

## Digital Inclusion Support Needs of Households in Poverty: Insights From Interviews With Dutch Social Workers

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As poverty and digital exclusion interrelate, it is relevant to investigate how households in poverty may be best supported in relation to the Internet. Social workers have unique insights into supporting households in poverty, but their perspectives have received limited research attention thus far. Hence, we conducted semistructured expert interviews with 14 social workers to gather their perspectives on digital inclusion support needs. These interviews aim to provide key insights into the role of the Internet in fulfilling economic, cultural, social, and personal needs. While the potential of the Internet is highlighted alongside a few perceived benefits, such as finding free activities in the neighborhood or supporting each other on social media, social workers underline that the Internet may make administrative tasks more complex and may amplify stress. This research adds social workers' perspectives to existing knowledge on digital inclusion needs and poverty and assists in establishing related support and policies.

*Keywords: digital inclusion, poverty, digital divide, digital inequality, social inequality, support needs, interviews, social workers*

Helping those living in financial deprivation has always been intertwined with social work practices (Feldman, 2019). However, because of the ever-digitizing society, the nature of the needed support is changing (Sanders & Scanlon, 2021). As a product of policies aimed at promoting individual responsibility and self-reliance, households in poverty become more often dependent on the Internet to acquire financial assistance or arrange administrative tasks (Goedhart, Verdonk, & Dedding, 2022). Consequently, poverty goes hand in hand with digital exclusion (Boerkamp, Van Deursen, Van Laar, Van der Zeeuw, & Van der

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Graaf, 2024). The risk of being digitally excluded is three to five times larger for those facing poverty than for their wealthier counterparts (Anrijs, Mariën, De Marez, & Ponnet, 2023), thereby exacerbating traditional forms of inequality in society (DiMaggio, Hargittai, Celeste, & Shafer, 2004; Lutz, 2019; Van Deursen & Helsper, 2015a; Van Dijk, 2005).

As “digital inclusion should always be seen as embedded in a person’s offline circumstances” (Helsper, 2012, p. 405), understanding the role of the Internet in the lives of households in poverty requires insights into the broader spectrum of their lives. Although each person’s daily needs vary, they can generally be categorized into four domains: economic, cultural, social, and personal (Helsper, 2012). Support for families living in poverty should be aimed at the intertwined problems in these different domains of life (Witte, 2021), making it important to examine how the Internet influences the fulfillment of needs in these domains. Unfortunately, limited knowledge about digital inclusion support needs of households living in poverty exists. Most studies have explored digital inclusion on a global scale for diverse target audiences or at-risk groups, such as migrants (e.g., Merisalo & Jauhiainen, 2020; Safarov, 2021), older adults (e.g., Blažič & Blažič, 2020; Romano et al., 2015; Van Deursen & Helsper, 2015b), or youth (e.g., Calderón Gómez, 2019; Harris, Straker, & Pollock, 2017; Kiss, Fitzpatrick, & Piko, 2020; Oyedemi, 2015). However, understanding the needs of those living in poverty, along with the role of the Internet in meeting them, is essential for developing effective digital support policies.

This study builds on the knowledge and experience of social workers who support households living in poverty. Social workers advocate for a society where everyone can participate fully (Hartman-Van der Laan, 2019). As social workers are involved in supporting households in different facets of everyday life, they are able to provide an elaborate view of the needs concerning diverse domains and the role of the Internet in this respect. Furthermore, social workers can be regarded as valuable members of the social circle of those experiencing poverty (Witte, 2021). Therefore, social workers’ perspectives are invaluable for identifying the needs of households in poverty and evaluating how the Internet may help or hinder meeting those needs. The following research question is central to the study: “How do social workers perceive the fostering and hindering role of the Internet in fulfilling the economic, cultural, social, and personal needs of households in poverty?” By employing semistructured interviews, the perspectives of social workers are gathered to better understand the digital inclusion support needs of those living in poverty, considering a broad spectrum of life domains. Such insights from social workers add to the existing body of poverty research and provide valuable input for enhancing social work efforts, shaping support, and informing policymaking.

## **Theoretical Background**

### ***Three Levels of Digital Inclusion***

Over the past few decades, research on Internet inequalities has experienced a shift in focus, reflecting three different levels of the digital divide. Scholars started by studying differences in physical access (Dewan & Riggins, 2005; Robinson et al., 2015), also called the “first-level digital divide” (Van Deursen & Van Dijk, 2019, p. 354). A distinction was made between those with and those without access, referred to as “haves and have-nots” (DiMaggio & Hargittai, 2001, p. 1). In later research, the focus shifted toward differences in skills and usage (Van Dijk, 2005), also known as the “second-level digital divide” (Hargittai, 2002, para. 1), stressing that

inequalities result from the way Internet technologies are used. In later years, scholars put forward the idea that the research on digital inequality should focus not only on access, skills, and usage but also on the actual consequences of Internet use (Selwyn, 2004; Van Dijk, 2005). This approach, labeled the “third-level digital divide” (Van Deursen & Helsper, 2015a, p. 29; Wei, Teo, Chan, & Tan, 2011, p. 170), concerns the positive and negative outcomes of Internet use that enhance or restrict one’s societal position. Existing notions of inequalities are reinforced through Internet use (Witte & Mannon, 2010). This highlights the need to identify the specific digital inclusion needs of households in poverty.

### ***Four Life Domains***

Inspired by Bourdieu’s (1986) work, Helsper’s corresponding fields model conceptualizes how different domains in daily life correspond to offline and online realms. Helsper uses domains to distinguish between economic, cultural, social, and personal links. The model starts from the premise that social exclusion is the starting point for analysis and investigates the role of digital exclusion in existing social inequalities (Helsper, 2012).

First, the economic domain concerns “poverty, joblessness[,] and economic capital and [is] measured by indicators such as income, education, employment, and access to financial services” (Helsper, 2012, p. 407). In today’s society, digital inclusion increasingly affects the extent to which one profits from job opportunities (Goedhart et al., 2022). Aside from job searching, using the Internet for online banking, shopping, learning, and information seeking can offer significant benefits (Helsper, 2012). As social work practice is strongly intertwined with supporting those in situations of financial deprivation (Feldman, 2019), social workers’ perspectives hold great value in reflecting on the needs in the economic domain of households in poverty.

Second, Helsper considers the cultural domain as “shared norms that guide [behavior] which give meaning to belonging to a certain group” (Helsper, 2012, p. 407). The cultural domain, among others, includes participation in society and sporting or cultural extracurricular activities for development (Witte, 2021). Social workers may also be occupied with stimulating or supporting their clients in undertaking these activities. The cultural domain also encompasses themes related to language or ethnicity. Research underlines that insufficient language skills may form a major barrier to Internet use, especially when subjected to complicated websites (Goedhart, Broerse, Kattouw, & Dedding, 2019; Van Deursen & Van Dijk, 2014). In line with this, the Internet needs and experiences influenced by poverty may be amplified by one’s migrant background (Goedhart et al., 2019). Still, while language barriers may particularly impact individuals with migrant backgrounds or non-native speakers, it is important to recognize that they also affect native, low-literate citizens. Tasks that may seem accessible to some are complicated for citizens with limited (digital) literacy (Smit, Swart, & Broersma, 2024). Unfortunately, limited literacy and poverty are interconnected (Christoffels, Baay, Bijlsma, & Levels, 2016).

Third is the social domain, which is defined as “the actual and potential network of social relationships whose economic and cultural capital can be mobilized by people in order to enhance their possibilities of action” (Calderón Gómez, 2021, p. 2537). Examples are direct relationships, such as those with close family and friends; indirect relationships, such as those with club members, acquaintances, or colleagues; and functional relationships, such as those with social workers, among others (Witte, 2021).

Online, research shows that people living in poverty may have fewer networks to support them (Helsper & Van Deursen, 2017; Mariën & Vleugels, 2011). In the absence of high-quality support networks, those in poverty may be forced to rely on informal help provided by individuals with similar characteristics (Mariën & Vleugels, 2011). These support networks also encompass the concept of “digital care work,” which involves providing Internet assistance in formal settings (Kaun & Forsman, 2022, p. 3751). This indicates that one may initially seek assistance from community centers or social workers (Smit et al., 2024). If support from these sources is unavailable, they may turn to librarians (Lehtinen, Poutanen, & Kovalainen, 2023) and other government organizations (Smit et al., 2024). Taking support networks into account is important for designing support. Research has long highlighted the added value of tailoring support to local conditions and needs, for example, by employing suitable instructors (McKenzie et al., 2001).

Fourth and last, the personal domain concerns resources that enable taking advantage of new opportunities irrespective of one’s economic, cultural, or social background (Helsper, 2012). The personal domain relates to the characteristics of an individual, such as the individual’s emotional or physical well-being (Helsper, 2008). The inability to use the Internet negatively impacts feelings of belonging and self-confidence (Goedhart et al., 2022). Social work may also form a valuable link in supporting households in the personal domain. Households in poverty often experience less grip on their lives, more financial stress, and more experiences of failure, which severely affect their resilience (Witte, 2021) or emotional well-being (Mani, Mullainathan, Shafir, & Zhao, 2013). Furthermore, households in poverty may experience barriers to seeking health information (McCloud, Okechukwu, Sorensen, & Viswanath, 2016). In this respect, prior literature not only stresses the importance of having functional skills (i.e., knowing how to seek information) but also critical skills (i.e., being able to check the credibility of information; Abel & McQueen, 2021; Helsper, Schneider, Van Deursen, & Van Laar, 2020). A fear of technology (Vitak, Liao, Subramaniam, & Kumar, 2018) or having other life priorities (Wyche & Murphy, 2012) may hinder and limit one’s possibilities to fully profit from online opportunities. The latter hindrance also has implications for digital inclusion support: “Interventions need to be efficient in the sense of time, motivation and energy since people have other important issues to tackle” (Goedhart et al., 2019, p. 2361).

## **Method**

### ***Semistructured Interviews***

To investigate social workers’ insights concerning the role the Internet plays in the lives of households in poverty, semistructured interviews were conducted. The semistructured approach was used to obtain expert insights by asking tailored follow-up questions. An interview guideline was designed beforehand, including hints for discussion topics, based on the four domains of Helsper’s (2012) corresponding fields model. Still, there was room for flexibility to discuss emerging topics throughout the conversations. Open-ended questions formed the starting point, and participants were encouraged to share their personal insights.

### ***Participants***

In total, 14 social professionals from different regions of the Netherlands participated in the interviews. All participants were recruited by contacting key persons in the field, who then agreed to distribute the invitations

or via messages on LinkedIn. The criterion for participation was that the participants had explicit experience with households in poverty through their work, enabling them to reflect on the needs of these households. As this study aims to gather insights from households in poverty in a broad sense, no prerequisites were made regarding the composition of households being supported or the level of clients' digital literacy. While the exact occupations of the participants were diverse, all participants had a link to households living in poverty. This could be a link based on one-on-one contact with clients, community work, or coordinating or advisory activities at organizations aiming to support marginalized groups. Examples of participants' occupations include social workers working with youth in situations of deprivation, women in poverty, or migrants. Furthermore, professionals working on projects about neighborhoods in poverty and representatives of organizations that support food provision or the reduction of digital care access inequalities were interviewed. Interviews were conducted offline (4) and via Microsoft Teams (10) between June 8 and June 27, 2022.

### ***Procedure***

Each participant was informed about the aim of the study, their rights, data anonymity, and data handling before the interview. Informed consent was obtained verbally, and participants were encouraged to ask additional questions before the interviews started. All interviews were recorded. Each interview continued with the researcher asking the participants to elaborate on their professional experiences working with people facing poverty. Subsequently, follow-up questions were asked concerning the four abovementioned domains. To be able to discuss needs in the four domains, the interview scheme contained questions concerning financial/economic, social networks, leisure time and development, and health and well-being themes. These themes were chosen beforehand, reflecting the needs that were considered relevant in the current context, following Helsper's (2012) reasoning that "if the model is applied in a specific context, in, for example, qualitative research, the researchers should gather information on all four [domains] but inquire only after those resources that are contextually relevant in each [domain]" (p. 12). The role of the Internet was interwoven into all themes to better understand the dynamics between the Internet and the four domains.

Aside from the social workers' insights into the needs of those living in poverty in different domains, questions were posed about the current state of support as well as the potential need and room for improvement. Some participants were able to share insights about a certain theme more than others and vice versa. For example, one participant who worked in the field of health could mostly reflect on health-related needs or hindrances for households facing poverty, whereas another participant who worked in deprived neighborhoods was better able to reflect on housing conditions and the role of one's social environment. The variety of participants enabled a broad view of the experiences of those living in poverty through the eyes of social workers. The interviews ended with the researcher thanking the participants for their time and input. The interviews lasted approximately 50 minutes on average (34 minutes minimum to 64 minutes maximum).

### ***Analysis***

All interview recordings were transcribed to obtain a proper view of the data gathered. The transcripts were coded by applying deductive thematic analysis (Crabtree & Miller, 1992; Fereday & Muir-Cochrane, 2006). As such, the corresponding fields model formed the predefined basis for the development of codes and themes. The coding process was performed in the ATLAS.ti program and followed two stages after data familiarization.

During the first stage, codes about the four domains, "economic," "cultural," "social," and "personal," were applied, as well as an additional subcode "Internet." During the second stage, co-occurrences of these respective codes were identified to study the relationship between the domains and the Internet.

## Results

### *Economic Needs Hindered and Fostered by the Internet*

While the economic domain is often related to hardware costs, the social workers interviewed relate it primarily to access to applications that impact the financial situation of their clients. While properly functioning hardware is still discussed as an issue for those facing poverty, social workers expressed that even when the hardware is available, it is not always evident how to correctly use online financial or administrative applications. Furthermore, people may be unaware of their availability. Throughout the interviews, participants especially mentioned problems about the system allowing Dutch governments to verify a person's identity on the Internet (DigiD). Participant 7 (coordinator at a food bank) stated:

I think that a lot of people just have problems with applying for benefits through DigiD. What is also becoming an issue is that a lot of health insurance bills are no longer sent by post, but are just placed in digital files. Then people don't know at all that a bill is outstanding. If it is not paid, another bailiff comes. You know, all those digital files and messages on "MijnOverheid?" People don't know at all that they have an online government inbox.

Furthermore, facing difficult economic-related tasks online, such as submitting a CV, online banking, filling in forms, or finding the right way to apply for certain subsidies, was discussed by several participants. While one participant underlined that for professionals, the Internet offered benefits, as they could access an overview of all information online, instead of on loose papers, participants still argued that for their clients, it may not be easier at all. Despite this difficulty, participants highlighted the unfortunate irony that arranging economic-digital tasks was often even more prominent for those living in poverty than for those who live in wealthier circumstances. Participant 7 (coordinator at a food bank) stated:

You have to upload payslips, but do they know when they have to upload (. . .) a payslip? If you have a higher education level, none of that is necessary, but when you live off of a minimum wage, you go crazy with everything everyone wants to know about you. In addition, everyone wants the information to be submitted differently.

While social media may help engage young people in handling money responsibly, participants expressed their concerns about the ease of spending money online, as money is less visible in contrast to cash, and pay-later options in online shops are overly tempting. One participant mentioned that online, it is easy to have different bank accounts for different purposes or to have online tools, such as Excel, to oversee daily budgets. However, in general, the participants expressed that their clients may face trouble with budgeting. The ease of getting money online and its potential negative consequences are illustrated by Participant 4 (coordinator at an administrative support organization) as follows:

[He] wanted to help a friend who faced a difficult situation. He didn't have any money himself. Then, he thought, what if I take out a loan? He went looking for a loan on the Internet. However, when you look for a loan or fast money, you don't always end up with the right parties. Therefore, he first had to transfer some money to dispose of the loan amount. Someone with a bit more experience in that area would think, gosh, how weird. (. . .) He didn't think that; thus, he found himself with a rogue loan and ended up paying eight hundred euros to dispose of a loan amount that of course was never there. And so someone gets into trouble (. . .).

About one's living environment, several participants underlined that the housing conditions of their clients may be suboptimal. Participant 1 (expert-by-experience poverty and social exclusion) highlighted how this could also be problematic online:

Imagine a child being taught at home through [Microsoft] Teams. The child's little sister is playing with all kinds of noisy things, the dog is frolicking in the room, the mother is busy hanging laundry in the room because it is raining outside, and the father is sitting there too. In addition, the child has to be focused on the screen, because things are explained there. Yes, that is so difficult.

Overall, social workers underlined diverse needs and hindrances in the economic domain that are recursive for the online and offline worlds. Rather than merely addressing hardware costs, the Internet seems to complicate many economic tasks. Hence, according to various social workers, it may be beneficial for individuals living in poverty to submit their documents at a physical desk rather than to manage everything online. While social workers underlined the potential of the Internet, for example, in creating an overview of required documents for people who provide support or in reaching people via social media, the interviewees stressed hindrances related to the ease of loaning and spending money online and the difficulty of working with online economic-related platforms.

### ***Cultural Needs Hindered and Fostered by the Internet***

The main themes identified in the cultural domain relate to bonding via the Internet and the role of language. Following the insights of the participants, hindrances related to the latter are most pressing and are experienced by both native Dutch speakers and non-native speakers. For non-native speakers, this may especially cause trouble when performing formal online tasks, as Participant 13 (supports municipalities in tackling housing nuisances) illustrates:

Everything is also digital these days, isn't it? If you have rent arrears at the housing association, you have to fill in a form on the website. (. . .) I see it especially with this group of people, who are often the most vulnerable in our society (. . .), such as status holders who don't have sufficient command of the language. (. . .) It is very difficult for them to fill in forms. They can just about manage a Facebook message, but not a form.

Additionally, social workers highlighted that native Dutch speakers may face limited literacy or illiteracy or face difficult languages on websites that may be hard to understand. For this reason, social workers also

recommend that website developers consider language accessibility when creating websites. In line with this, as a prerequisite for support, social workers highlight the importance of making information visual rather than merely presenting it as text. As a result of website inaccessibility, households often depend on assistance to complete tasks, as Participant 3 (coordinator at an administrative support organization) illustrates:

There is also a large group that is low-literate and who doesn't understand things properly. (. . .) Very often things are digital, which is quite difficult for many people. We quickly look things up and make a phone call, (. . .) but there truly are a lot of people who need help from a volunteer who can sit next to them and help them call, step by step.

On the other hand, participants stressed online benefits in the cultural domain. For example, one participant mentioned apps that showed free activities in the neighborhood. Furthermore, the Internet offers a sense of entertainment to enhance the feeling of belonging, as addressed by Participant 8 (trained as a social worker and working in poverty reduction and neighborhood teams):

Additionally, with things like Facebook, they use that digital reality of social media to actually support each other, to share fun things with each other, entertainment, videos. That's what I see a lot. It's a way to keep in touch, it's a way to have fun together. It's actually very important.

To conclude, hindrances related to language and illiteracy are strengthened online, and the Internet offers entertainment and the potential for bonding.

### ***Social Needs Hindered and Fostered by the Internet***

While the Internet offers possibilities to connect and stay in touch, the social workers interviewed stressed the problems experienced among households in poverty concerning a lack of digital support networks. As their clients often do not possess a network with people who can help them with online tasks—people in their networks often face similar problems—social workers play an important role in this respect. Participant 7 (coordinator at a food bank) described how asking for help may be difficult for someone in poverty:

Well, the negative thing about something being difficult is that it is again something difficult, again something you cannot do, that you cannot manage; you think, "I am a loser, and I remain a loser, and I cannot keep up at all." The distance widens again. The "intelligent" people and the "handy" people and the people with their good friends, they get even further in the digital world. However, if you do not catch up, the gap gets even bigger.

Furthermore, according to social workers, those living in poverty often experience shame about their situation. This might make them hesitant to seek help with Internet-related tasks. Subsequently, according to the social workers, this may lead to isolation or loneliness. Hence, as a prerequisite for digital inclusion support, social workers stress that the stigma surrounding poverty should be accounted for; clients should not be constantly reminded that they are poor. Furthermore, social workers highlight that the process of asking for support should be made as easy as possible, low-threshold support locations should be



accessible at times when people have questions, and redundant or overly complicated steps to ask for help should be eliminated.

In contrast to social support for digital tasks, the Internet also has social benefits. The interviews highlight how online initiatives to meet new people help clients relieve their isolation. Participant 8 (who trained as a social worker and worked in poverty reduction and neighborhood teams) provides an example of a local Facebook page that facilitates the sharing of goods or leftovers or other support within the community:

[The platform] should truly be seen on the level of "I cooked too much spaghetti and who can I make happy with a double portion?" (. . .) Then, there are responses of people offering a grocery package (. . .), so there are a lot of people from the target group who help a lot of other people. It is very low-threshold help; there is no assistance involved, and you don't have to tell anyone what your income is: you just get help. (. . .) Not everyone living in poverty goes to the municipality. Not everyone living in poverty is on welfare. There is an awful lot of hidden poverty, so these kinds of initiatives from citizens who are very often on social media help them to find each other. I think that the social aspect of social media is very important for people.

Aside from such benefits, social workers stress that initiatives such as neighborhood WhatsApp groups may also limit anonymity, which could serve as a hindrance for people to use them. The interviews reveal that it may be difficult to estimate whether a connection online is safe or beneficial, which stresses the importance of being educated about such things. It can also be discomforting for them to see others online partaking in fun activities while they themselves cannot afford this. Participant 13 (supports municipalities in tackling housing nuisances):

Now you see all the cute pictures on Instagram of people who went to a nice concert or a nice dinner. Well, that's where it starts, isn't it? (. . .) Imagine that you can never do that, (. . .) that you cannot do that for a very long time. (. . .) What I see is that people literally and figuratively close both the door and the curtains.

In conclusion, the lack of direct support networks and hindrances resulting from shame and social isolation are often mentioned. Nevertheless, social workers highlighted that the Internet, especially social media, can also serve as a means to foster community initiatives.

### ***Personal Needs Hindered and Fostered by the Internet***

In the personal domain, stress was often mentioned. Living in poverty comes with stress, regardless of whether the situation assumes a high dependency on others for survival. As such, people may experience a mental burden when operating the Internet, as it is again something they may need to ask for help with. To specify, one participant stressed that younger people are expected to know how to find their way online but that this is often difficult for them too. The interviews highlight that the Internet does require a cognitive load, which may be too high for some experiencing poverty. The result is that some clients become afraid

to click certain buttons online because they are worried about doing something wrong. Participant 9 (a systemic therapist and ambulatory youth worker) stressed challenges related to digital skills as follows:

So the ideas of "I don't get that" and "I don't know how" . . . just increases the stress. Then, you have to have a "DigiD," and you don't have all that. In addition, you don't know how either. I think that certainly, the fact that all kinds of things have been digitized makes it extra complicated for a lot of people.

A positive example was given by one participant who mentioned finding health information in the client's own language, even though they still seemed to favor face-to-face questions. However, concerning health, the Internet also offers hindrances. One participant shared an example of a client who was unsure of how to conduct a video call with their general practitioner during the COVID-19 pandemic. This participant underlined that eHealth is increasingly the main access point and that the related lack of skills is becoming problematic. Another participant highlighted that digitization negatively affects their clients' mental health, as they might lose contact with both the outside world and nature.

In sum, several social workers highlighted that the Internet adds to the experienced stress that comes with poverty. In relation to one's health, not knowing how to operate eHealth services can be problematic, although the Internet enables clients to find health information in their own language.

## **Discussion**

### ***Main Findings***

This study used semistructured interviews with social workers to explore their perspectives on how the Internet supports and impedes the fulfillment of the economic, cultural, social, and personal needs of those living in poverty. While the results about the four domains are presented separately, the interrelatedness of the domains is omnipresent, and hindrances in one domain may also affect other domains. This is in line with Helsper's (2012) argument that "although the [domains] are conceptually distinct, in practice they are often linked and their effects compound each other" (p. 6). The interconnectedness of the domains aligns with the multidimensional nature of poverty. For this reason, an integrated approach is necessary to mitigate poverty (Visser, 2019). Given that poverty can impact various aspects of one's life, it is understandable why considering life domains in isolation can be complex (Boerkamp, Van der Zeeuw, Van Deursen, Van Laar, & Van der Graaf, forthcoming). This emphasizes the necessity of considering one's broader personal circumstances when designing digital inclusion support and policies. Thus, support should not only aim at bettering the economic position of those in poverty, but intertwined hurdles concerning other life domains should also be adequately addressed.

Social workers' perspectives underscore how the intricacies of using the Internet, coupled with the challenges of living in poverty, lead individuals to rely more on their social networks. Social workers note that the Internet introduces added complexity and stress for individuals experiencing poverty. Prior research has also indicated that those in situations of exclusion often need to rely on help from their environment (Fernández Da Silva, Buceta, & Mahou-Lago, 2022). However, asking for this help is not obvious. For

instance, people living in poverty may conceal their home situations from others because they are ashamed (Meij, Haartsen, & Meijering, 2020). The result is a smaller social circle that reinforces their already disadvantaged positions. This study supports the notion that those in poverty often do not have a direct circle involving high-quality Internet support (Goedhart et al., 2019; Helsper & Van Deursen, 2017).

Findings concerning one's social support networks should be understood in two ways. First, when designing digital inclusion support, it is important to consider an individual's network and establish processes that facilitate seeking low-threshold, quality Internet assistance. Second, while designing accessible support structures is important, it is not the ultimate solution for achieving digital inclusion. First and foremost, a governmental and institutional responsibility to foster accessible services should be put forward. Increasing digitization may place burdens on those with fewer opportunities to invest in proper skills and equipment (Goedhart et al., 2022). While promoting digital inclusion can enhance one's societal standing, it is important not to place the entire responsibility on individuals.

Furthermore, the findings reveal that digital inclusion support needs to transcend a mere focus on digital skills. In line with Van Dijk's (2005) resources and appropriation theory, Internet access can be considered a process that, besides skills, encompasses attitude and motivation, material access, and usage. Regarding attitude and motivation, negative prior experiences with the Internet cause households in poverty to feel stressed and frustrated, hindering them from achieving their needs. Therefore, social workers emphasize the significance of providing offline support rather than solely relying on online support. Concerning material access, the current study emphasizes a deficiency in quality hardware. Those living in poverty experience more difficulties with devices because they need to rely on cheaper, used, or outdated devices (Gonzales, 2016; Van Deursen & Van Dijk, 2019). Even when devices are present, this does not ensure that they are always working properly (Goedhart et al., 2019; Van Deursen & Van Dijk, 2019). Limited motivations and material access limit the broad range of online activities and, thus, the achievement of beneficial outcomes. Furthermore, improving specific skills alone will not be enough; a better idea of how sociocultural, socioeconomic, and personal factors influence interactions with different online activities is necessary. It is important to consider the broad scope of Internet appropriation when designing support and policies (Van Deursen & Helsper, 2017).

### ***Limitations and Future Research Directions***

Some limitations and directions for future research can be highlighted. First, insights were gathered indirectly via social workers instead of directly via those living in poverty. This approach can be regarded as a valuable initial step in identifying needs because the interviewed social workers were able to provide a range of insightful perspectives on the lives of households in poverty. Furthermore, social workers are either not or less limited in giving socially desired answers. Nevertheless, as needs and experienced Internet barriers may be highly personal, gathering an overarching perspective through social workers may not include all relevant details. While social workers can be a valuable part of a household's social network, they are not involved in every aspect of the everyday life of the household. For this reason, future research should test for agreement by focusing on uncovering support needs among households facing poverty themselves. Think of a qualitative approach in which households in poverty are asked about their experiences using the Internet in a diversity of life domains, for example, by employing interview studies or

co-creation in participatory research. As there is great relevance in involving both the end-users of support and experts (e.g., Floreak, 2020; Trischler, Dietrich, & Rundle-Thiele, 2019), the combined insights of social workers and households may provide a starting point for co-designing support.

This study incorporated the perspectives of social workers regarding households in poverty in a broad sense. While this approach yielded a comprehensive view and valuable perspectives, further specifying the target audience may offer more specific insights. For example, the results may be different for households with different digital literacy levels or households with different demographic backgrounds. Households in poverty cannot be considered a homogeneous group, and future research may opt to specify the target audience to gain deeper perspectives that may serve as input for digital inclusion support and policies.

Furthermore, this study aimed to gather insight into the role of the Internet in fostering or hindering the needs and achievements of households in poverty. Unfolding the role of the Internet in diverse life domains provides a starting point for understanding how digital inclusion support may be shaped for households facing poverty. Nevertheless, effective digital inclusion support must match one's needs not only in terms of content but also in terms of the way the support is implemented. Research has long highlighted the added value of tailoring support to local conditions and needs, for example, by employing proper locations or types of instructors (McKenzie et al., 2001). Concerning these support prerequisites, the social workers revealed a few prerequisites for implementing digital inclusion support, such as using visual information instead of textual information and offering low-threshold support locations nearby. Prior research may aim to further identify relevant support prerequisites. Interviewing households in poverty about their needs and wishes in this respect may be valuable.

Last, a limitation arises about the application of the corresponding fields model. While the model offers a pragmatic framework, the proposed life domains are intertwined in practice, and needs in one domain may extend to needs in other domains. Furthermore, when applying the model to interpret results, one must be careful not to emphasize only individual- or technique-oriented hindrances. Indeed, while these are prominently considered in the model, Helsper (2012) also stressed the importance of interpreting the results in terms of the broader societal context. This study, therefore, sought to interpret the findings in this respect. Future research may more explicitly study how wider institutional and cultural contexts affect the achievement of digital inclusion needs.

### ***Concluding Remarks***

This research explored how social workers perceive the fostering and hindering role of the Internet in fulfilling the economic, cultural, social, and personal needs of households in poverty. In today's digital society, households in poverty are increasingly dependent on the Internet to arrange diverse tasks. Due to the complexity of using the Internet, combined with the personal challenges that come with poverty, the fulfillment of needs is often hindered. The findings stress that not only should proper support be delivered that is tailored to the daily lives of households in poverty but also that more accessible Internet services should be advocated for.

### References

- Abel, T., & McQueen, D. (2021). Critical health literacy in pandemics: The special case of COVID-19. *Health Promotion International*, 36(5), 1473–1481. doi:10.1093/heapro/daaa141
- Anrijs, S., Mariën, I., De Marez, L., & Ponnet, K. (2023). Excluded from essential internet services: Examining associations between digital exclusion, socio-economic resources and internet resources. *Technology in Society*, 73, 1–11. doi:10.1016/j.techsoc.2023.102211
- Blažič, B. J., & Blažič, A. J. (2020). Overcoming the digital divide with a modern approach to learning digital skills for the elderly adults. *Education and Information Technologies*, 25(1), 259–279. doi:10.1007/s10639-019-09961-9
- Boerkamp, L. G. P., Van der Zeeuw, A., Van Deursen, A. J. A. M., Van Laar, E., & Van der Graaf, S. (forthcoming). Internet appropriation barriers in the lives of Dutch parents living in poverty: A qualitative study. *The Information Society*.
- Boerkamp, L. G. P., Van Deursen, A. J. A. M., Van Laar, E., Van der Zeeuw, A., & Van der Graaf, S. (2024). Exploring barriers to and outcomes of internet appropriation among households living in poverty: A systematic literature review. *SAGE Open*, 14(1), 1–18. doi:10.1177/21582440241233047
- Bourdieu, P. (1986). The forms of capital. In J. C. Richards (Ed.), *Handbook of theory and research for sociology of education* (pp. 241–258). New York, NY: Greenwood Press.
- Calderón Gómez, D. (2019). Technological capital and digital divide among young people: an intersectional approach. *Journal of Youth Studies*, 22(7), 941–958. doi:10.1080/13676261.2018.1559283
- Calderón Gómez, D. (2021). The third digital divide and Bourdieu: Bidirectional conversion of economic, cultural, and social capital to (and from) digital capital among young people in Madrid. *New Media & Society*, 23(9), 2534–2553. doi:10.1177/1461444820933252
- Christoffels, I., Baay, P., Bijlsma, I., & Levels, M. (2016). *Over de relatie tussen laaggeletterdheid en armoede* [About the relationship between illiteracy and poverty]. Stichting Lezen & Schrijven. Retrieved from [https://www.lezenenschrijven.nl/sites/default/files/2020-08/WEB\\_SLS\\_Rapport\\_Armoede.pdf](https://www.lezenenschrijven.nl/sites/default/files/2020-08/WEB_SLS_Rapport_Armoede.pdf)
- Crabtree, B. F., & Miller, W. L. (1992). A template approach to text analysis: Developing and using codebooks. In B. F. Crabtree & W. L. Miller (Eds.), *Doing qualitative research* (pp. 93–109). Newbury Park, CA: Sage Publications.

- Dewan, S., & Riggins, F. J. (2005). The digital divide: Current and future research directions. *Journal of the Association for Information Systems*, 6(12), 298–337. doi:10.17705/1jais.00074
- DiMaggio, P., & Hargittai, E. (2001). *From the 'digital divide' to 'digital inequality': Studying internet use as penetration increases* (Working paper series 15). Princeton, NJ: Princeton.
- DiMaggio, P., Hargittai, E., Celeste, C., & Shafer, S. (2004). Digital inequality: From unequal access to differentiated use. In K. M. Neckerman (Ed.), *Social inequality* (pp. 355–400). New York, NY: Russell Sage Foundation.
- Feldman, G. (2019). Towards a relational approach to poverty in social work: Research and practice considerations. *The British Journal of Social Work*, 49(7), 1705–1722. doi:10.1093/bjsw/bcy111
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80–92. doi:10.1177/160940690600500107
- Fernández Da Silva, Á., Buceta, B. B., & Mahou-Lago, X. M. (2022). eHealth policy in Spain: A comparative study between general population and groups at risk of social exclusion in Spain. *Digital Health*, 8, 1–16. doi:10.1177/20552076221120724
- Floreak, M. J. (2020). Designing for the real world: Using research to turn a target audience into real people. In J. R. Hayes, R. E. Young, M. L. Matchett, M. McCaffrey, & C. Cochran (Eds.), *Reading empirical research studies: The rhetoric of research* (pp. 158–174). New York, NY: Routledge.
- Goedhart, N. S., Broerse, J. E., Kattouw, R., & Dedding, C. (2019). 'Just having a computer doesn't make sense': The digital divide from the perspective of mothers with a low socio-economic position. *New Media & Society*, 21(11–12), 2347–2365. doi:10.1177/1461444819846059
- Goedhart, N. S., Verdonk, P., & Dedding, C. (2022). "Never good enough." A situated understanding of the impact of digitalization on citizens living in a low socioeconomic position. *Policy & Internet*, 14(4), 824–844. doi:10.1002/poi3.315
- Gonzales, A. (2016). The contemporary US digital divide: From initial access to technology maintenance. *Information, Communication & Society*, 19(2), 234–248. doi:10.1080/1369118X.2015.1050438
- Hargittai, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*, 7(4). doi:10.5210/fm.v7i4.942
- Harris, C., Straker, L., & Pollock, C. (2017). A socioeconomic related 'digital divide' exists in how, not if, young people use computers. *PLoS One*, 12(3), e0175011. doi:10.1371/journal.pone.0175011

- Hartman-Van der Laan, M. (2019). *Sociaal werk in de digitale samenleving* [Social work in the digital society]. Bussum, The Netherlands: Uitgeverij Coutinho.
- Helsper, E. J. (2008). *Digital inclusion: An analysis of social disadvantage and the information society*. London, UK: Oxford Internet Institute, Department for Communities and Local Government.
- Helsper, E. J. (2012). A corresponding fields model for the links between social and digital exclusion. *Communication Theory*, 22(4), 403–426. doi:10.1111/j.1468-2885.2012.01416
- Helsper, E. J., Schneider, L. S., Van Deursen, A. J. A. M., & Van Laar, E. (2020). *The youth digital skills indicator: Report on the conceptualisation and development of the ySKILLS digital skills measure*. KU Leuven, ySKILLS. Retrieved from <https://zenodo.org/records/4608010>
- Helsper, E. J., & Van Deursen, A. J. A. M. (2017). Do the rich get digitally richer? Quantity and quality of support for digital engagement. *Information, Communication & Society*, 20(5), 700–714. doi:10.1080/1369118X.2016.1203454
- Kaun, A., & Forsman, M. (2022). Digital care work at public libraries: Making Digital First possible. *New Media & Society*, 26(7), 1–16. doi:10.1177/14614448221104234
- Kiss, H., Fitzpatrick, K. M., & Piko, B. F. (2020). The digital divide: Risk and protective factors and the differences in problematic use of digital devices among Hungarian youth. *Children and Youth Services Review*, 108, 1–9. doi:10.1016/j.childyouth.2019.104612
- Lehtinen, E., Poutanen, S., & Kovalainen, A. (2023). Librarians bridging the digital divide: Experiences from Finland. *Journal of Access Services*, 20(3–4), 120–140. doi:10.1080/15367967.2023.2292210
- Lutz, C. (2019). Digital inequalities in the age of artificial intelligence and big data. *Human Behavior and Emerging Technologies*, 1(2), 141–148. doi:10.1002/hbe2.140
- Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science*, 341(6149), 976–980. doi:10.1126/science.1238041
- Mariën, I., & Vleugels, C. (2011). Van digitale kloof naar digitale inclusie: Naar een duurzame ondersteuning van e-inclusie-initiatieven in Vlaanderen [From digital divide to digital inclusion: Towards sustainable support for e-inclusion initiatives in Flanders]. *Tijdschrift voor Communicatiewetenschap*, 39(4), 104–118.
- McCloud R. F., Okechukwu C. A., Sorensen, G., & Viswanath, K. (2016). Beyond access: Barriers to Internet health information seeking among the urban poor. *Journal of the American Medical Informatics Association*, 23(6), 1053–1059. doi:10.1093/jamia/ocv204

- McKenzie, T. L., Stone, E. J., Feldman, H. A., Epping, J. N., Yang, M., Strikmiller, P. K., . . . Parcel, G. S. (2001). Effects of the CATCH physical education intervention: Teacher type and lesson location. *American Journal of Preventive Medicine*, 21(2), 101–109. doi:10.1016/S0749-3797(01)00335-X
- Meij, E., Haartsen, T., & Meijering, L. (2020). Enduring rural poverty: Stigma, class practices and social networks in a town in the Groninger Veenkoloniën. *Journal of Rural Studies*, 79, 226–234. doi:10.1016/j.jrurstud.2020.08.031
- Merisalo, M., & Jauhiainen, J. S. (2020). Digital divides among asylum-related migrants: Comparing Internet use and smartphone ownership. *Tijdschrift voor Economische en Sociale Geografie*, 111(5), 689–704. doi:10.1111/tesg.12397
- Oyedemi, T. (2015). Participation, citizenship and internet use among South African youth. *Telematics and Informatics*, 32(1), 11–22. doi:10.1016/j.tele.2014.08.002
- Robinson, L., Cotton, S. R., Ono, H., Quan-Haase, A., Mesch, G., Chen, W., . . . Stern, M. J. (2015). Digital inequalities and why they matter. *Information, Communication & Society*, 18(5), 569–582. doi:10.1080/1369118X.2015.1012532
- Romano, M. F., Sardella, M. V., Alboni, F., Russo, L., Mariotti, R., Nicastro, I., . . . Di Bello, V. (2015). Is the digital divide an obstacle to e-health? An analysis of the situation in Europe and in Italy. *Telemedicine and e-Health*, 21(1), 24–35. doi:10.1089/tmj.2014.0010
- Safarov, N. (2021). Personal experiences of digital public services access and use: Older migrants' digital choices. *Technology in Society*, 66, 1–9. doi:10.1016/j.techsoc.2021.101627
- Sanders, C. K., & Scanlon, E. (2021). The digital divide is a human rights issue: Advancing social inclusion through social work advocacy. *Journal of Human Rights and Social Work*, 6(2), 130–143. doi:10.1007/s41134-020-00147-9
- Selwyn, N. (2004). Reconsidering political and popular understandings of the digital divide. *New Media & Society*, 6(3), 341–362. doi:10.1177/1461444804042519
- Smit, A., Swart, J., & Broersma, M. (2024). Bypassing digital literacy: Marginalized citizens' tactics for participation and inclusion in digital societies. *New Media & Society*. Advance online publication. doi:10.1177/14614448231220383
- Trischler, J., Dietrich, T., & Rundle-Thiele, S. (2019). Co-design: From expert-to user-driven ideas in public service design. *Public Management Review*, 21(11), 1595–1619. doi:10.1080/14719037.2019.1619810



- Van Deursen, A. J. A. M., & Helsper, E. J. (2015a). The third-level digital divide: Who benefits most from being online? In L. Robinson, S. R. Cotten, J. Schulz, T. M. Hale, & A. Williams (Eds.), *Communication and information technologies annual* (Vol. 5, pp. 29–52). Bingley, UK: Emerald Group Publishing Limited.
- Van Deursen, A. J. A. M., & Helsper, E. J. (2015b). A nuanced understanding of Internet use and non-use among the elderly. *European Journal of Communication*, 30(2), 171–187. doi:10.1177/0267323115578059
- Van Deursen, A. J. A. M., & Helsper, E. J. (2017). Collateral benefits of Internet use: Explaining the diverse outcomes of engaging with the Internet. *New Media & Society*, 20(7), 2333–2351. doi:10.1177/1461444817715282
- Van Deursen, A. J. A. M., & Van Dijk, J. A. G. M. (2014). The digital divide shifts to differences in usage. *New Media & Society*, 16(3), 507–526. doi:10.1177/1461444813487959
- Van Deursen, A. J. A. M., & Van Dijk, J. A. G. M. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media & Society*, 21(2), 354–375. doi:10.1177/1461444818797082
- Van Dijk, J. A. G. M. (2005). *The deepening divide: Inequality in the information society*. Thousand Oaks, CA: SAGE Publications.
- Visser, S. S. (2019). *Mechanismen van en interventies bij intergenerationele armoede: Een literatuuronderzoek* [Mechanisms of and interventions in intergenerational poverty: A literature review]. Groningen, The Netherlands: Rijksuniversiteit Groningen.
- Vitak, J., Liao, Y., Subramaniam, M., & Kumar, P. (2018). 'I knew it was too good to be true' the challenges economically disadvantaged Internet users face in assessing trustworthiness, avoiding scams, and developing self-efficacy online. *Proceedings of the ACM on Human-Computer Interaction*, 2, 1–25. doi:10.1145/3274445
- Wei, K. K., Teo, H. H., Chan, H. C., & Tan, B. C. (2011). Conceptualizing and testing a social cognitive model of the digital divide. *Information Systems Research*, 22(1), 170–187. doi:10.1287/isre.1090.0273
- Witte, J. C., & Mannon, S. E. (2010). *The internet and social inequalities*. New York, NY: Routledge.
- Witte, T. (2021). *Armoede en bestaansonzekerheid. Beleid en sociaalprofessionele aanpak* [Poverty and livelihood insecurity. Policy and social-professional approach]. Bussum, The Netherlands: Uitgeverij Coutinho.

- Wyche, S. P., & Murphy, L. L. (2012). "Dead China-make" phones off the grid: Investigating and designing for mobile phone use in rural Africa. In *Proceedings of the Designing Interactive Systems Conference* (pp. 186–195). New York, NY: Association for Computing Machinery.  
doi:10.1145/2317956.2317985