NAV over the past 6 months, respondents described both positive and negative experiences with navigating, understanding, and utilising digital services. NAV's website gives clients' access to these services. The site provides extensive information, access to online applications, and opportunities for digital communication. Nevertheless, respondents seem to struggle to understand the information on the website:

'It's too abstract sometimes, way too distant. It's all digital and very hard to understand.' The data suggests that some respondents struggle because of lacking digital skills:

> The contact with NAV has gone through my employer. I cannot make use of digital systems myself.

Some respondents are frustrated with digital services because they have complex needs that are ill-suited for digital follow-up, such as health issues. To illustrate, a respondent with health issues emphasised a need for external support to understand the information and navigate the services:

> I am autistic and strongly suspect ME [Chronic fatigue syndrome, CFS]. This is the reason I seek help at NAV, but it also means it's challenging to understand the guidelines because of unclear language. And I quickly get exhausted when meeting NAV, also through digital services. Without support from parents or others, I can't see how someone in my situation can be able to get the help they need.

Although digital skills and system knowledge could shape these experiences, many responses are also intertwined with critique of the online solutions, such as the layout of the website.

> The website and chat function does not have adequate information, and it's hard to navigate in 'Ditt NAV' [personalised web space that gives access to the activity plan and the digital dialogue]; this comes from a person with Norwegian as mother tongue.

Thus, clients experience the website as difficult to navigate: 'The website is extremely complex and messy.' Others struggled with application forms and wanted more information on how to interpret questions in the form:

> There should be better information about what they want with the questions in the application forms, it's very cumbersome to fill them out online when they are so fuzzy.

Problems with digital solutions and information increase the importance of clients' own system knowledge, resources, comprehension, patience, and support network. However, respondents also experienced benefits of digital services, related to increased convenience, flexibility, and improved access to counsellors. Some highlighted the convenience of contacting their counsellor in the digital dialogue instead of calling them: 'It's really convenient to contact the counsellor through chat in the activity plan.' For some, electronic channels created easier access to services: 'It's very easy to contact NAV online and over phone. I experience that they want to help me as good as they can.' Respondents also appreciated being able to send and receive documents online: 'I want more digitalization. For example, to be able to fill out, sign and send all documents, applications and so on digitally to and via NAV.'

4.1.2 | Response time

A major theme among the respondents were issues related to inadequate communication and information. Often, these experiences were related to response time. One respondent wrote 'It takes a long time before you get the answers you need' and described the experience as 'messy'. Respondents described processes of asking questions and awaiting answers for weeks (i.e., about decision letters or application status), often being in stressful situations with limited or no income.

> Received a decision letter that assumed I was a student, so no help [because students were not eligible for the relevant benefit]. Been trying to contact NAV digitally to make this right, but now haven't heard from them for two weeks.

Another respondent experienced the digital dialogue as too slow and limited, and found it necessary to call NAV to move the case forward:

> Takes up a lot of my day when I try to get in touch with NAV. Feel I don't get answers through digital messages, it takes time and it's difficult to start a dialogue with the counsellor. Feel that in NAV you need to call to get answers and help.

Moreover, respondents experienced receiving conflicting information from different people in NAV, which added to confusion.

> I rarely get help and answers to my questions, every time I get a letter, I need to talk to 100 different people only to understand what is being said, and there's very little help if you disagree. Don't have a counsellor, only talk with different people in the chat, and it's impossible to get through on the phone. It's very frustrating when you don't know where the next rent or food will come from, and you don't get answers.

While all clients have a counsellor, NAV is also organised in different administrative units, meaning that different people will often answer different questions in digital channels. Other respondents expressed fault towards the system. As one respondent notes: 'It's rarely the counsellors who are the problem, but rather the system they work in. They seem overworked and stressed all of them.' These respondents ascribed follow-up problems to systematic barriers, such as few employees, lack of resources, competency problems and too standardised services in NAV:

> I wish it was easier to get an answer. That counsellors shouldn't have too many [clients] to handle, they should consider more employees. They should know the rules better, I've experienced they either don't have the same answer, or that it's actually opposite to what they say, for example what you can write about in chat and not. Wish application process times were shorter since I and others struggle and that's why you seek help and should get help as fast as possible.

Overall, the findings show that clients are frustrated over slow case processing and insufficient information. Respondents emphasise the central role of the counsellors and their ability to help in a relevant, responsive, and timely manner, as perceived by the individual clients. As demonstrated in the empirical material, NAV's internal organisation can impact user experience. That is, NAV is divided in various units with separate responsibilities. Navigating these units through online platforms is a potential barrier for clients. Taken together, respondents have different views and experiences with NAV's website and using digital services.

4.1.3 | Impersonal contact

Finally, several respondents expressed frustration with digital follow-up due to impersonal contact with their counsellor, while others preferred digital interaction. Examples include participants who had never met their counsellor in person and wanted a closer relation: 'No kind of relation with the counsellor, sad'. To free up time to work with vulnerable clients, NAV directs clients with less complex needs to electronic channels. This means that some clients will have more digital interaction with NAV than others. One respondent expressed not feeling understood in the digital interaction:

> The contact is way too often digital. Have neither met nor had a phone call with the new counsellor. Feel it's difficult to be seen and understood without even having met the person who will help me.

Some participants emphasised a need for less digital and more personal follow-up services due to their individual problems and life situation:

> [...] I've only been in contact with my counsellor two times, electronically. The first time the counsellor asked me to answer five questions in writing. In my application for WAA [Work Assessment Allowance, i.e., temporary disability benefit], I had asked to be allowed to speak with a person because I have problems expressing myself in writing because of my disease. [...] I had a need for the counsellor to get in touch and invite me to a meeting – physical or digital.

Personal contact could have provided NAV with relevant information for case processing and the client with a better experience.

While many respondents want a closer relationship with their counsellor, it is not clear whether this relationship needs to be in person or online. Some respondents share positive experiences with online counselling. For instance, one respondent said that (s)he 'received fantastic help' from his/her counsellor, despite not having met in person.

> My counsellor is nice, helpful and does his best to make sure I'm fine. So, I'm very happy with my counsellor for the last six months. Ps. I have never met my current counsellor IRL [in real life] since I got him during the corona pandemic. We have only talked in chat and over the phone, but I am very satisfied.

The example shows how participants also can experience digital services as relevant, timely and flexible. Similarly, other respondents prefer digital interaction compared to face-to-face meetings: 'I feel there is now less pressure to set up meetings to answer simple questions. Now, I can simply log in and send the counsellor a question, and I get an answer digitally, which I prefer.' Another respondent felt calmer when contacting his/her counsellor online, in part due to negative sentiments attached to going to the NAV office, such as a possible perceived stigma:

> I've had phone calls with counsellors when needed and used chat services. For my part, it's been way more reassuring to connect online, compared to meeting up at the NAV office and talk with the counsellor face-to-face. I feel the communication is better and more effective. It's not an easy-peasy thing to go to the NAV office, so I really appreciate not having to go there.

There are variations in the data between clients who want more and less digital interaction with their counsellors. Overall, the findings highlight that counsellors have a central role in providing information in an understandable way.

4.2 | Developing hypotheses for quantitative analyses

Based on the identified qualitative themes, previous research, and available survey data on digital service provision, we formulated the following hypotheses regarding satisfaction with digital follow-up from NAV:

The first and second hypotheses are grounded in findings from the qualitative data, which illustrate that some informants struggled to obtain necessary information for their cases, and that response time is an important aspect of satisfaction with NAV.

> **H1.** Clients who were more satisfied with the amount of information regarding their case and satisfaction with digital follow up are positively associated.

H2. Perceived response time in client cases is positively associated with satisfaction with digital follow-up.

The third hypothesis is based on previous research on digital division (Medero et al., 2022) and is partially supported by findings from the qualitative data, which suggest that language may be an important factor in navigating digital systems.

H3. Higher language comprehension is positively associated with satisfaction with digital follow-up.

4.3 | Predictors of satisfaction with digital follow-up

Multiple linear regression analysis was performed to determine the relationship between the independent variables (information, perceived response time, and language comprehension) and covariates: (gender, age, education, and type of follow-up) and the dependent variable (satisfaction with digital follow-up). The model was significant—F (26.30) and with an R^2 of 0.21, which suggests that the independent variables explain 21% of the variation in the dependent variable, digital satisfaction. Results from the analysis (see Table 2) suggest that the variables assessing perceived response time, higher language comprehension, and sufficient information are all significantly associated with the dependent variable and predict satisfaction with digital follow-up among young employment seekers. For response time, the beta coefficient shows that this relationship is moderate in strength ($\beta = 0.31$), and further shows that a 1-week decrease in perceived response time can be associated with an increase in satisfaction with digital follow-up. In addition, follow-up through digital activity plan is positively associated with satisfaction with digital follow-up, while follow-up via phone or video is not.

To determine the relative importance of the significant predictors in the multiple linear regression, we ran a dominance analysis, which compares changes in the R-square value across a series of models. Like the pattern demonstrated in Tables 2 and 3 show that perceived response time is the dominant predictor, explaining 5.39% of the

TABLE 2 Summary of multiple linear regression analyses for variables predicting satisfaction with digital follow-up ($N = 866$).

Variable	Satisfaction with digital follow-up			
	B	SE B	β	VIF
Gender (m)	−0.060	0.079	−0.023	1.02
Age	−0.009	0.019	−0.015	1.09
Higher education	0.055	0.122	0.014	1.10
Follow-up: phone	0.105	0.106	0.032	1.13
Follow-up: video	0.168	0.240	0.022	1.08
Follow-up: digital activity plan	0.322	0.080	0.129***	1.12
Perceived response time	0.963	0.113	0.314***	1.48
Language comprehension	0.880	0.194	0.138***	1.00
Information	0.524	0.174	0.110**	1.44
R^2	0.208			
F	26.30			

***$p < 0.001$; **$p < 0.01$.

TABLE 3 Relative importance of significant predictors explaining satisfaction with digital follow-up.

Predictor	Standardised domin. stat.	Average contribution (pp)	Ranking
Perceived response time	0.5390	5.39	1
Information	0.2419	2.41	2
Language comprehension	0.1318	1.13	3
Follow-up: digital activity plan	0.0873	0.87	4

Abbreviation: pp, percentage points.

average contribution to the R^2, followed by information (2.0%), language comprehension (1.13%) and digital activity plan (0.87%).

5 │ DISCUSSION

This mixed-methods study investigated predictors of satisfaction with digital follow-up among young employment seekers in NAV, testing three hypotheses. Results supported all three hypotheses, indicating that clients who were more satisfied with the amount of information regarding their case, perceived response time, and higher language comprehension were significantly associated with satisfaction with digital follow-up.

The main finding in this study demonstrates that the strongest predictor for satisfaction with digital follow-up is perceived response time. This suggests that if clients feel they are receiving assistance more quickly, they are more likely to be satisfied with digital services. This result underscores previous national and international research, which has identified response time as an important element of citizens satisfaction (Lamsal & Gupta, 2022; Norwegian Labor and Welfare Administration, 2022).

Our qualitative data revealed that digital interactions gave some clients a feeling of relief, describing it as more efficient and convenient compared to physical meetings. Other informants experienced digital interactions as inefficient, as it could take a long time to get a response. One reason for these late responses could be inattention due to high workloads and high turnover in NAV offices. However, digital technologies could also create higher expectations of services for young people who may be ´digitally savvy´, but less familiar with online public services (Mearns et al., 2015). Often, respondents referred to the digital dialogue as a 'chat', expecting immediate answers. While NAV's digital dialogue might give the impression of instant messaging, it is asynchronous, meaning that there is a time delay in the interaction. That is, digital interaction could create new expectations of efficient services that form satisfaction. For some clients with long-term processes that require complexity, follow-up may benefit from interactions that are both synchronous and face-to-face (Zhu & Andersen, 2022).

The second and third strongest predictor of satisfaction with digital follow-up is clients who are more satisfied with the amount of information regarding their case followed by higher language comprehension. Qualitative data showed that clients have ambiguous experiences with digital follow-up. Although digital follow-up is perceived as useful, unclear information was identified as a barrier. Previous research suggests that young people value digital services (Liaaen et al., 2021; Mishna et al., 2015; Norwegian Labor and Welfare Administration, 2022), our qualitative data also showed frustration with digital services. For example, some respondents expressed difficulties with understanding and interpreting information in digital channels, calling for more face-to-face interactions.

These findings may be placed more broadly in the idea of 'system quality', which relates user satisfaction to the quality and relevance of information (Vítor et al., 2022). On the other hand, clients' perception of information may also be related to their 'bureaucratic competence', that is, their abilities to obtain and understand information from public authorities (Gordon, 1975). Previous research on NAV has demonstrated that bureaucratic competence is a predictor for understanding information among young people (Norwegian Labor and Welfare Administration, 2022).

It is argued that this relates to expectations and previous experience with contacting public authorities. For example, young people are often used to dealing with simple and quick information, and the information from one public agency, such as NAV, can be found difficult to use because it differs from other, more popular online platforms for young people (Norwegian Labor and Welfare Administration, 2022).

In line with this previous research, our qualitative data also suggests that system knowledge may influence their satisfaction with digital follow up. For young people, this was related to both organisational understanding and navigating online channels. An example of this is the expectation of how long it takes to process an application. Respondent described processing times as 'long'. While this might be, there are still complex assessments taking place behind digital interfaces, meaning that instant messages do not equal instant decisions. These examples highlight the importance of bureaucratic competence in digital government. However, research suggests that tailored and individualised follow-up as effective elements for labour market inclusion (Bond et al., 2016, 2023; Sveinsdottir et al., 2020). If the division of responsibilities and user involvement is increasingly unclear (Fugletveit & Lofthus, 2021), impersonal contact and complicated digital channels may impact satisfaction.

Based on these findings, we argue that expectations also influence clients' satisfaction with digital services. While access to digital technologies can drive some service expectations, system knowledge could form others. However, public services cannot expect clients to have extensive digital or bureaucratic skills, which places new demands on digital government to clarify expectations, such as expected response time to digital messages or expected processing time for applications. To make digital services more inclusive, information should be clear, correct and adapted to the target group, as stated in the Norwegian Language Act of 2022. Thus, we argue that online information should be developed in close collaboration with user representatives and risk groups to reduce bureaucratic barriers.

5.1 | Limitations

This study has some limitations. First, the response rate was low. While young clients are a hard target population to reach, non-response bias is a possible issue in our study. Non-response bias can challenge validity when responders differ systematically from non-responders. We were able to compare our sample and target population on distributions of gender and age. As shown in Table 1, women were overrepresented in our sample, while there were only minor differences in age. Reflecting our somewhat skewed gender distribution, studies have shown that women are more inclined to participate in surveys than men (Curtin et al., 2000; Moore & Tarnai, 2022; Singer et al., 2000). However, our results suggest that gender is not a significant predictor of satisfaction with digital follow-up, indicating that the skewed gender distribution has not influenced the overall results. Nevertheless, generalisation of results should be done with some caution.

An overarching limitation includes assessing bias, that is, the risk of confounding, which is common with cross sectional data. For instance, we do not know whether participants who are more satisfied with digital services tend to provide more positive feedback on response time. There is also a chance that individuals with lower levels or language proficiency may be less likely to respond to the survey, resulting in a selection bias that may have influenced the outcomes. In addition, the variable measuring age consists of a limited age span (18–20 years), which raises a question of whether the short interval can substantially contribute to the statistical models.

Second, the qualitative component in this mixed-methods study draws on data from open-ended questions. While open-ended questions do not restrict participants, the communication is one-sided, and further exploration is lost. There is also a risk that respondents use open text fields to express memorable or impressionable experiences that do not represent more widespread perceptions. Despite these limitations, this study has strengths. By drawing on data from multiple components, it reduces bias and the possibility of data mining. The mixed-methods design allows for both breadth in the quantitative data and depth in the qualitative data (Malina et al., 2011), which strengthens the validity of the findings.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. This work has not been published previously. It is not under consideration for publication elsewhere.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author.

ETHICS STATEMENT

This study has been approved by the ethics committee Norwegian Center for Research Data (reference number 737672). In addition, all methods were performed in accordance with the relevant guidelines and regulations following the Declaration of Helsinki Ethical Principles. Informed written consent was obtained from all participants before the start of this study. Participants were informed about the purpose of the study, privacy and confidentiality and their possibilities to withdraw from the study at any time.

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